CURRÍCULUM VÍTAE NORMALIZADO

Jordi Soriano Fradera

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Jordi Soriano Fradera

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ScopusID:	**15048698300**
Date of birth:	**14/12/1970**
Gender:	**Male**
Nationality:	**Spain**
Country of birth:	**Spain**
City of birth:	**Barcelona (BARCELONA)**
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Current professional situation

Employing entity: Universitat de Barcelona
Professional category: Secretaria i Consell de direcció de l'UBICS (Universitat de Barcelona Institute of Complex Systems)
Start date: 22/12/2016

Employing entity: Universitat de Barcelona
Department: Faculty of Physics, Department of Condensed Matter Physics
Professional category: Senior lecturer
City employing entity: Barcelona, Spain
Phone: +34934020554 - 20554 **Fax:** +34934037063 **Email:** jordi.soriano@ub.edu
Start date: 05/11/2015
Type of contract: Permanent employment contract **Dedication regime:** Full time
Primary (UNESCO code): 220400 - Fluida (physics of)
Secondary (UNESCO code): 240600 - Biophysics
Tertiary (UNESCO code): 320507 - Neurology
Performed tasks: Associate Professor at the University of Barcelona, where I am the head of an experimental group that investigates open questions in neuroscience, and using physical and mathematical modeling toolboxes.

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universitat de Barcelona	Professor Agregat Interí	15/09/2015
2	Universitat de Barcelona	'Retenció de Talent' researcher	25/11/2013
3	Universitat de Barcelona	Ramon y Cajal researcher	25/11/2008
4	Physics of Complex Systems, Weizmann Institute of Science (Israel)	Invited researcher	01/01/2008
5	Physics of Complex Systems, Weizmann Institute of Science (Israel)	Postdoctoral Fellow	21/06/2005
6	Experimentalphysik I - Biophysik, Universität Bayreuth (Germany)	Postdoctoral Fellow	15/03/2003
7	Universitat de Barcelona	Collaboration Fellowship	01/01/2002
8	Universitat de Barcelona	FPI Fellowship	01/01/1998

1 **Employing entity:** Universitat de Barcelona
Professional category: Professor Agregat Interí
Start-End date: 15/09/2015 - 04/11/2015 **Duration:** 1 month - 21 days

2 **Employing entity:** Universitat de Barcelona
Professional category: 'Retenció de Talent' researcher
Start-End date: 25/11/2013 - 14/09/2015 **Duration:** 1 year - 9 months - 21 days

3 **Employing entity:** Universitat de Barcelona
Professional category: Ramon y Cajal researcher
Start-End date: 25/11/2008 - 24/11/2013 **Duration:** 5 years

4 **Employing entity:** Physics of Complex Systems, Weizmann Institute of Science (Israel)
Professional category: Invited researcher
Start-End date: 01/01/2008 - 15/10/2008 **Duration:** 9 months - 15 days

5 **Employing entity:** Physics of Complex Systems, Weizmann Institute of Science (Israel)
Professional category: Postdoctoral Fellow
Start-End date: 21/06/2005 - 31/12/2007 **Duration:** 2 years - 6 months - 11 days

6 **Employing entity:** Experimentalphysik I - Biophysik, Universität Bayreuth (Germany)
Professional category: Postdoctoral Fellow
Start-End date: 15/03/2003 - 15/06/2005 **Duration:** 2 years - 3 months - 1 day

7 **Employing entity:** Universitat de Barcelona
Professional category: Collaboration Fellowship
Start-End date: 01/01/2002 - 31/12/2002 **Duration:** 1 year

8 **Employing entity:** Universitat de Barcelona
Professional category: FPI Fellowship
Start-End date: 01/01/1998 - 31/12/2001 **Duration:** 4 years

Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Diploma / Degree / Activities
Name of qualification: Llicenciatura en Física
City degree awarding entity: Spain
Degree awarding entity: Universitat de Barcelona
Date of qualification: 15/05/1997
Average mark: Pass

Doctorates

Doctorate programme: Doctor en Física
Degree awarding entity: Universitat de Barcelona
Type of entity: University
City degree awarding entity: Spain
Date of degree: 28/02/2003

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Catalan	C2	C2	C2	C2	C2
Spanish	C2	C2	C2	C2	C2
English	C2	C2	C2	C2	C2
German	B1	B1	B1	B1	B1
French	B1	C1	B1	B1	B1

Teaching experience

General teaching experience

1
Type of teaching: Official teaching
Name of the course: Biofísica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Optional
University degree: Física
Geographical area: National
Start date: 03/2019
End date: 06/2019
End date: 06/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6

Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

2 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2019
End date: 06/2019
End date: 06/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

3 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2019
End date: 06/2019
End date: 06/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

4 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2019
End date: 06/2019
End date: 06/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

5 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 09/2018
End date: 02/2019
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: Practical work (classroom-problems)
End date: 02/2019
Type of hours/ ECTS credits: Credits

6 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018
End date: 02/2019
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Spanish

Type of teaching: Practical work (classroom-problems)
End date: 02/2019
Type of hours/ ECTS credits: Credits

7 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018
End date: 02/2019
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: In person theory
End date: 02/2019
Type of hours/ ECTS credits: Credits

8 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Física
Geographical area: National

Type of teaching: In person theory

Course given: 2
Start date: 09/2018 **End date:** 02/2019
End date: 02/2019 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

9 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018 **End date:** 02/2019
End date: 02/2019 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

10 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018 **End date:** 02/2019
End date: 02/2019 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

11 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018 **End date:** 02/2019
End date: 02/2019 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física

City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

12 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2018
End date: 02/2019
End date: 02/2019
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

13 **Type of teaching:** Official teaching
Name of the course: Biofísica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Optional
University degree: Física
Geographical area: National
Start date: 03/2018
End date: 06/2018
End date: 06/2018
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

14 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2018
End date: 06/2018
End date: 06/2018
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

15 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory

University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2018 **End date:** 06/2018
End date: 06/2018 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

16 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2018 **End date:** 06/2018
End date: 06/2018 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

17 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 09/2017 **End date:** 02/2018
End date: 02/2018 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

18 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 09/2017 **End date:** 02/2018
End date: 02/2018 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 6

Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

19 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2017
End date: 02/2018
End date: 02/2018
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

20 **Type of teaching:** Official teaching
Name of the course: Biofísica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Optional
University degree: Física
Geographical area: National
Start date: 03/2017
End date: 06/2017
End date: 06/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

21 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2017
End date: 06/2017
End date: 06/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

22 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2017
End date: 06/2017
End date: 06/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

23 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2017
End date: 06/2017
End date: 06/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

24 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 09/2016
End date: 02/2017
End date: 02/2017
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

25 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Optional
University degree: Física
Geographical area: National

Course given: 3
Start date: 09/2016 **End date:** 02/2017
End date: 02/2017 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

26 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2016 **End date:** 02/2017
End date: 02/2017 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

27 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2016 **End date:** 02/2017
End date: 02/2017 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain

28 **Type of teaching:** Official teaching
Name of the course: Biofísica
Type of programme: Bachelor's degree **Type of teaching:** In person theory
Type of subject: Optional
University degree: Física
Geographical area: National
Start date: 03/2016 **End date:** 06/2016
End date: 06/2016 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

29 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 03/2016
End date: 06/2016
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: Practical work (classroom-problems)
End date: 06/2016
Type of hours/ ECTS credits: Credits

30 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 03/2016
End date: 06/2016
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: In person theory
End date: 06/2016
Type of hours/ ECTS credits: Credits

31 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of subject: Optional
University degree: Física
Geographical area: National
Course given: 3
Start date: 09/2015
End date: 02/2016
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: Practical work (classroom-problems)
End date: 02/2016
Type of hours/ ECTS credits: Credits

32 **Type of teaching:** Official teaching
Name of the course: Física dels Medis Continus
Type of programme: Bachelor's degree
Type of subject: Optional
University degree: Física

Type of teaching: Practical work (classroom-problems)

Geographical area: National
Course given: 3
Start date: 09/2015 **End date:** 02/2016
End date: 02/2016 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 6
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

33 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2015 **End date:** 02/2016
End date: 02/2016 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

34 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2015 **End date:** 02/2016
End date: 02/2016 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

35 **Type of teaching:** Official teaching
Name of the course: Mecànica de Biofluids
Type of programme: Master's degree **Type of teaching:** Practical work (classroom-problems)
Type of subject: Optional
University degree: Enginyeria Biomèdica
Geographical area: National
Start date: 09/2015 **End date:** 02/2016
End date: 02/2016 **Type of hours/ ECTS credits:** Credits
Hours/ECTS credits: 2,5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física

City of entity: Barcelona, Catalonia, Spain
Subject language: English

36 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2014
End date: 02/2015
End date: 02/2015
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

37 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2013
End date: 02/2014
End date: 02/2014
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

38 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2013
End date: 02/2014
End date: 02/2014
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

39 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of teaching: In person theory

Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2012
End date: 02/2013
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

End date: 02/2013
Type of hours/ ECTS credits: Credits

40 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2012
End date: 02/2013
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: In person theory

End date: 02/2013
Type of hours/ ECTS credits: Credits

41 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2011
End date: 02/2012
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: In person theory

End date: 02/2012
Type of hours/ ECTS credits: Credits

42 **Type of teaching:** Official teaching
Name of the course: Projecte Final de Biofísica - Pràcticum II
Type of programme: Master's degree
Type of subject: Optional
University degree: Biophysics
Geographical area: National
Start date: 09/2011
End date: 02/2012
Hours/ECTS credits: 20
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física

Type of teaching: Ending Degree Project Work

End date: 02/2012
Type of hours/ ECTS credits: Credits

City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

43 **Type of teaching:** Official teaching
Name of the course: Termodinàmica
Type of programme: Bachelor's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Física
Geographical area: National
Course given: 2
Start date: 09/2011
End date: 02/2012
End date: 02/2012
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 9
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

44 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2010
End date: 02/2011
End date: 02/2011
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

45 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of teaching: In person theory
Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2010
End date: 02/2011
End date: 02/2011
Type of hours/ ECTS credits: Credits
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

46 **Type of teaching:** Official teaching
Name of the course: Física I
Type of programme: Bachelor's degree
Type of teaching: Practical work (classroom-problems)
Type of subject: Obligatory
University degree: Química

Geographical area: National
Course given: primer
Start date: 09/2010
End date: 02/2011
Hours/ECTS credits: 26
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Química
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

End date: 02/2011
Type of hours/ ECTS credits: Hours

47 **Type of teaching:** Official teaching
Name of the course: Física I
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Química
Geographical area: National
Course given: primer
Start date: 09/2010
End date: 02/2011
Hours/ECTS credits: 26
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Química
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: Practical work (classroom-problems)

End date: 02/2011
Type of hours/ ECTS credits: Hours

48 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2009
End date: 02/2010
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain
Subject language: Catalan

Type of teaching: In person theory

End date: 02/2010
Type of hours/ ECTS credits: Credits

49 **Type of teaching:** Official teaching
Name of the course: Tècniques Experimentals en Biofísica
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Biophysics
Geographical area: National
Start date: 09/2009
End date: 02/2010
Hours/ECTS credits: 5
Entity: Universitat de Barcelona
Faculty, institute or centre: Facultad de Física
City of entity: Barcelona, Catalonia, Spain

Type of teaching: In person theory

End date: 02/2010
Type of hours/ ECTS credits: Credits

Subject language: Catalan

50 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Aleix Pagés Puertas, 'Comparison of the dynamics between homogeneous and clustered neuronal cultures with dictated connectivity ', ADVANCED PHYSICS master
Type of programme: Teaching in third cycle
Start date: 15/09/2013
End date: 04/09/2014
Entity: Universitat de Barcelona

51 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Lluís Hernández Navarro, 'Electrical Stimulacion of Neuronal Cultures, and a Fractal Study of the Peripheral Nervous System', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 15/09/2012
End date: 15/09/2013
Entity: Universitat de Barcelona

52 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Miguel Beneyto Checa, 'Propagation of Activity Fronts in Two-dimensional Cultures', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/10/2011
End date: 06/07/2012
Entity: Universitat de Barcelona

53 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Tomeu Coll Mulet, 'Use of Advanced Photonics Tecnhiques to Perturb Activity in Neuronal Cultures', BIOMEDICAL ENGINEERING master
Type of programme: Teaching in third cycle
Start date: 01/09/2011
End date: 13/09/2012
Entity: Universitat de Barcelona

54 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Fernando Carreño Escobar, 'Morphological and Electrophysiological Changes Induced by DC Electric Field Stimulation In Neuronal Cultures', NEUROSCIENCE master
Type of programme: Teaching in third cycle
Start date: 01/09/2011
End date: 06/09/2012
Entity: Universitat de Barcelona

55 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Christopher Bendiksen, 'Novel Methods for Physical Restriction of Neuronal Growth', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/05/2011
End date: 06/07/2012
Entity: Universitat de Barcelona

56 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Bojana Kokinovic, 'Influence of Cux transcription factor in cortical neurons', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/04/2011
End date: 09/02/2012
Entity: Universitat de Barcelona

57 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Daniel Malagarriga Guasch, 'DC Electrical Stimulation on in vitro Neuronal Networks: Experiments and Model', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 20/09/2010
End date: 08/09/2011
Entity: Universitat de Barcelona

58 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Patricia A. Martínez Barrios, 'Applying GFP to characterize connectivity in living neuronal networks', NEUROSCIENCE master
Type of programme: Teaching in third cycle
Start date: 01/10/2009
End date: 10/09/2010
Entity: Universitat Autònoma de Barcelona

59 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Sara Teller Amado, 'Dynamics of clustered cortical networks in vitro', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/10/2009
End date: 09/09/2010
Entity: Universitat de Barcelona

60 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Xavier Clotet Fons, 'Neuronal cultures in a flow chamber', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/10/2009
End date: 09/09/2010
Entity: Universitat de Barcelona

61 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Alberto Eljarrat Ascunce, 'Micro-computed tomography for the development of hyper-realistic invertebrade models', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 01/10/2009
End date: 02/07/2010
Entity: Universitat de Barcelona

62 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Núria Amigó Grau, 'Propagating pulses of activity in patterned neuronal networks', BIOPHYSICS master

Type of programme: Teaching in third cycle
Start date: 01/03/2009
End date: 02/07/2010
Entity: Universitat de Barcelona

63 **Type of teaching:** Official teaching
Name of the course: Supervision of master thesis: Marie R. Popiel Jacobsen, 'Experiments on patterned neuronal networks', BIOPHYSICS master
Type of programme: Teaching in third cycle
Start date: 15/01/2009
End date: 07/09/2009
Entity: Universitat de Barcelona

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Modulation of spontaneous activity in neuronal cultures through chemical action
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Aina Martínez Vidal
Obtained qualification: Notable
Date of reading: 2022

2 **Project title:** Exploring neuronal dynamics through the Izhikevich and Kuramoto models
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Anna Monclús Rojo
Obtained qualification: Excellent
Date of reading: 2022

3 **Project title:** Targeted attack on neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Imanol Jurado Rodríguez
Obtained qualification: Excellent
Date of reading: 2022

4 **Project title:** Percolation in neural networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Júlia Alberic Torrent
Obtained qualification: Excellent
Date of reading: 2022

5 **Project title:** Functional activity alterations in neuronal networks after physical damage
Type of project: Degree work
Entity: Universitat de Barcelona

City of entity: Spain
Student: Sàlem Ayasreh Fierro
Obtained qualification: Excellent
Date of reading: 2022

6 **Project title:** Study of the collective activity in neuronal networks through the Izhikevich model: the importance of connectivity
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Laia Barjuan Ballabriga
Obtained qualification: With Honours
Date of reading: 2021

7 **Project title:** Recovery of neuronal networks after physical damage
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Helena García Serra
Obtained qualification: Excellent
Date of reading: 2021

8 **Project title:** Activity and functional connectivity in neuronal cultures with topographical PDMS substrates
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Marta Pascual Casas
Obtained qualification: Notable
Date of reading: 2021

9 **Project title:** Random failures and an Alumne/a: Adrià Bravo Vidal attacks on Small World Networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Adrià Bravo Vidal
Obtained qualification: Excellent
Date of reading: 2021

10 **Project title:** Synchronous Dynamics of Interconnected in vitro Neuronal Networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Alexandre Gol Mestre
Obtained qualification: Excellent
Date of reading: 2021

11 **Project title:** Functional Connectivity Analysis of Stem Cell Cultures Alumne/a: Ana López Poyatos with Parkinson's Disease
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain

Student: Ana López Poyatos
Obtained qualification: Notable
Date of reading: 2021

12 **Project title:** Recovery after focal damage in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Iris Rubio Polán
Obtained qualification: Notable
Date of reading: 2021

13 **Project title:** Diferences in activity and functional connectivity between bi-dimensional and three-dimensional neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Mar Barrantes Cepas
Obtained qualification: Excellent
Date of reading: 2021

14 **Project title:** Collective dynamics of two coupled neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Júlia Ferrer Gil
Obtained qualification: Notable
Date of reading: 2020

15 **Project title:** Numerical simulations of modular neuronal networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Miquel Canal Esteve
Obtained qualification: Notable
Date of reading: 2020

16 **Project title:** Impact of local stimulation on dynamical richness and functional organisation in cortical networks in vitro
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Carla Morante Alberti
Obtained qualification: Excellent
Date of reading: 2020

17 **Project title:** Site percolation in Interdependent networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Guillermo Ródenas Alesina

Obtained qualification: Excellent
Date of reading: 2020

18 **Project title:** Impact of physical constraints on the dynamical properties of neuronal networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Marc Pielies Avellí
Obtained qualification: Excellent
Date of reading: 2020

19 **Project title:** Evolution of functional connectivity in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Miquel Tomé Carreño
Obtained qualification: Excellent
Date of reading: 2020

20 **Project title:** Dynamics of neuronal networks in hydrogel-based 3D primary cultures
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Gemma Lluch Albiol
Obtained qualification: Excellent
Date of reading: 2020

21 **Project title:** Collective dynamics in neuronal networks derived from human induced pluripotent stem cells
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Adrián López Gómez
Obtained qualification: Notable
Date of reading: 2019

22 **Project title:** Dynamical richness and integration{segregation balance in modular cortical networks
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Marta Tarruella Cayuela
Obtained qualification: Notable
Date of reading: 2019

23 **Project title:** Quantifying complexity in modular networks: from engineered to self-organized
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Meritxell Cruañas Baqué
Obtained qualification: Notable
Date of reading: 2019

24 **Project title:** Estudi d'un sistema reacció-difusió: el model depredador-presa
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Meritxell Cruañas Baqué
Obtained qualification: Notable
Date of reading: 2019

25 **Project title:** Functional Connectivity Alterations after Focal Damage in Neuronal Cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Alba Fischer Carles
Obtained qualification: Notable
Date of reading: 2019

26 **Project title:** Dynamical richness and functional connectivity in patterned neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Joan Falcó Roget
Obtained qualification: Notable
Date of reading: 2019

27 **Project title:** Study of spontaneous activity in three dimensional neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Rosa Flaquer Galmés
Obtained qualification: Excellent
Date of reading: 2019

28 **Project title:** Dynamics and Effective Connectivity in Bi- and Three-dimensional Neuronal Cultures: from Self-organization to Engineering
Type of project: Ph.D. Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Estefanía Estévez Priego
Obtained qualification: Excellent
Date of reading: 2019

29 **Project title:** Theoretical and experimental approaches for the initiation and propagation of activity in spatially embedded neuronal cultures
Type of project: Ph.D. Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Lluís Hernández Navarro
Obtained qualification: Excellent Cum Laude
Date of reading: 2018

30 **Project title:** Functional connectivity analysis of interconnected neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Adrián López Gómez
Obtained qualification: Notable
Date of reading: 2018

31 **Project title:** Initiation and propagation of activity in neuronal cultures under connectivity alterations
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Jose Arnau Herrera Carrillo
Obtained qualification: Excellent
Date of reading: 2018

32 **Project title:** Activity and functional connectivity alterations in neuronal cultures affected by Parkinson's disease
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Mireia Tolosa Simeón
Obtained qualification: Notable
Date of reading: 2018

33 **Project title:** Spontaneous Activity in Neuronal Cultures with Dictated Connectivity
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Olga Ortiz Miquel
Obtained qualification: Excellent
Date of reading: 2018

34 **Project title:** Linear and nonlinear approaches to unravel dynamics and connectivity in neuronal cultures
Type of project: Ph.D. Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Elisenda Tibau Martorell
Obtained qualification: Excellent Cum Laude
Date of reading: 2017

35 **Project title:** Effect of an electric stimulation to activity patterns in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Ana Arché Núñez.
Obtained qualification: Notable
Date of reading: 2017

36 **Project title:** Activity and connectivity in pre designed neuronal networks
Type of project: Degree work
Entity: Universitat de Barcelona

City of entity: Spain
Student: Albert Ferrer Moreno
Obtained qualification: Notable
Date of reading: 2017

37 **Project title:** Resilience of clustered neuronal cultures upon physical damage
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Gemma Viscasillas Valls
Obtained qualification: Notable
Date of reading: 2017

38 **Project title:** Functional organization and network resilience in self-organizing clustered neuronal cultures
Type of project: Ph.D. Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Sara Teller Amado
Obtained qualification: Excellent Cum Laude
Date of reading: 2016

39 **Project title:** Transfer Entropy: How to Further Understand Connections among Neurons
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Albert Trias Creus
Obtained qualification: Excellent
Date of reading: 2016

40 **Project title:** Structural and functional connectivity in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Ana Alonso Castillo
Obtained qualification: Notable
Date of reading: 2016

41 **Project title:** Study of the propagation of activity in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Luis Manuel Camacho Puerma
Obtained qualification: Notable
Date of reading: 2016

42 **Project title:** Analysis of the Coding of information in the brain of monkeys
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Pau de Jorge Aranda
Obtained qualification: Notable

Date of reading: 2016

43 **Project title:** Infuence of stimulus neural coding into decision-making performance: A data-analysis study.
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: David Capilla Guilarte
Obtained qualification: Notable
Date of reading: 2016

44 **Project title:** Reaction-diffusion model for the Hydra's head formation
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Manel Martín Sánchez
Obtained qualification: Notable
Date of reading: 2016

45 **Project title:** Effect of damage and connectivity loss on the dynamics of neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Martí Salvador Castiñeira
Obtained qualification: Notable
Date of reading: 2016

46 **Project title:** Study of the spontaneous activity in neuronal cultures
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Noelia Iranzo Ribera
Obtained qualification: Excellent
Date of reading: 2015

47 **Project title:** Automatic detection of neurons in fuorescence calcium images and study of the global dynamics of the neural culture
Type of project: Degree work
Entity: Universitat de Barcelona
City of entity: Spain
Student: Mariel García Huiman
Obtained qualification: Excellent
Date of reading: 2015

48 **Project title:** Comparison of the dynamics between homogeneous and clustered neuronal cultures with dictated connectivity
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Aleix Pagés Puertas
Obtained qualification: Approved
Date of reading: 2014

49 **Project title:** Electrical stimulation of neuronal cultures, and a fractal study of the peripheral nervous system
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Lluís Hernández Navarro
Obtained qualification: Excellent
Date of reading: 2013

50 **Project title:** Influence of Cux transcription factor in cortical neurons
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Bojana Kokinovic
Obtained qualification: Approved
Date of reading: 2012

51 **Project title:** Novel Methods for Physical Restriction of Neuronal Growth
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Christopher Bendiksen
Obtained qualification: Notable
Date of reading: 2012

52 **Project title:** Propagation of Activity Fronts in Two-dimensional Cultures
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Miguel Beneyto Checa
Obtained qualification: Notable
Date of reading: 2012

53 **Project title:** Morphological And Electrophysiological Changes Induced By DC Electric Field Stimulation In Neuronal Cultures
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Fernando Carreño Escobar
Obtained qualification: Excellent
Date of reading: 2012

54 **Project title:** Modificación del comportamiento en redes neuronales mediante técnicas fotónicas avanzadas
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Tomeu Coll Mulet
Obtained qualification: Excellent
Date of reading: 2012

55 **Project title:** DC Electrical Stimulation on in vitro Neuronal Networks: Experiments and Model
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Daniel Malagarriga Guasch
Obtained qualification: Notable
Date of reading: 2011

56 **Project title:** Propagating pulses of activity in patterned neuronal networks
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Núria Amigó Grau
Obtained qualification: Excellent
Date of reading: 2010

57 **Project title:** Micro-computed tomography for the development of hyper-realistic invertebrated models
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Alberto Eljarrat
Obtained qualification: Notable
Date of reading: 2010

58 **Project title:** Dynamics of clustered cortical networks 'in vitro'
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Sara Teller Amado
Obtained qualification: Notable
Date of reading: 2010

59 **Project title:** Neuronal cultures in a flow chamber
Type of project: Master's Thesis
Entity: Universitat de Barcelona
City of entity: Spain
Student: Xavier Clotet Fons
Obtained qualification: Notable
Date of reading: 2010

60 **Project title:** Applying GFP to characterize connectivity in living neuronal networks
Type of project: Master's Thesis
Entity: Universitat Autònoma de Barcelona
City of entity: Spain
Student: Patricia Martínez Barrios
Obtained qualification: Notable
Date of reading: 2010

61 **Project title:** Experiments on patterned neuronal networks
Type of project: Master's Thesis
Entity: Universitat de Barcelona

City of entity: Spain
Student: Marie R. Popiel Jacobsen
Obtained qualification: Notable
Date of reading: 2009

Teaching experience in courses and seminars for university teacher training

1 **Type of event:** Conferences
Name of the event: Biofísica: desenvolupant petits models per entendre grans problemes
City organizing entity: Barcelona, Spain
Teaching date: 16/06/2016

2 **Type of event:** Conferences
Name of the event: Introdcuing the potential of neuronal cultures as model systems in Biophysics
City organizing entity: Barcelona, Spain
Teaching date: 03/09/2012

3 **Type of event:** Conferences
Name of the event: Introducing neuronal cultures
City organizing entity: Madrid, Spain
Teaching date: 06/07/2011

Educational or pedagogical publications, books, articles, etc.

Name of the materials: Editor of teaching material for the Open University of Catalonia (UOC). Courses: General Physics, Electromagnetism, and Electronics.
Date of drafting: 01/03/1997
Format: Elaboration of teaching material

Other activities/achievements not included above

1 **Description of the activity:** Courses and Seminars - Taught: Teacher at El Escorial Summer School. 'From functional specialization to the connectome in the human brain: understanding the neurological mechanisms of cognitive dysfunction'
End date: 12/07/2013

2 **Description of the activity:** Courses and Seminars - Taught: Summer school: 'Dynamics and synchronization in networks'
End date: 07/07/2011

3 **Description of the activity:** Courses and Seminars - Taught: Summer school: 'Physics of Complex Systems: New Trends and Applications'.
End date: 07/09/2005

Scientific and technological experience

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

1 **Name of the project:** Neuronal networks from Cortical human iPSCs for Machine Learning Processing-NEU-ChiP (NEU-ChiP)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano Fradera; Daniel Tornero Prieto
Nº of researchers: 2
Funding entity or bodies:
Unió Europea **Type of entity:** European Union Administration
City funding entity: B-1048 Brussels, Belgium

Code according to the funding entity: 964877
Start-End date: 01/09/2021 - 31/08/2024 **Duration:** 3 years
Participating entity/entities: Universitat de Barcelona
Total amount: 535.750 €

2 **Name of the project:** Fenómenos colectivos en mataria blanda, tejidos celulares y redes neuronales
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader; Jordi Soriano Fradera
Nº of researchers: 3
Funding entity or bodies:
Ministerio de Ciencia, Innovación y Universidades **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: PID2019-108842GB-C21
Start-End date: 01/06/2020 - 31/05/2023 **Duration:** 3 years
Participating entity/entities: Universitat de Barcelona
Total amount: 221.430 €

3 **Name of the project:** Modulation of Tau seeding and pathology in tauopathies by BBB-nanocarriers, epitope selective vaccination and ectoPrP Tau receptor bodies
Entity where project took place: Institu de bioenginyeria de Barcelona. IBEC **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano
Nº of researchers: 8
Funding entity or bodies:
Fundació Caixa de Pensions 'La Caixa' **Type of entity:** Nonprofit Private Institutions
City funding entity: 08028 Barcelona, Spain

Code according to the funding entity: HR19-00452 (provisional)

Start-End date: 15/09/2019 - 14/09/2022 **Duration:** 3 years
Participating entity/entities: Universitat de Barcelona
Total amount: 51.700 €

4 **Name of the project:** Física no lineal
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Ortín Rull
Nº of researchers: 20
Funding entity or bodies:
Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) **Type of entity:** Authonomous Administration
City funding entity: 08003 Barcelona, Spain

Code according to the funding entity: 2017SGR1061
Start-End date: 01/01/2017 - 30/09/2021 **Duration:** 4 years - 9 months
Participating entity/entities: Universitat de Barcelona
Total amount: 20.000 €

5 **Name of the project:** Atorgament d'un ajut de la convocatòria del Programa d'Intensificació de l'Activitat Investigadora Internacional (2019)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano Fradera
Nº of researchers: 1
Funding entity or bodies:
Universitat de Barcelona **Type of entity:** University
City funding entity: Barcelona, Spain

Start-End date: 01/09/2019 - 31/08/2020 **Duration:** 1 year
Participating entity/entities: Universitat de Barcelona
Total amount: 3.533,85 €

6 **Name of the project:** Custom architecturally defined 3D stem cell derived functional human neural networks for transformative progress in neuroscience and medicine (MESO_BRAIN)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano Fradera
Nº of researchers: 3
Funding entity or bodies:
Unió Europea **Type of entity:** European Union Administration
City funding entity: B-1048 Brussels, Belgium

Code according to the funding entity: 713140
Start-End date: 01/09/2016 - 29/02/2020 **Duration:** 3 years - 6 months
Participating entity/entities: Universitat de Barcelona
Total amount: 466.236 €

7 **Name of the project:** IBERSINC: Dinámica y sincronización en redes
Entity where project took place: Universitat Rovira i Virgili **Type of entity:** University
City of entity: TARRAGONA, Spain
Name principal investigator (PI, Co-PI....): Alex Arenas
Nº of researchers: 16
Funding entity or bodies:
Ministerio de Economia, Industria y Competitividad **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: FIS2017-90782-REDT
Start-End date: 01/01/2017 - 31/12/2019 **Duration:** 3 years
Participating entity/entities: Universitat Rovira i Virgili
Total amount: 17.000 €

8 **Name of the project:** Fenómenos de no-equilibrio en Materia Blanda: de fluidos complejos a tejidos celulares
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader; Pietro Tierno
Nº of researchers: 4
Funding entity or bodies:
Ministerio de Economia y Competitividad **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: FIS2016-78507-C2-2-P
Start-End date: 30/12/2016 - 29/12/2019 **Duration:** 3 years
Participating entity/entities: Universitat de Barcelona
Total amount: 145.200 €

9 **Name of the project:** Modulation of synaptic plasticity deficits as therapeutic straegy in Huntington's Disease/Modulació del dèficit de la plasticitat sinàptica com estratègia terapèutica en la malaltia de Huntington.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Alberch Vie
Nº of researchers: 12
Funding entity or bodies:
Fundació La Marató de TV3 **Type of entity:** Foundations
City funding entity: Esplugues de Llobregat (Barcelona), Spain

Code according to the funding entity: 20140130
Start-End date: 01/01/2015 - 31/12/2017 **Duration:** 3 years
Participating entity/entities: sense especificar
Total amount: 150.000 €

10 **Name of the project:** Avalanchas en biofísica, geofísica, materiales y plasmas
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Eduard Vives Santa-Eulalia

Nº of researchers: 10
Funding entity or bodies:
Ministerio de Economia y Competitividad **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: MAT2015-69777-REDT
Start-End date: 27/11/2015 - 26/11/2017 **Duration:** 2 years
Participating entity/entities: Universitat de Barcelona
Total amount: 30.000 €

11 **Name of the project:** Física no lineal
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Ortín Rull
Nº of researchers: 20
Funding entity or bodies:
Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) **Type of entity:** Authonomous Administration
City funding entity: 08003 Barcelona, Spain

Code according to the funding entity: 2014SGR878
Start-End date: 01/01/2014 - 30/04/2017 **Duration:** 3 years - 4 months
Participating entity/entities: Universitat de Barcelona
Total amount: 38.400 €

12 **Name of the project:** Materia blanda forzada, activa y viva
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader; Francesc Sagues Mestre
Nº of researchers: 9
Funding entity or bodies:
Ministerio de Economia y Competitividad **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: FIS2013-41144-P
Start-End date: 01/01/2014 - 31/12/2016 **Duration:** 3 years
Participating entity/entities: Universitat de Barcelona
Total amount: 229.900 €

13 **Name of the project:** Ajuts en el marc del Programa de Retenció del Talent 2013
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano Fradera
Nº of researchers: 1
Funding entity or bodies:
Universitat de Barcelona **Type of entity:** University
City funding entity: Barcelona, Spain

Start-End date: 24/11/2013 - 30/09/2015 **Duration:** 1 year - 10 months - 7 days
Participating entity/entities: Universitat de Barcelona

Total amount: 74.000 €

14 **Name of the project:** Materia blanda forzada, activa y viva
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader
Nº of researchers: 12
Funding entity or bodies:
Universitat de Barcelona **Type of entity:** University
City funding entity: Barcelona, Spain

Start-End date: 03/04/2014 - 31/12/2014 **Duration:** 8 months - 29 days
Participating entity/entities: Universitat de Barcelona
Total amount: 7.200 €

15 **Name of the project:** Auto-organización en materiales blandos y materia viva: II) Fluidos complejos, Células y Tejidos.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader
Nº of researchers: 4
Funding entity or bodies:
Ministerio de Ciencia e Innovación (MICINN) **Type of entity:** State or Central Administration
City funding entity: Madrid, Spain

Code according to the funding entity: FIS2010-21924-C02-02
Start-End date: 01/01/2011 - 31/12/2013 **Duration:** 3 years
Participating entity/entities: sense especificar
Total amount: 180.000 €

16 **Name of the project:** Subvenció per a la contractació d'investigadors dins del Programa Ramon y Cajal. Inclou 15.000,00 euros de finançament addicional a la primera anualitat.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader; Jordi Soriano Fradera
Nº of researchers: 2
Funding entity or bodies:
Ministerio de Ciencia e Innovación (MICINN) **Type of entity:** State or Central Administration
City funding entity: Madrid, Spain

Code according to the funding entity: RYC-2008-03433
Start-End date: 24/11/2008 - 23/11/2013 **Duration:** 5 years
Participating entity/entities: Universitat de Barcelona
Total amount: 192.480 €

17 **Name of the project:** IBERSINC: Red sobre dinámica y sincronización en redes
Entity where project took place: Universidad Rey Juan Carlos de Madrid **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Javier Martín Buldú / Jordi Soriano Fradera

Nº of researchers: 48
Funding entity or bodies:
Ministerio de Ciencia e Innovación (MICINN) **Type of entity:** State or Central Administration
City funding entity: Madrid, Spain

Code according to the funding entity: FIS2010-09832-E
Start-End date: 01/01/2011 - 28/02/2013 **Duration:** 2 years - 2 months
Participating entity/entities: Universidad Rey Juan Carlos de Madrid
Total amount: 12.000 €

18 **Name of the project:** Grup de Física No Lineal
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Jordi Ortín Rull
Funding entity or bodies:
Departament d'Innovació, Universitats i Empresa. Generalitat de Catalunya **Type of entity:** Authonomous Administration
City funding entity: Barcelona, Spain

Code according to the funding entity: 2009-SGR-14
Start-End date: 2009 - 2013 **Duration:** 4 years - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 44.720 €

19 **Name of the project:** Estudio de redes neuronales vivas con conectividad definida
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Jordi Soriano Fradera
Nº of researchers: 1
Funding entity or bodies:
Ministerio de Ciencia e Innovación (MICINN) **Type of entity:** State or Central Administration
City funding entity: Madrid, Spain

Code according to the funding entity: FIS2009-07523
Start-End date: 2010 - 2010 **Duration:** 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 15.800 €

20 **Name of the project:** Measuring information flow along one dimensional neural networks
Entity where project took place: Weizmann Institute of Science **Type of entity:** Other organisms
City of entity: Rehovot, Israel
Name principal investigator (PI, Co-PI....): Elisha Moses
Funding entity or bodies:
Minerva Foundation, Germany **Type of entity:** Other organisms
City funding entity: Unknown

Code according to the funding entity: 708568
Start-End date: 2006 - 2008 **Duration:** 2 years - 1 day
Participating entity/entities: Weizmann Institute of Science

Total amount: 134.300 €

21 **Name of the project:** Propagation and coding of information in linear neural networks
Entity where project took place: Weizmann Institute of Science **Type of entity:** Other organisms
City of entity: Rehovot, Israel
Name principal investigator (PI, Co-PI....): Elisha Moses
Funding entity or bodies:
The Israel Science Foundation **Type of entity:** Foundations
City funding entity: Tel-Aviv, Israel

Code according to the funding entity: 993/05-700388
Start-End date: 2005 - 2008 **Duration:** 3 years - 1 day
Participating entity/entities: Weizmann Institute of Science
Total amount: 105.000 €

22 **Name of the project:** Nonequilibrium physics: from complex fluids to biological systems
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Jaume Casademunt Viader
Funding entity or bodies:
Unió Europea **Type of entity:** European Union Administration
City funding entity: B-1048 Brussels, Belgium

Code according to the funding entity: HPRN-CT-2002-00312
Start-End date: 2002 - 2006 **Duration:** 4 years - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 189.752 €

23 **Name of the project:** Física no lineal.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Jordi Ortín Rull
Funding entity or bodies:
Departament d'Universitats, Recerca i Societat de la Informació (Generalitat de Catalunya) DURSI **Type of entity:** Authonomous Administration
City funding entity: Spain

Code according to the funding entity: 2001SGR00433
Start-End date: 2001 - 2005 **Duration:** 4 years - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 25.242,51 €

24 **Name of the project:** Dinámica no lineal de interfases y sus aplicaciones en medios porosos
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Aurora Hernández Machado
Funding entity or bodies:

Dirección General de Enseñanza Superior e Investigación Científica **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: BFM2000-0628-C03-01
Start-End date: 2001 - 2003 **Duration:** 2 years - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 27.526,94 €

25 **Name of the project:** Xarxa temàtica de dinàmiques no lineals d'autoorganització espaciotemporal.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): José María Sancho Herrero
Funding entity or bodies:
Comissionat per a Universitats i Recerca. Generalitat de Catalunya **Type of entity:** Authonomous Administration
City funding entity: Barcelona, Spain

Code according to the funding entity: 2000 XT 0005
Start-End date: 2001 - 2002 **Duration:** 1 year - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona

26 **Name of the project:** Grup de dinàmica no lineal.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Francesc Sagués Mestre
Nº of researchers: 6
Funding entity or bodies:
Comissionat per a Universitats i Recerca. Generalitat de Catalunya **Type of entity:** Authonomous Administration
City funding entity: Barcelona, Spain

Code according to the funding entity: 1999SGR00041
Start-End date: 2000 - 2001 **Duration:** 1 year - 1 day
Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 13.222,27 €

27 **Name of the project:** Estructuras espacio-temporales fuera del equilibrio: dinámica y desorden.
Entity where project took place: Universitat de Barcelona **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Aurora Hernández Machado
Funding entity or bodies:
Secretaría de Estado de Universidades e Investigación **Type of entity:** State or Central Administration
City funding entity: Spain

Code according to the funding entity: PB96-0378-CO2-01
Start-End date: 1997 - 2000 **Duration:** 3 years - 1 day

Participating entity/entities: Departament d'Estructura i Constituents de la Matèria. Facultat de Física. Universitat de Barcelona
Total amount: 65.510,32 €

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

1 Faci-Lázaro, S.; Lor, T.; Ródenas, G.; Mazo, J.J.; Soriano, J.; Gómez-Gardeñes, J.Dynamical robustness of collective neuronal activity upon targeted damage in interdependent networks. European Physical Journal-Special Topics. (France): EDP Sciences, 2022. ISSN 1951-6355
DOI: https://doi.org/10.1140/epjs/s11734-021-00411-7
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 6

2 Matamoros-Angles, A.; Hervera, A.; Soriano, J.; Marti, E.; Carulla, P.; Llorens, F.; Nuvolone, M.; Aguzzi, A.; Ferrer, I.; Gruart, A.; Delgado-García, J. M.; del Rio, J. A.Analysis of co-isogenic prion protein deficient mice reveals behavioral deficits, learning impairment, and enhanced hippocampal excitability. Bmc Biology. 20 - 1, (United Kingdom): BioMed Central, 2022. ISSN 1741-7007
DOI: https://doi.org/10.1186/s12915-021-01203-0
Handle: http://hdl.handle.net/2445/182571
Type of production: Scientific paper **Format:** Journal
Position of signature: 3

3 Carola G.; Malagarriga D.; Calatayud C.; Richaud-Patin Y.; Beltramone S.; Dell'Era P.; Tolosa E.; Soriano J.; Muotri A.; Raya A.; Consiglio A.Parkinson's disease patient-specific neuronal networks carrying the LRRK2 G2019S mutation unveil early functional alterations that predate neurodegeneration. npj Parkinson's Disease. (United Kingdom): Springer Nature, 2021. ISSN 2373-8057
Type of production: Scientific paper **Format:** Journal
Position of signature: 0

4 Hernández-Navarro, L.; Faci-Lázaro, S.; Orlandi, J.G.; Feudel, U.; Gómez-Gardeñes, J.; Soriano, J.Noise-driven amplification mechanisms governing the emergence of coherent extreme events in excitable systems. Physical Review Research. 3, American Physical Society, 2021. ISSN 2643-1564
DOI: https://doi.org/10.1103/PhysRevResearch.3.023133
Type of production: Scientific paper **Format:** Journal
Position of signature: 6
Total no. authors: 6

5 Koroleva, A.; Deiwick, A.; El-Tamer, A.; Koch, L.; Shi, Y.; Estévez-Priego, E.; Ludl, A.-A.; Soriano, J.; Guseva, D.; Ponimaskin, E.; Chichkov, B.In vitro development of human iPSC-derived functional neuronal networks on laser-fabricated 3D scaffolds. ACS Applied Materials & Interfaces. 13, pp. 7839 - 7853. (United States of America): American Chemical Society, 2021. ISSN 1944-8244
DOI: https://doi.org/10.1021/acsami.0c16616
Type of production: Scientific paper **Format:** Journal
Position of signature: 8

Total no. authors: 11

6 Tibau, E.; Ludl, A.-A.; Rüdiger, S.; Orlandi, J.G.; Soriano, J.Neuronal spatial arrangement shapes effective connectivity traits of in vitro cortical networks. Ieee Transactions On Network Science And Engineering. 7 - 1, pp. 435 - 448. (United States of America): 2020. ISSN 2327-4697

DOI: https://doi.org/10.1109/TNSE.2018.2862919

Type of production: Scientific paper
Format: Journal
Position of signature: 5
Total no. authors: 5

Impact source: ISI
Category: ENGINEERING, MULTIDISCIPLINARY
Impact index in year of publication: 3.894
Journal in the top 25%: Yes
Position of publication: 20
No. of journals in the cat.: 91

Impact source: ISI
Category: MATHEMATICS, INTERDISCIPLINARY APPLICATIONS
Impact index in year of publication: 3.894
Journal in the top 25%: Yes
Position of publication: 16
No. of journals in the cat.: 108

7 Teller, S.; Estévez-Priego, , E; Granell, C.; Tornero, D.; Andilla, J.; Olarte, O.E.; Loza-Alvarez, P.; Arenas, A.; Soriano, J.Spontaneous Functional Recovery after Focal Damage in Neuronal Cultures. eNeuro. 7 - 1, The Society for Neuroscience, 2020. ISSN 2373-2822

DOI: https://doi.org/10.1523/ENEURO.0254-19.2019
Handle: http://hdl.handle.net/2445/160541
Type of production: Scientific paper
Format: Journal
Position of signature: 9
Total no. authors: 9

8 Comella-Bolla, A.; Orlandi, J. A.; Miguez, A.; Straccia, M.; García-Bravo, M.; Bombau, G.; Galofré, M.; Sanders, P.; Carrere, J.; Segovia, J. C.; Blasi, J.; Allen, N. D.; Alberch, J.; Soriano, J.; Canals, J. M.Human pluripotent stem cell-derived neurons are functionally mature in vitro and integrate into the mouse striatum following transplantation. Molecular Neurobiology. 57, pp. 2766 - 2798. (United States of America): Humana Press., 2020. ISSN 0893-7648

DOI: https://doi.org/10.1007/s12035-020-01907-4
Handle: http://hdl.handle.net/2445/171065
Type of production: Scientific paper
Format: Journal
Position of signature: 14

Impact source: ISI
Category: NEUROSCIENCES
Impact index in year of publication: 5.59
Journal in the top 25%: Yes
Position of publication: 61
No. of journals in the cat.: 273

9 Crowe, J.A; El-Tamer, A.; Nagel, D.; Koroleva, A.V.; Madrid-Wolff, J.; Olarte, O.E.; Sokolovsky, S.; Estevez-Priego, E.; Ludl, A.-A.; Soriano, J.; Loza-Alvarez, P.; Chichkov, B.N.; Hill, E.J.; Parri, H.R.; Rafailov, E.U.Development of two-photon polymerised scaffolds for optical interrogation and neurite guidance of human iPSC-derived cortical neuronal networks. Lab On a Chip. 20, pp. 1792 - 1806. (United Kingdom): Royal Society of Chemistry, 2020. ISSN 1473-0197

DOI: https://doi.org/10.1039/c9lc01209e
Handle: http://hdl.handle.net/2445/172345
Type of production: Scientific paper
Format: Journal
Position of signature: 10
Total no. authors: 15

Impact source: ISI
Category: CHEMISTRY, MULTIDISCIPLINARY
Impact index in year of publication: 6.799
Journal in the top 25%: Yes

Position of publication: 37
No. of journals in the cat.: 179

Impact source: ISI
Category: CHEMISTRY, ANALYTICAL
Impact index in year of publication: 6.799
Journal in the top 25%: Yes
Position of publication: 9
No. of journals in the cat.: 83

Impact source: ISI
Category: INSTRUMENTS & INSTRUMENTATION
Impact index in year of publication: 6.799
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 64

Impact source: ISI
Category: BIOCHEMICAL RESEARCH METHODS
Impact index in year of publication: 6.799
Journal in the top 25%: Yes
Position of publication: 7
No. of journals in the cat.: 77

Impact source: ISI
Category: NANOSCIENCE & NANOTECHNOLOGY
Impact index in year of publication: 6.799
Journal in the top 25%: No
Position of publication: 34
No. of journals in the cat.: 107

10 Estévez-Priego, E.; Teller, S.; Granell, C; Arenas, A.; Soriano, J.Functional strengthening through synaptic scaling upon connectivity disruption in neuronal cultures. Network Neuroscience. 4 - 4, pp. 1160 - 1180. (United States of America): 2020. Available on-line at: <https://www.mitpressjournals.org/doi/full/10.1162/netn_a_00156>. ISSN 2472-1751
DOI: https://doi.org/10.1162/netn_a_00156
Handle: http://hdl.handle.net/2445/179459
Type of production: Scientific paper
Format: Journal
Position of signature: 5
Total no. authors: 5

Impact source: ISI
Category: NEUROSCIENCES
Impact index in year of publication: 4,625
Journal in the top 25%: No
Position of publication: 89
No. of journals in the cat.: 273

11 Gronning Hansen, Marita; Laterza, Cecilia; Palma-Tortosa, Sara; Kvist, Giedre; Monni, Emanuela; Tsupykov, Oleg; Tornero, Daniel; Uoshima, Naomi; Soriano, Jordi; Bengzon, Johan; Martino, Gianvito; Skibo, Galyna; Lindvall, Olle; Kokaia, Zaal. Grafted human pluripotent stem cell-derived cortical neurons integrate into adult human cortical neural circuitry. Stem Cells Translational Medicine. 9(11), pp. 1365 - 1377. (United States of America): John Wiley & Sons, 2020. ISSN 2157-6564
DOI: https://doi.org/10.1002/sctm.20-0134
Handle: http://hdl.handle.net/2445/179283
Type of production: Scientific paper
Format: Journal
Position of signature: 9
Total no. authors: 14

Impact source: ISI
Category: CELL & TISSUE ENGINEERING
Impact index in year of publication: 6.94
Journal in the top 25%: Yes
Position of publication: 6
No. of journals in the cat.: 29

12 Fernández-García, S.; Orlandi, J.G.; García-Díaz Barriga, G.A.; Rodríguez, M.J.; Masana, M.; Soriano, J.; Alberch, J.Deficits in coordinated neuronal activity and network topology are striatal hallmarks in Huntington's disease. Bmc Biology. 18, pp. 58. (United Kingdom): BioMed Central, 2020. ISSN 1741-7007
DOI: https://doi.org/10.1186/s12915-020-00794-4
Handle: http://hdl.handle.net/2445/171308
Type of production: Scientific paper
Format: Journal
Position of signature: 9

Total no. authors: 7

Impact source: ISI
Impact index in year of publication: 7.431
Position of publication: 7
Category: BIOLOGY
Journal in the top 25%: Yes
No. of journals in the cat.: 93

13 Ludl, A.-A.; Soriano, J.Impact of Physical Obstacles on the Structural and Effective Connectivity of in silico Neuronal Circuits. Frontiers in Computational Neuroscience. 14, (Switzerland): Frontiers Media, 2020. ISSN 1662-5188

DOI: https://doi.org/10.3389/fncom.2020.00077
Handle: http://hdl.handle.net/2445/175856
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 2

Impact source: ISI
Impact index in year of publication: 2.38
Position of publication: 213
Category: NEUROSCIENCES
Journal in the top 25%: No
No. of journals in the cat.: 273

Impact source: ISI
Impact index in year of publication: 2.38
Position of publication: 27
Category: MATHEMATICAL & COMPUTATIONAL BIOLOGY
Journal in the top 25%: No
No. of journals in the cat.: 58

14 Calatayud, C.; Carola, G.; Fernández-Carasa, I.; Valtorta, M.; Jiménez-Delgado, S.; Díaz, M.; Soriano, J.; Cappelletti, G.; García-Sancho, J.; Raya, Á.; Consiglio, A.CRISPR/Cas9-mediated generation of a tyrosine hydroxylase reporter iPSC line for live imaging and isolation of dopaminergic neurons. Scientific Reports. 9, pp. 6811. (United Kingdom): Nature Publishing Group, 2019. ISSN 2045-2322

DOI: https://doi.org/10.1038/s41598-019-43080-2
Handle: http://hdl.handle.net/2445/148117
Type of production: Scientific paper
Format: Journal
Position of signature: 7
Total no. authors: 11

Impact source: ISI
Impact index in year of publication: 3.998
Position of publication: 17
Category: MULTIDISCIPLINARY SCIENCES
Journal in the top 25%: Yes
No. of journals in the cat.: 71

15 Angelique di Domenico; Giulia Carola; Carles Calatayud; Meritxell Pons-Espinal; Juan Pablo Muñoz; Yvonne Richaud-Patin; Irene Fernandez-Carasa; Marta Gut; Armida Faella; Janani Parameswaran; Jordi Soriano; Isidro Ferrer; Eduardo Tolosa; Antonio Zorzano; Ana Maria Cuervo; Angel Raya; Antonella Consiglio. Patient-specific iPSC-derived astrocytes contribute to non-cell-autonomous neurodegeneration in Parkinson's disease. Stem Cell Reports. 12 - 2, pp. 213 - 229. (United States of America): Elsevier, 2019. ISSN 2213-6711

DOI: https://doi.org/10.1016/j.stemcr.2018.12.011
Handle: http://hdl.handle.net/2445/141851
Type of production: Scientific paper
Format: Journal
Position of signature: 11
Total no. authors: 17

Impact source: ISI
Impact index in year of publication: 6.032
Position of publication: 43
Category: CELL BIOLOGY
Journal in the top 25%: Yes
No. of journals in the cat.: 195

Impact source: ISI
Impact index in year of publication: 6.032
Category: CELL & TISSUE ENGINEERING
Journal in the top 25%: Yes

Position of publication: 5 **No. of journals in the cat.:** 29

16 Faci-Lázaro, S.; Soriano, J.; Gómez-Gardeñes, J.Impact of targeted attack on the spontaneous activity in spatial and biologically-inspired neuronal networks. Chaos. 29, (United States of America): American Institute of Physics (AIP), 2019. ISSN 1054-1500

Type of production: Scientific paper **Format:** Journal
Position of signature: 11
Total no. authors: 17

Impact source: ISI **Category:** MATHEMATICS, APPLIED
Impact index in year of publication: 2.832 **Journal in the top 25%:** Yes
Position of publication: 16 **No. of journals in the cat.:** 260

Impact source: ISI **Category:** PHYSICS, MATHEMATICAL
Impact index in year of publication: 2.832 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 55

17 Tibau, E.; Soriano, J.Analysis of spontaneous activity in neuronal cultures through recurrence plots: impact of varying connectivity. European Physical Journal-Special Topics. 227, pp. 999 - 1014. (France): EDP Sciences, 2018. ISSN 1951-6355

Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 2

Impact source: ISI **Category:** PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 1.66 **Journal in the top 25%:** No
Position of publication: 39 **No. of journals in the cat.:** 81

18 Yamamoto, H.; Moriya, S.; Ide, K.; Hayakawa, T.; Akima, H.; Sato, S.; Kubota, S.; Tanii, T.; Niwano, M.; Teller, S.; Soriano, J.; Hirano-Iwata, A.Impact of modular organization on dynamical richness in cortical networks. Science Advances. 4 - 11, (United States of America): American Association for the Advancement of Science, 2018. Available on-line at: <http://advances.sciencemag.org/content/4/11/eaau4914>. ISSN 2375-2548

DOI: https://doi.org/10.1126/sciadv.aau4914
Type of production: Scientific paper **Format:** Journal
Position of signature: 11
Total no. authors: 12

Impact source: ISI **Category:** MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 12.804 **Journal in the top 25%:** Yes
Position of publication: 4 **No. of journals in the cat.:** 69

19 García-Díaz Barriga, G.; Giralt, A.; Anglada-Huguet, M.; Gaja-Capdevila, N.; Orlandi, J.G.; Soriano, J.; Canals, J.M.; Alberch, J.7,8 Dihydroxyflavone ameliorates cognitive and motor deficits in a Huntington's disease mouse model through specific activation of the PLCγ1 pathway. Human Molecular Genetics. 26 - 16, pp. 3144 - 3160. (United Kingdom): Oxford University Press, 2017. ISSN 0964-6906

DOI: https://doi.org/10.1093/hmg/ddx198
Type of production: Scientific paper **Format:** Journal
Position of signature: 6
Total no. authors: 8

Impact source: ISI **Category:** BIOCHEMISTRY & MOLECULAR BIOLOGY
Impact index in year of publication: 4.902 **Journal in the top 25%:** Yes
Position of publication: 53 **No. of journals in the cat.:** 293

Impact source: ISI
Impact index in year of publication: 4.902
Position of publication: 31
Category: GENETICS & HEREDITY
Journal in the top 25%: Yes
No. of journals in the cat.: 171

20 Hernández-Navarro, L; Orlandi, J.G.; Cerruti, B.; Vives, E.; Soriano, J.Dominance of metric correlations in two-dimensional neuronal cultures described through a Random Field Ising Model. Physical Review Letters. 118 - 20, (United States of America): American Physical Society, 2017. ISSN 0031-9007
DOI: https://doi.org/10.1103/PhysRevLett.118.208101
Handle: http://hdl.handle.net/2445/122334
Type of production: Scientific paper
Format: Journal
Position of signature: 5
Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 8.839
Position of publication: 6
Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 78

21 Teller, S; Tahirbegi, I.B; Mir, M; Samitier, J; Soriano, J. Magnetite-Amyloid-beta deteriorates activity and functional organization in an in vitro model for Alzheimer's disease. Scientific Reports. 5 - 17261, (United Kingdom): Nature Publishing Group, 2015. ISSN 2045-2322
DOI: https://doi.org/10.1038/srep17261
Handle: http://hdl.handle.net/2445/101708
Type of production: Scientific paper
Format: Journal
Position of signature: 4
Total no. authors: 5
Impact source: ISI
Impact index in year of publication: 5.228
Position of publication: 7
Category: MULTIDISCIPLINARY SCIENCES
Journal in the top 25%: Yes
No. of journals in the cat.: 63

22 Fernández-Santiago, R.; Carballo-Carbajal, I.; Castellano, G.; Torrent, R.; Richaud, Y.; Sánchez-Danés, A.; Vilarrasa-Blasi, R.; Sánchez-Pla, A.; Mosquera, J.L.; Soriano, J.; López-Barneo, J.; Canals, J.M.; Alberch, J.; Raya, Á.; Vila, M.; Consiglio, A.; Martín-Subero, J.I.; Ezquerra, M.; Tolosa, E.Aberrant epigenome in iPSC-derived dopaminergic neurons from Parkinson's disease patients. EMBO Molecular Medicine. 7 - 12, pp. 1529 - 1546. (United Kingdom): EMBO Press, 2015. ISSN 1757-4676
DOI: https://doi.org/10.15252/emmm.201505439
Type of production: Scientific paper
Format: Journal
Position of signature: 9
Total no. authors: 18
Impact source: ISI
Impact index in year of publication: 9.547
Position of publication: 7
Category: MEDICINE, RESEARCH & EXPERIMENTAL
Journal in the top 25%: Yes
No. of journals in the cat.: 124

23 Fernàndez-Castillo, N.; Cabana-Domínguez, J.; Soriano, J.; Sànchez-Mora, C.; Roncero, C.; Grau-López, L.; Ros-Cucurull, E.; Daigre, C.; van Donkelaar, M.M.J.; Franke, B.; Casas, M.; Ribasés, M.; Cormand, B.Transcriptomic and genetic studies identify NFAT5 as a candidate gene for cocaine dependence. Translational Psychiatry. 5 - e667, (United States of America): Nature Publishing Group, 2015. ISSN 2158-3188
DOI: https://doi.org/10.1038/tp.2015.158
Handle: http://hdl.handle.net/2445/100508
Type of production: Scientific paper
Format: Journal
Position of signature: 3
Total no. authors: 13

Impact source: ISI
Impact index in year of publication: 5.538
Position of publication: 16
Category: PSYCHIATRY (SCIENCE ED.)
Journal in the top 25%: Yes
No. of journals in the cat.: 142

24 Canals, I.; Soriano, J.; Orlandi, J.G.; Torrent, R.; Richaud-Patin, Y.; Jiménez-Delgado, S.; Merlin, S.; Follenzi, A.; Consiglio, A.; Vilageliu. L.; Grinberg, D.; Raya, A.Activity and high-order effective connectivity alterations in Sanfilippo C patient-specific neuronal networks. Stem Cell Reports. 5 - 4, pp. 546 - 557. (United States of America): Elsevier, 2015. ISSN 2213-6711
DOI: https://doi.org/10.1016/j.stemcr.2015.08.016
Handle: http://hdl.handle.net/2445/179712
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 12

Impact source: ISI
Impact index in year of publication: 7.023
Position of publication: 30
Category: CELL BIOLOGY
Journal in the top 25%: Yes
No. of journals in the cat.: 187

Impact source: ISI
Impact index in year of publication: 7.023
Position of publication: 2
Category: CELL & TISSUE ENGINEERING
Journal in the top 25%: Yes
No. of journals in the cat.: 21

25 Soriano, J.; Casademunt, J.Neuronal cultures: The brain's complexity and non-equilibrium physics, all in a dish. Contributions to Science. 11 - 2, pp. 225 - 235. (Spain): Institut d'Estudis Catalans, 2015. Available on-line at: <http://revistes.iec.cat/index.php/CtS/article/view/142175>. ISSN 1575-6343
Type of production: Scientific paper
Format: Journal
Position of signature: 1

26 Teller, S.; Granell, C.; De Domenico, M.; Soriano, J.; Gomez, S.; Arenas, A.Emergence of assortative mixing between clusters of cultured neurons. PLoS Computational Biology. 10 - 9, (United States of America): Public Library of Science (PLoS), 2014. Available on-line at: <http://www.ploscompbiol.org/article/info%3Adoi%2F10.1371%2Fjournal.pcbi.1003796>. ISSN 1553-734X
DOI: https://doi.org/10.1371/journal.pcbi.1003796
Handle: http://hdl.handle.net/2445/58593
Type of production: Scientific paper
Format: Journal
Position of signature: 4
Total no. authors: 6

Impact source: ISI
Impact index in year of publication: 4.62
Position of publication: 11
Category: BIOCHEMICAL RESEARCH METHODS
Journal in the top 25%: Yes
No. of journals in the cat.: 79

Impact source: ISI
Impact index in year of publication: 4.62
Position of publication: 4
Category: MATHEMATICAL & COMPUTATIONAL BIOLOGY
Journal in the top 25%: Yes
No. of journals in the cat.: 57

27 Orlandi, J.G.; Stetter, O.; Soriano, J.; Geisel, T.; Battaglia, D.Transfer entropy reconstruction and labeling of neuronal connections from simulated calcium imaging. PLoS One. 9 - 6, (United States of America): Public Library of Science (PLoS), 2014. Available on-line at: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0098842>. ISSN 1932-6203
DOI: https://doi.org/10.1371/journal.pone.0098842
Handle: http://hdl.handle.net/2445/55769

Type of production: Scientific paper
Format: Journal
Position of signature: 3
Total no. authors: 5
Impact source: ISI
Category: MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 3.234
Journal in the top 25%: Yes
Position of publication: 9
No. of journals in the cat.: 57

28 Schmeltzer, C.; Soriano, J.; Sokolov, I.M.; Rudiger, S.Percolation of spatially constrained Erdos-R enyi networks with degree correlations. Physical Review E. 89, (United States of America): American Physical Society, 2014. Available on-line at: <http://journals.aps.org/pre/pdf/10.1103/PhysRevE.89.012116>. ISSN 1539-3755
DOI: https://doi.org/10.1103/PhysRevE.89.012116
Handle: http://hdl.handle.net/2445/50943
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 4
Impact source: ISI
Category: PHYSICS, FLUIDS & PLASMAS
Impact index in year of publication: 2.288
Journal in the top 25%: No
Position of publication: 9
No. of journals in the cat.: 31

Impact source: ISI
Category: PHYSICS, MATHEMATICAL
Impact index in year of publication: 2.288
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 54

29 Tibau, E.; Valencia, M.; Soriano, J.Identification of neuronal network properties from the spectral analysis of calcium imaging signals in neuronal cultures. Frontiers in Neural Circuits. 7 - 199, pp. 1 - 16. (Switzerland): Frontiers Media, 2013. Available on-line at: <http://journal.frontiersin.org/Journal/10.3389/fncir.2013.00199/full>. ISSN 1662-5110
DOI: https://doi.org/10.3389/fncir.2013.00199
Handle: http://hdl.handle.net/2445/53466
Type of production: Scientific paper
Format: Journal
Position of signature: 3
Total no. authors: 3
Impact source: ISI
Category: NEUROSCIENCES
Impact index in year of publication: 2.95
Journal in the top 25%: No
Position of publication: 124
No. of journals in the cat.: 251

30 Orlandi, J.G.; Soriano, J.; Alvarez-Lacalle, E.; Teller, S.; Casademunt, J.Noise focusing and the emergence of coherent activity in neuronal cultures. Nature Physics. 9, pp. 582 - 590. (United Kingdom): Nature Publishing Group, 2013. ISSN 1745-2473
DOI: https://doi.org/10.1038/nphys2686
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 5
Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 20.603
Journal in the top 25%: Yes
Position of publication: 3
No. of journals in the cat.: 77

31 Gamba, A.; Nicodemi, M.; Soriano, J.; Ott, A.Critical Behavior and Axis Defining Symmetry Breaking in Hydra Embryonic Development. Physical Review Letters. 108 - 15, (United States of America): American Physical Society, 2012. ISSN 0031-9007

DOI: https://doi.org/10.1103/PhysRevLett.108.158103
Handle: http://hdl.handle.net/2445/46884
Type of production: Scientific paper
Format: Journal
Position of signature: 3
Total no. authors: 4

Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.943
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 83

32 Stetter, O.; Battaglia, D.; Soriano, J.; Geisel, T.Model-Free Reconstruction of Excitatory Neuronal Connectivity from Calcium Imaging Signals. PLoS Computational Biology. 8 - 8, (United States of America): Public Library of Science (PLoS), 2012. ISSN 1553-734X
DOI: https://doi.org/10.1371/journal.pcbi.1002653
Handle: http://hdl.handle.net/2445/46885
Type of production: Scientific paper
Format: Journal
Position of signature: 3
Total no. authors: 4

Impact source: ISI
Category: BIOCHEMICAL RESEARCH METHODS
Impact index in year of publication: 4,867
Journal in the top 25%: Yes
Position of publication: 11
No. of journals in the cat.: 75

Impact source: ISI
Category: MATHEMATICAL & COMPUTATIONAL BIOLOGY
Impact index in year of publication: 4,867
Journal in the top 25%: Yes
Position of publication: 4
No. of journals in the cat.: 47

33 Cohen, O.; Keselman, A.; Moses, E.; Rodríguez-Martínez, M.; Soriano, J.; Tlusty, T.Quorum percolation in living neural networks. EPL. 89, pp. 18008. (France): Institute of Physics (IOP), 2010. ISSN 0295-5075
Type of production: Scientific paper
Format: Journal
Position of signature: 5
Total no. authors: 6

Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.753
Journal in the top 25%: Yes
Position of publication: 16
No. of journals in the cat.: 79

34 M. Rodríguez-Martínez; J. Soriano; T. Tlusty; I. Furman; Y. Pilpel. Messenger RNA fluctuations and regulatory RNAs shape the dynamics of a negative feedback loop. Physical Review E. 81, pp. 031924. (United States of America): American Physical Society, 2010. ISSN 1539-3755
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 5

Impact source: ISI
Category: PHYSICS, FLUIDS & PLASMAS
Impact index in year of publication: 2.352
Journal in the top 25%: No
Position of publication: 8
No. of journals in the cat.: 31

Impact source: ISI
Category: PHYSICS, MATHEMATICAL
Impact index in year of publication: 2.352
Journal in the top 25%: Yes
Position of publication: 4
No. of journals in the cat.: 54

Source of citations: WOS
Citations: 5

35 S. Jacobi; J. Soriano; E. Moses. BDNF and NT-3 increase velocity of activity front propagation in uni-dimensional hippocampal cultures. Journal of Neurophysiology. 104, pp. 2932 - 2939. (United States of America): American Physiological Society, 2010. ISSN 0022-3077

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 3

Impact source: ISI
Category: NEUROSCIENCES
Impact index in year of publication: 3.114
Journal in the top 25%: No
Position of publication: 100
No. of journals in the cat.: 237

Impact source: ISI
Category: PHYSIOLOGY
Impact index in year of publication: 3.114
Journal in the top 25%: No
Position of publication: 28
No. of journals in the cat.: 78

Source of citations: WOS
Citations: 2

36 Soriano, J.; Braslavsky, I.; Xu, D.; Krichevsky, O.; Stavans, J.Universality of Persistence Exponents in Two-Dimensional Ostwald Ripening. Physical Review Letters. 103 - 22, pp. 226101. (United States of America): American Physical Society, 2009. ISSN 0031-9007

DOI: https://doi.org/10.1103/PhysRevLett.103.226101
Handle: http://hdl.handle.net/2445/135286
Type of production: Scientific paper
Format: Journal
Position of signature: 1
Total no. authors: 5

Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.323
Journal in the top 25%: Yes
Position of publication: 6
No. of journals in the cat.: 71

Source of citations: WOS
Citations: 4

37 J. Soriano; S. Rüdiger; P.A. Pullarkat; A. Ott. Mechano-genetic coupling of Hydra symmetry breaking and driven Turing instability mode. Biophysical Journal. 96, pp. 1649 - 1660. (United States of America): Biophysical Society, 2009. ISSN 0006-3495

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Total no. authors: 4

Impact source: ISI
Category: BIOPHYSICS
Impact index in year of publication: 4.39
Journal in the top 25%: Yes
Position of publication: 10
No. of journals in the cat.: 74

Source of citations: WOS
Citations: 4

38 S. Jacobi; J. Soriano; M. Segal; E. Moses. BDNF and NT-3 increase excitatory input connectivity in rat hippocampal cultures. European Journal of Neuroscience. 30, pp. 998 - 1010. (United Kingdom): John Wiley & Sons, 2009. ISSN 0953-816X

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 4

Impact source: ISI
Category: NEUROSCIENCES
Impact index in year of publication: 3.418
Journal in the top 25%: No
Position of publication: 87
No. of journals in the cat.: 231

Source of citations: WOS **Citations:** 5

39 M. Kücken; J. Soriano; P.A. Pullarkat; A. Ott; E.M. Nicola. An osmoregulatory basis for shape oscillations in regenerating Hydra. Biophysical Journal. 95, pp. 978 - 985. (United States of America): Biophysical Society, 2008. ISSN 0006-3495

Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5

Impact source: ISI **Category:** BIOPHYSICS
Impact index in year of publication: 4.683 **Journal in the top 25%:** Yes
Position of publication: 9 **No. of journals in the cat.:** 70

Source of citations: WOS **Citations:** 5

40 J. Soriano; M. Rodríguez-Martínez; T. Tlusty; E. Moses. Development of input connections in neural cultures. Proceedings of the National Academy of Sciences of the United States of America - PNAS. 105, pp. 13758 - 13763. (United States of America): National Academy of Sciences, 2008. ISSN 0027-8424

Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 4

Impact source: ISI **Category:** MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 9.38 **Journal in the top 25%:** Yes
Position of publication: 3 **No. of journals in the cat.:** 42

Source of citations: WOS **Citations:** 26

41 J. Soriano; C. Colombo; A. Ott. Hydra Molecular Network Reaches Criticality at the Symmetry-Breaking Axis-Defining Moment. Physical Review Letters. 97 - 25, pp. 258102. (United States of America): American Physical Society, 2006. ISSN 0031-9007

DOI: https://doi.org/10.1103/PhysRevLett.97.258102
Handle: http://hdl.handle.net/2445/135287
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 3

Impact source: ISI **Category:** PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.072 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 68

Source of citations: WOS **Citations:** 6

42 I. Breskin; J. Soriano; E. Moses; T. Tlusty. Percolation in Living Neural Networks. Physical Review Letters. 97 - 18, pp. 188102. (United States of America): American Physical Society, 2006. ISSN 0031-9007

DOI: https://doi.org/10.1103/PhysRevLett.97.188102
Handle: http://hdl.handle.net/2445/135297
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4

Impact source: ISI **Category:** PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.072 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 68

Source of citations: WOS **Citations:** 41

43 J. Soriano; A. Mercier; A. Planet; A. Hernández-Machado; M.A. Rodríguez; J. Ortín. Anomalous Roughening of Viscous Fluid Fronts in Spontaneous Imbibition. Physical Review Letters. 95 - 10, pp. 104501. (United States of America): American Physical Society, 2005. ISSN 0031-9007

DOI: https://doi.org/10.1103/PhysRevLett.95.104501

Handle: http://hdl.handle.net/2445/135319

Type of production: Scientific paper **Format:** Journal

Position of signature: 1

Total no. authors: 6

Impact source: ISI **Category:** PHYSICS, MULTIDISCIPLINARY

Impact index in year of publication: 7.489 **Journal in the top 25%:** Yes

Position of publication: 4 **No. of journals in the cat.:** 69

Source of citations: WOS **Citations:** 26

44 Soriano, J.; Ortín, J.; Hernández-Machado, A.Anomalous roughening in experiments of interfaces in Hele-Shaw flows with strong quenched disorder. Physical Review E. 67, (United States of America): American Physical Society, 2003. ISSN 1539-3755

Handle: http://hdl.handle.net/2445/18699

Type of production: Scientific paper **Format:** Journal

Position of signature: 1

Total no. authors: 3

Impact source: ISI **Category:** PHYSICS, FLUIDS & PLASMAS

Impact index in year of publication: 2.202 **Journal in the top 25%:** Yes

Position of publication: 4 **No. of journals in the cat.:** 21

Impact source: ISI **Category:** PHYSICS, MATHEMATICAL

Impact index in year of publication: 2.202 **Journal in the top 25%:** Yes

Position of publication: 1 **No. of journals in the cat.:** 31

Source of citations: WOS **Citations:** 20

45 Soriano, J.; Ortín, J.; Hernández-Machado, A.Experiments of interfacial roughening of Hele-Shaw flows with weak quenched disorder. Physical Review E. 66, (United States of America): American Physical Society, 2002. ISSN 1539-3755

Handle: http://hdl.handle.net/2445/18771

Type of production: Scientific paper **Format:** Journal

Position of signature: 1

Total no. authors: 3

Impact source: ISI **Category:** PHYSICS, FLUIDS & PLASMAS

Impact index in year of publication: 2.397 **Journal in the top 25%:** Yes

Position of publication: 2 **No. of journals in the cat.:** 20

Impact source: ISI **Category:** PHYSICS, MATHEMATICAL

Impact index in year of publication: 2.397 **Journal in the top 25%:** Yes

Position of publication: 1 **No. of journals in the cat.:** 29

Source of citations: WOS **Citations:** 35

46 Soriano, J.; Ramasco, J.J.; Rodríguez, M.A.; Hernández-Machado, A.; Ortín, J.Anomalous roughening of Hele-Shaw flows with quenched disorder. Physical Review Letters. 89, (United States of America): American Physical Society, 2002. ISSN 0031-9007

Handle: http://hdl.handle.net/2445/12826

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Total no. authors: 5

Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.323
Journal in the top 25%: Yes
Position of publication: 4
No. of journals in the cat.: 68

Source of citations: WOS
Citations: 40

47 Hernández-Machado, A; Soriano, J; Lacasta, A. M.; Rodríguez, M. A.; Ramírez-Piscina, L.; Ortín, J.Interface roughening in Hele-Shaw flows with quenched disorder: experimental and theoretical results. Europhysics Letters (EPL). 55, pp. 194 - 200. (France): Institute of Physics (IOP), 2001. ISSN 0295-5075

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 6

Impact source: ISI
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.304
Journal in the top 25%: Yes
Position of publication: 8
No. of journals in the cat.: 66

Source of citations: WOS
Citations: 42

48 Carrillo, Ll.; Soriano, J.; Ortín, J.Interfacial instabilities of a fluid annulus in a rotating Hele-Shaw cell. Physics of Fluids. 12, pp. 1685 - 1698. (United States of America): American Institute of Physics (AIP), 2000. ISSN 1070-6631

Handle: http://hdl.handle.net/2445/24906

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 3

Impact source: ISI
Category: MECHANICS
Impact index in year of publication: 1.442
Journal in the top 25%: Yes
Position of publication: 6
No. of journals in the cat.: 91

Impact source: ISI
Category: PHYSICS, FLUIDS & PLASMAS
Impact index in year of publication: 1.442
Journal in the top 25%: No
Position of publication: 8
No. of journals in the cat.: 19

Source of citations: WOS
Citations: 34

49 Carrillo, Ll.; Soriano, J.; Ortín, J.Radial displacement of a fluid annulus in a rotating Hele-Shaw cell. Physics of Fluids. 11 - 4, pp. 778 - 785. (United States of America): American Institute of Physics (AIP), 1999. Available on-line at: <http://scitation.aip.org/content/aip/journal/pof2/11/4/10.1063/1.869950>. ISSN 1070-6631

DOI: https://doi.org/10.1063/1.869950
Handle: http://hdl.handle.net/2445/58824

Type of production: Scientific paper
Format: Journal
Position of signature: 2
Total no. authors: 3

Impact source: ISI
Category: MECHANICS
Impact index in year of publication: 1.42
Journal in the top 25%: Yes
Position of publication: 9
No. of journals in the cat.: 89

Impact source: ISI
Impact index in year of publication: 1.42
Position of publication: 8
Category: PHYSICS, FLUIDS & PLASMAS
Journal in the top 25%: No
No. of journals in the cat.: 19
Source of citations: WOS
Citations: 33

50 Sendiña, I.; Soriano, J.Cultivos neuronales: sistema modelo para comprender la dinámica y la connectividad en redes. Conectividad funcional y anatómica en el cerebro humano. pp. 103 - 113. (Spain): Elsevier, 2015. ISBN 978-8490225257
Type of production: Book chapter
Format: Book
Total no. authors: 2

51 J.-P. Eckman; O. Feinerman; L. Gruendlinger; E. Moses; J. Soriano; T. Tlusty. The physics of living neural networks. Physics Reports-Review Section of Physics Letters. 449, pp. 54 - 76. (Holland): Elsevier B.V., 2007. ISSN 0370-1573
Type of production: Review
Format: Journal
Position of signature: 5
Total no. authors: 6
Impact source: ISI
Impact index in year of publication: 20.263
Position of publication: 2
Category: PHYSICS, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 69
Source of citations: WOS
Citations: 30

52 Tornero, D.; Soriano, J.Neuronal cultures to study the brain and neurological disorders. (United Kingdom): Research Outreach, 2020. Available on-line at: <http://doi.org/10.32907/RO-117-7477>.
Type of production: News articles
Format: Book
Total no. authors: 2

53 Soriano, J.; Casademunt, J. Cultius neuronals: un sistema model per entendre la complexitat del cervell. Revista de Física. 5 - 2, pp. 29 - 37. (Spain): Societat Catalana de Física, 2015.
Legal deposit: B-32.096/1991
Type of production: News articles
Format: Book
Total no. authors: 2

54 Casademunt, J.; Orlandi, J.G.; Soriano, J.Dinámica colectiva de las redes neuronales. Revista 'Mente y Cerebro'. 67, pp. 49 - 50. (Spain): Prensa Científica, 2014. Available on-line at: <http://www.investigacionyciencia.es/mente-y-cerebro/numeros/2014/7/dinmica-colectiva-de-las-redes-neuronales-12228>.
Type of production: News articles
Format: Book
Total no. authors: 3

55 Soriano, J.Das Gehirn als physikalische Größe [El cervell com una gran eïna física]. (Germany): 2011. Available on-line at: <http://www.faz.net/artikel/C31277/gehirnforschung-das-gehirn-als-physikalische-groesse-30462757.html>.
Type of production: News articles
Format: Book
Total no. authors: 1

56 Battaglia, D; Guyon, I.; Lemaire, V.; Soriano, J.Connectomics Challenge. Springer Series on Challenges in Machine Learning. (United States of America): Springer International Publishing AG, 2017. Available on-line at: <http://www.jmlr.org/proceedings/papers/v46/>. ISBN ISBN 978-3-319-53
Type of production: Editor
Format: Book

Total no. authors: 4

57 Teller, Sara; Soriano, Jordi. Experiments In Clustered Neuronal Networks: A Paradigm for Complex Modular Dynamics. AIP Conference Proceedings. 1738, (United States of America): American Institute of Physics (AIP), 2016. ISSN 0094-243X
DOI: https://doi.org/10.1063/1.4951998
Type of production: Proceeding **Format:** Journal
Position of signature: 0
Total no. authors: 2

58 Teller, S.; Soriano, J.Experiments in clustered neuronal networks: A paradigm for complex modular dynamics. International Conference of Numerical Analysis and Applied Mathematics 2015. 1738, (United States of America): American Institute of Physics (AIP), 2016. ISBN 978-0-7354-1392-4
Type of production: Proceedings **Format:** Book
Total no. authors: 2

59 Battaglia, D; Guyon, I.; Lemaire, V.; Soriano, J.JMLR Volume 46: Neural connectomics workshop at ECML 2014. JMLR Volume 46. Boston(United States of America): The MIT Press, 2015. Available on-line at: <http://www.jmlr.org/proceedings/papers/v46/>. ISBN 1938-7228
Type of production: Editor **Format:** Book
Total no. authors: 4

60 Orlandi, J.G.; Ray, B.; Battaglia, D.; Guyon, I.; Lemaire, V.; Saeed, M.; Statnikov, A.; Stetter, O.; Soriano, J.First Connectomics Challenge: From Imaging to Connectivity. Journal of Machine Learning Research. 46, pp. 1 - 22. Boston(United States of America): The MIT Press, 2015. Available on-line at: <http://www.jmlr.org/proceedings/papers/v46/>. ISBN 1938-7228
Type of production: Proceedings **Format:** Book
Total no. authors: 10

61 Guyon, I.; Battaglia, D.; Guyon, A.; Lemaire, V; Orlandi, J.G.; Ray, B.; Saeed, M.; Soriano, J.; Statnikov, A.; Stetter, O.Design of the First Neuronal Connectomics Challenge: From Imaging to Connectivity. Neural Networks (IJCNN), 2014 International Joint Conference on. pp. 2600 - 2607. Beijing(China): IEEE Xplore, 2014. Available on-line at: <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6889913>. ISBN 978-1-4799-6627-1
Type of production: Proceedings **Format:** Book
Total no. authors: 10

62 Stetter, O.; Orlandi, J.G.; Soriano, J.; Battaglia, D.; Geisel, T.Network reconstruction from calcium imaging data of spontaneously bursting neuronal activity. BMC Neuroscience. 14 - 1, pp. 139. (United Kingdom): BioMed Central, 2013. ISSN 1471-2202
Type of production: Proceeding **Format:** Journal
Position of signature: 3
Total no. authors: 5
Impact source: ISI **Category:** NEUROSCIENCES
Impact index in year of publication: 3.04 **Journal in the top 25%:** No
Position of publication: 132 **No. of journals in the cat.:** 251

63 Orlandi, J.G.; Alvarez-Lacalle, E.; Teller S.; Soriano, J; Casademunt, J.The emergence of spontaneous activity in neuronal cultures, coherence from noise. BMC Neuroscience. 14 - 1, pp. 54. (United Kingdom): BioMed Central, 2013. ISSN 1471-2202
Type of production: Proceeding **Format:** Journal
Position of signature: 4
Total no. authors: 5

Impact source: ISI
Impact index in year of publication: 3.04
Position of publication: 132
Category: NEUROSCIENCES
Journal in the top 25%: No
No. of journals in the cat.: 251

64 Stetter, O.; Soriano, J.; Geisel, T; Battaglia, D.From structure to function, via dynamics. Physics, Computation, and the Mind --- Advances and Challenges at Interfaces. 1510, pp. 64 - 73. (United States of America): American Institute of Physics (AIP), 2013. ISBN 978-0-7354-1128-9
Type of production: Proceedings
Format: Book
Total no. authors: 4

65 Tibau, E.; Bendiksen, C.; Teller, S.; Amigó, N.; Soriano, J.Interplay Activity-connectivity: Dynamics in Patterned Neuronal Cultures. Physics, Computation, and the Mind --- Advances and Challenges at Interfaces. 1510, pp. 54 - 63. (United States of America): American Institute of Physics (AIP), 2013. ISBN 978-0-7354-1128-9
Type of production: Proceedings
Format: Book
Total no. authors: 5

66 Teller, S.; Soriano, J.Experiments on Clustered Neuronal Networks. Physics, Computation, and the Mind --- Advances and Challenges at Interfaces. 1510, pp. 244 - 246. (United States of America): American Institute of Physics (AIP), 2013. ISBN 978-0-7354-1128-9
Type of production: Proceedings
Format: Book
Total no. authors: 2

67 Orlandi, J.; Alvarez-Lacalle, E.; Soriano, J.; Casademunt, J.The emergence of spontaneous activity in neuronal cultures. Physics, Computation, and the Mind --- Advances and Challenges at Interfaces. 1510 - 5, pp. 25 - 27. (United States of America): American Institute of Physics (AIP), 2013. ISBN 978-0-7354-1128-9
Type of production: Proceedings
Format: Book
Total no. authors: 5

68 Orlandi, J.G.; Alvarez-Lacalle, E.; Teller, S.; Casademunt, J.; Soriano, J.The role of connectivity and noise in the emergence of spontaneous activity in cultured neuronal networks. Nonlinear Theory and Its Applications, IEICE. 1, pp. 547 - 550. IEICE TRANSACTIONS ON COMMUNICATIONS, 2012. ISSN 2185-4106
Type of production: Proceeding
Format: Journal
Position of signature: 5
Total no. authors: 5

69 Battaglia, D.; Soriano, J.; Stetter, O.Function follows dynamics, not (only) structure: from neural cultures to flexible information routing in the brain. Nonlinear Theory and Its Applications, IEICE. 1, pp. 551 - 554. IEICE TRANSACTIONS ON COMMUNICATIONS, 2012. ISSN 2185-4106
Type of production: Proceeding
Format: Journal
Position of signature: 2
Total no. authors: 3

70 Stetter, O.; Battaglia, D.; Soriano, J; Geisel, T.State-dependent network reconstruction from calcium imaging signals. BMC Neuroscience. 12 - 1, pp. 117. (United Kingdom): BioMed Central, 2011. ISSN 1471-2202
Type of production: Proceeding
Format: Journal
Position of signature: 3
Total no. authors: 4
Impact source: ISI
Impact index in year of publication: 3.04
Position of publication: 109
Category: NEUROSCIENCES
Journal in the top 25%: No
No. of journals in the cat.: 244

71 Soriano, J.; Breskin, I.; Mose, E.; Tlusty, T.Percolation approach to study connectivity in living neural networks. Cooperative behavior in neural systems. 887, pp. 96 - 106. (United States of America): American Institute of Physics (AIP), 2007. ISBN 978-0-7354-0390-1
Type of production: Proceedings **Format:** Book
Total no. authors: 4

Works submitted to national or international conferences

1 **Title of the work:** Tuning synchrony in living neuronal networks through neuroengineering
Name of the conference: BARCSYN
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Barcelona, Spain
Date of event: 2021
End date: 2021
Montalà-Flaquer, M.; Ide, K.; Fernández-López, C.; Yamamoto, H.; Hirano-Iwata, A.; Soriano, J.

2 **Title of the work:** Tuning the richness of dynamical patterns in living neuronal networks through neuroengineering
Name of the conference: Dynamics Days (virtual)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Niça, France
Date of event: 2021
End date: 2021
Montalà-Flaquer, M.; Ide, K.; Fernández-López, C.; Yamamoto, H.; Hirano-Iwata, A.; Soriano, J.

3 **Title of the work:** Tuning the richness of spontaneous activity patterns in neuronal cultures through engineering
Name of the conference: 9th RIEC International Symposium on Brain Functions and Brain Computer
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Sendai (virtual conference), Japan
Date of event: 2020
End date: 2020
Montalá, M.; Estévez-Priego, E.; Faci-Lázaro, S.; Gómez-Gardeñe, J.; Ludl, A.-A.; Soriano, J.

4 **Title of the work:** High throughput calcium imaging
Name of the conference: SCTN-Training Research School on Reprogramming and Molecular Biotechnology
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Milano (virtual conference), Italy
Date of event: 2020
End date: 2020
Soriano, J.

5 **Title of the work:** Mechanisms shaping dynamics and synchronization in modular neuronal cultures
Name of the conference: Meeting of the Spanish Research Network 'IBERSINC'
Type of event: Conference

Type of participation: Participatory - oral communication
City of event: La Laguna, Spain
Date of event: 2019
End date: 2019
Soriano, J.; Estévez, E.

6 **Title of the work:** Three-dimensional neuronal cultures: challenges and opportunities
Name of the conference: 7th RIEC International Symposium on Brain Functions and Brain Computer
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Sendai, Japan
Date of event: 2019
End date: 2019
Soriano, J.

7 **Title of the work:** Effective Connectivity in Neuronal Cultures: from Physics to Engineering and Medicine
Name of the conference: LANET2019: Latin American Conference on Complex Networks
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Cartagena de las Indias, Colombia
Date of event: 2019
End date: 2019
Soriano, J.; Estévez, E.; Ludl, A.

8 **Title of the work:** Engineering neuronal cultures: shaping brain complexity in a dish
Name of the conference: 4th workshop on Advanced Methods in Theoretical Neuroscience
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Göttingen, Germany
Date of event: 2019
End date: 2019
Soriano, J.

9 **Title of the work:** Inference of neuronal networks in three-dimensional cultures
Name of the conference: Society for Neuroscience
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: San Diego, United States of America
Date of event: 2018
End date: 2018
Ludl, A.A.; Estévez. E.; Soriano, J.

10 **Title of the work:** Inference of Neuronal Connections
Name of the conference: BARCCSYN - Barcelona Computational, Systems and Cognitive Neuroscience
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2018
End date: 2018
Ludl, A.A; Soriano, J.

11 **Title of the work:** Response to damage and recovering capability in clustered neuronal networks.
Name of the conference: BARCCSYN - Barcelona Computational, Systems and Cognitive Neuroscience
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2018
End date: 2018
Estévez, E.; Soriano, J.

12 **Title of the work:** Network Reconstruction for Brain Damage Repair
Name of the conference: VII Jornada COMPLEXITAT
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Castelldefels, Spain
Date of event: 2018
End date: 2018
Ludl, A.A.; Soriano, J.

13 **Title of the work:** Dynamics and Effective Connectivity in Neuronal Cultures: from Experiments to Medical Applications
Name of the conference: 6th RIEC International Symposium on Brain Functions and Brain Computer
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Sendai, Japan
Date of event: 2018
End date: 2018
Soriano, J.

14 **Title of the work:** Connectivity and dynamics in neuronal cultures: experiments, simulations, and medical applications
Name of the conference: 15th Experimental Chaos and Complexity Conference
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Madrid, Spain
Date of event: 2018
End date: 2018
Soriano, J.

15 **Title of the work:** Mechanisms shaping dynamics and synchronization in modular neuronal cultures
Name of the conference: Berstein Conference 2018
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Berlin, Germany
Date of event: 2018
End date: 2018
Soriano, J.

16 **Title of the work:** Neuronal cultures: a proxy for brain research at the mesoscopic scale?
Name of the conference: Brain Dynamics on Multiple Scales - Paradigms, their Relations, and Integrated Approaches
Type of event: Conference **Geographical area:** International

Type of participation: Participatory - oral communication
City of event: Dresden, Germany
Date of event: 2017
End date: 2017
Soriano, J.

17 **Title of the work:** Collective Dynamics in Neuronal Cultures: Activity Patterns, Propagation, and Resilience
Name of the conference: II Encuentro Red IBERSINC
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Madrid, Spain
Date of event: 2017
End date: 2017
Soriano, J.

18 **Title of the work:** Experiments in neuronal cultures: probing network resilience in a dish
Name of the conference: International Central Winter Conference on Network Science 2017 (NetSc-X 2017)
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Tel Aviv, Israel
Date of event: 2017
End date: 2017
Teller, S; Soriano, J.

19 **Title of the work:** Local Organizer of the IV summer school 'Photonics Meets Biology'
Name of the conference: IV Photonics meets Biology
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Tarragona, Spain
Date of event: 2017
End date: 2017
Soriano, J.

20 **Title of the work:** Experiments in living neuronal networks: dynamics and avalanche phenomena in a dish
Name of the conference: Avalanche Processes in Condensed Matter Physics and Beyond
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 2017
End date: 2017
Soriano, J.

21 **Title of the work:** Collective dynamics in neuronal cultures: activity patterns, propagation, and resilience
Name of the conference: 5th RIEC International Symposium on Brain Functions and Brain Computer
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Sendai, Japan
Date of event: 2017
End date: 2017
Soriano, J.

22 **Title of the work:** Experiments in neuronal cultures: connectivity, dynamics and complexity in a dish
Name of the conference: Topical problems of nonlinear wave physics (NWP-2017)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Moscú, Russia
Date of event: 2017
End date: 2017
Soriano, J.

23 **Title of the work:** Dynamics and effective connectivity in neuronal cultures: from experiments to medical applications
Name of the conference: LANET 2017 - Latin American Conference on Complex Networks 2017
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Puebla, Mexico
Date of event: 2017
End date: 2017
Soriano, J.

24 **Title of the work:** Calcium imaging in neuronal cultures: visualizing collective phenomena in a dish
Name of the conference: IV Photonics meets Biology
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Tarragona, Spain
Date of event: 2017
End date: 2017
Soriano, J.

25 **Title of the work:** Connectivity inference in neuronal cultures: experiments, simulations and application to neurological disorders
Name of the conference: International Conference on Applied Mathematics and Informatics
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Isla de San Andrés, Colombia
Date of event: 2017
End date: 2017
Soriano, J.

26 **Title of the work:** Neuronal cultures: exploring complex phenomena in a dish
Name of the conference: VIII Congreso Nacional BIFI
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Zaragoza, Spain
Date of event: 2017
End date: 2017
Soriano, J.

27 **Title of the work:** Assessing connectivity in living neuronal networks: experiments and model
Name of the conference: XXI Congreso de Física Estadística
Type of event: Conference

Type of participation: Participatory - invited/keynote talk
City of event: Sevilla, Spain
Date of event: 2017
End date: 2017
Hernández-Navarro, Ll.; Orlandi, J. G.; Casademunt, J.; Vives, E.; Soriano, J.

28 **Title of the work:** Analysis of multi-neuron fluorescence calcium imaging data. Introduction to Gephi
Name of the conference: IBERSINC winter school
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 2017
End date: 2017
Soriano, J.

29 **Title of the work:** clustered neuronal cultures: an experimental model system for complex modular dynamics and neurodegeneration
Name of the conference: 10th FENS Forum of Neuroscience 2016
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Copenhaguen, Denmark
Date of event: 2016
End date: 2016
Teller, S.; Soriano, J.

30 **Title of the work:** ICANN 2016 [Scientific and Reviewing Committee; Program and Workshop Committee]
Name of the conference: 25th International Conference on Artificial Neural Networks.
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Barcelona, Spain
Date of event: 2016
End date: 2016
Soriano, J.

31 **Title of the work:** Statistical physical approaches to infer connectivity in living neuronal networks
Name of the conference: 4th International conference on complex dynamical systems and applications
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Durgapur, India
Date of event: 2016
End date: 2016
Soriano, J.

32 **Title of the work:** Experiments in Clustered Neuronal Networks: A Paradigm for Complex Modular Dynamics
Name of the conference: International Workshop On Nonlinear Complex Dynamical Systems
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Kolkata, India
Date of event: 2016
End date: 2016

Soriano, J.

33 **Title of the work:** Exploring effective connectivity in neuronal cultures. Applications to medicine
Name of the conference: International School and Conference on Network Science
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Seoul, Republic of Korea
Date of event: 2016
End date: 2016
Soriano, J.

34 **Title of the work:** Living Neuronal Networks in a Dish: Network Science and Neurological Disorders
Name of the conference: 25th International Conference on Artificial Neural Networks.
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 2016
End date: 2016
Teller, S.; Tibau, E.; Soriano, J.

35 **Title of the work:** Neuronal cultures: complex dynamics and resilience in a dish
Name of the conference: Dynamics Days Latin America and the Caribbean
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Puebla, Mexico
Date of event: 2016
End date: 2016
Soriano, J.

36 **Title of the work:** Neuronal cultures: Exploring complex dynamics, resilience amd neurodegeneration
Name of the conference: Biologia computacional i sistemes complexos
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 2016
End date: 2016
Soriano, J.

37 **Title of the work:** The potential of neuronal cultures as experimental model system for biophysics and medicine
Name of the conference: Barcelona Seminar on Excitalbe Cells
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 2016
End date: 2016
Soriano, J.

38 **Title of the work:** Interplay activity-connectivity in living neuronal networks in vitro
Name of the conference: Congreso Red IBERSINC
Type of event: Conference

Type of participation: Participatory - invited/keynote talk
City of event: Tarragona, Spain
Date of event: 2016
End date: 2016
Soriano, J.

39 **Title of the work:** Criticality in the lab: investigating hydra regeneration and neuronal networks as critical phenomena
Name of the conference: Criticality in biology: a critical assessment
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Dresden, Germany
Date of event: 2015
End date: 2015
Organising entity: Max Planck Institute for the Physics of Complex systems **Type of entity:** University
Soriano, J.

40 **Title of the work:** Random field ising model in mean-field approach for cultured neuronal networks
Name of the conference: Barcelona Computational and Systems Neuroscience (BARCSYN 2015)
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2015
End date: 2015
Organising entity: Centre de Recerca Matemàtica (CRM) **Type of entity:** IPFSL - Administration
Hernández-Navarro, LI; , Soriano, J.

41 **Title of the work:** Experiments in clustered neuronal networks
Name of the conference: Barcelona Computational and Systems Neuroscience (BARCSYN 2015)
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2015
End date: 2015
Organising entity: Centre de Recerca Matemàtica (CRM) **Type of entity:** IPFSL - Administration
Teller, S.; Soriano, J.

42 **Title of the work:** Experiments in neuronal cultures: exploring open questions in physics and medicine
Name of the conference: Quantitative biomedicine for health and disease
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Bilbao, Spain
Date of event: 2015
End date: 2015
Organising entity: Basque Center for Applied Mathematics **Type of entity:** University
Soriano, J."Conference proceedings".

43 **Title of the work:** Exploring effective connectivity in neuronal cultures. applications to medicine
Name of the conference: International School and Conference on Network Science (NETSCI 2015)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Zaragoza, Spain
Date of event: 2015
End date: 2015
Soriano, J.

44 **Title of the work:** New strategies to study diseased neuronal circuits through functional connectivity
Name of the conference: UPM-BBVA Workshop on Recent Advance in Bioinformatics and Neuroscience
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Madrid, Spain
Date of event: 2015
End date: 2015
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
Soriano, J.

45 **Title of the work:** Clustered Neuronal Cultures: Complex Dynamics, Resilience and Adaptability in a Dish
Name of the conference: Complex Collective Dynamics: Brains and beyond
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Anacapri, Italy
Date of event: 2015
End date: 2015
Soriano, J.

46 **Title of the work:** Experiments in clustered neuronal networks: a paradigm for complex modular dynamics
Name of the conference: Dynamical Networks with Complex Links
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Rodes, Greece
Date of event: 2015
End date: 2015
Soriano, J."AIP Conference Proceedings".

47 **Title of the work:** Use of neuronal cultures as a model system for physics and neuroscience
Name of the conference: 2nd Barcelona neuron meeting for young researchers
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Barcelona, Spain
Date of event: 2014
End date: 2014
Soriano, J.

48 **Title of the work:** Clustered neuronal networks
Name of the conference: Causality, Information Transfer and Dynamical Networks
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster

City of event: Dresden, Germany
Date of event: 2014
End date: 2014
Organising entity: Centre National de la Recherche Scientifique (CNRS) **Type of entity:** Internacional Administration
Teller, S.; Granell, C.; Gómez, S; Arenas, A; Soriano, J.

49 **Title of the work:** Multi-neuron calcium imaging: exploring neuronal dynamics in cortical cultures
Name of the conference: Causality, information transfer and dynamical networks
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Dresden, Germany
Date of event: 2014
End date: 2014
Organising entity: Centre National de la Recherche Scientifique (CNRS) **Type of entity:** Internacional Administration
Tibau, E.; Valencia, M.; Soriano, J.

50 **Title of the work:** Neuronal cultures: opening new frontiers in physics and medicine
Name of the conference: Nonlinearity and Stochasticity in Emergent Phenomena II
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Cuernavaca, Mexico
Date of event: 2014
End date: 2014
Organising entity: Centro Internacional de Ciencias, A.C. **Type of entity:** Foundation
Soriano, J.

51 **Name of the conference:** The European Conference on Machine Learning
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee
City of event: Nancy, France
Date of event: 2014
End date: 2014
Organising entity: Centre National de la Recherche Scientifique (CNRS) **Type of entity:** Internacional Administration
Soriano, J."ECML Conference Proceedings".

52 **Title of the work:** Spontaneous activity in neuronal cultures: a model system for complex networks
Name of the conference: Complexity, chaos and dynamics in biological networks
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Cargèse, France
Date of event: 2014
End date: 2014
Organising entity: Centre National de la Recherche Scientifique (CNRS) **Type of entity:** Internacional Administration
Soriano, J.

53 **Title of the work:** Dynamics in clustered neuronal cultures: a versatile experimental system for complex networks
Name of the conference: Topical Problems of Nonlinear Wave Physics
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Nizhny Novgorod, Russia
Date of event: 2014
End date: 2014
Organising entity: Russian Academy of Sciences
Soriano, J."NWP Conference Proceedings".

54 **Title of the work:** Activity, connectivity and other challenges in living neuronal networks
Name of the conference: The European Conference on Machine Learning
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Nancy, France
Date of event: 2014
End date: 2014
Organising entity: Centre National de la Recherche Scientifique (CNRS) **Type of entity:** Internacional Administration
Soriano, J."ECML Conference Proceedings".

55 **Title of the work:** From Structure to Function in Neuronal Cultures: Experimental and Theoretical tools
Name of the conference: First Workshop on Interdisciplinary Approaches for the Study of Neuronal Oscillations
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Pamplona, Spain
Date of event: 2013
End date: 2013
Organising entity: Universidad de Navarra **Type of entity:** University
Soriano, J.

56 **Title of the work:** [Organization]
Name of the conference: Meeting biophysicists: First Workshop of the ECM Department and the Center for Genomics Regulation
Type of event: Conference
Type of participation: Organizing committee
City of event: Barcelona, Spain
Date of event: 2013
End date: 2013
Organising entity: Universitat de Barcelona **Type of entity:** University
Soriano, J.

57 **Title of the work:** Experiments on clustered neuronal cultures
Name of the conference: 8th FENS forum of European Neuroscience Societies
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2012
End date: 2012

Teller, S.; Orlandi, J.; Alvarez-Lacalle, E.; Casademunt, J.; Soriano, J.

58 **Title of the work:** The emergence of coherent activity in neuronal cultures
Name of the conference: 8th FENS forum of European Neuroscience Societies
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2012
End date: 2012
Orlandi, J.; Alvarez-Lacalle, E.; Teller, S.; Soriano, J.; Casademunt, J.

59 **Title of the work:** Experiments on clustered neuronal cultures
Name of the conference: FisEs 2012
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Palma de Mallorca, Spain
Date of event: 2012
End date: 2012
Teller, S.; Soriano, J."Conference Proceedings".

60 **Title of the work:** Assessing neuronal connectivity in cortical cultures from calcium imaging signals
Name of the conference: FisEs 2012
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Palma de Mallorca, Spain
Date of event: 2012
End date: 2012
Tibau, E.; Soriano, J."Conference Proceedings".

61 **Title of the work:** The emergence of coherent activity in living neuronal networks
Name of the conference: FisEs 2012
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Palma de Mallorca, Spain
Date of event: 2012
End date: 2012
Orlandi, J.; Alvarez-Lacalle, E.; Teller, S.; Soriano, J.; Casademunt, J."Conference Proceedings".

62 **Title of the work:** Interplay activity-connectivity: dynamics in patterned neuronal cultures
Name of the conference: 12th Granada Seminar (Physics, Computation, and the Mind)
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 2012
End date: 2012
Soriano, J."AIP Conference Proceedings".

63 **Title of the work:** [Organization of Special Session]
Name of the conference: 2012 International Symposium on Nonlinear Theory and its Applications
Type of event: Conference **Geographical area:** International
Type of participation: Organizing committee

City of event: Palma de Mallorca, Spain
Date of event: 2012
End date: 2012
Soriano, J."NOLTA Proceedings".

64 **Title of the work:** Identifying patterns of activity in living clustered neuronal networks
Name of the conference: II Encuentro IBERSINC: Dinámica y sincronización en redes
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: Zaragoza, Spain
Date of event: 2012
End date: 2012
Teller, S.; Soriano, J."Conference Proceedings".

65 **Title of the work:** Propagation of Activity Fronts in Patterned Neural Cultures.
Name of the conference: 9th Meeting of the German Society of Neuroscience
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Göttingen, Germany
Date of event: 2011
End date: 2011
Jordi Soriano; Shimshon Jacobi; Núria Amigó; Sara Teller; Jaume Casademunt; Elisha Moses. "Conference Proceedings".

66 **Title of the work:** Monitoring Dynamics in Living Neuronal Networks
Name of the conference: Barcelona Computational and Systems Neuroscience Meeting (BarcSyn)
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Barcelona, Spain
Date of event: 2011
End date: 2011
Sara Teller; Javier Orlandi; Enric Álvarez-Lacalle; Jaume Casademunt; Jordi Soriano. "Conference Proceedings".

67 **Title of the work:** [Organizing committee]
Name of the conference: Encuentro Red IBERSINC
Type of event: Conference
Type of participation: Organizing committee
City of event: Barcelona, Spain
Date of event: 2011
End date: 2011
J. Soriano; J. Martín Buldú.

68 **Title of the work:** Spontaneous Activity in Neuronal Cultures: Experiments and Model
Name of the conference: XI Congreso de la Sociedad de Biofísica de España
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Murcia, Spain
Date of event: 2011
End date: 2011

Jordi Soriano; Sara Teller; Javier Orlandi; Enric Álvarez; Jaume Casademunt; Elisha Moses. "Conference Proceedings".

69 **Title of the work:** Nucleation and Front Propagation in Patterned Neuronal Networks.
Name of the conference: 7th FENS forum of European Neuroscience, Amsterdam, July 3-7, 2010
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Amsterdam, Holland
Date of event: 2010
End date: 2010
Orlandi, J.G.; Alvarez-Lacalle, E.; Amigó, N.; Soriano, J.; Casademunt, J.

70 **Title of the work:** Experiments on patterned neuronal cultures
Name of the conference: 7th Forum of European Neuroscience
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Amsterdam, Holland
Date of event: 2010
End date: 2010
J. Soriano; N. Amigó; J. Casademunt; E. Moses.

71 **Title of the work:** Modelling Spontaneous Activity in Neuronal Cultures.
Name of the conference: IV Spanish Portuguese Biophysical Congress, Zaragoza, July 7-10, 2010
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Zaragoza, Spain
Date of event: 2010
End date: 2010
Orlandi, J.G.; Alvarez-Lacalle, E.; Amigó, N.; Soriano, J.; Casademunt, J.

72 **Title of the work:** Neuronal bursting adaptability induced by a global electric stimulation
Name of the conference: Spike-Frequency Adaptation in Neural Systems
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Dresden, Germany
Date of event: 2010
End date: 2010
J. Soriano.

73 **Title of the work:** Mechanical oscillations in Hydra: a driving force for axis-definition
Name of the conference: 3rd European Science Foundation Conference on Functional Dynamics
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Cascais, Portugal
Date of event: 2009
End date: 2009
J. Soriano; S. Rüdiger; P. Pullarkat; A. Ott.

74 **Title of the work:** Development of input connections in living neural networks
Name of the conference: 8th Meeting of the German Society of Neuroscience
Type of event: Conference **Geographical area:** International

Type of participation: 'Participatory - poster
City of event: Göttingen, Germany
Date of event: 2009
End date: 2009
J. Soriano; M. Rodriguez-Martinez; T. Tlusty; E. Moses.

75 **Title of the work:** A new experimental approach to characterize connectivity in living neural networks
Name of the conference: Synchronization and multiscale complex dynamics in the brain
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - invited/keynote talk
City of event: Dresden, Germany
Date of event: 2009
End date: 2009
J. Soriano.

76 **Title of the work:** Percolation in Living Neural Networks
Name of the conference: 7th Meeting of the German Society of Neuroscience
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Göttingen, Germany
Date of event: 2007
End date: 2007
J. Soriano; I. Breskin; E. Moses; T. Tlusty.

77 **Title of the work:** Development of Input Connections in Neural Cultures
Name of the conference: Anual Meeting of the Israel Society for Neuroscience
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Eilat, Israel
Date of event: 2007
End date: 2007
J. Soriano; M. Rodríguez-Martínez; T. Tlusty; E. Moses.

78 **Title of the work:** Axis establishing mechanisms in Hydra
Name of the conference: IV Workshop of the Training Network PHYNECS: non-equilibrium physics, from complex fluids to biological systems
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Rehovot, Israel
Date of event: 2006
End date: 2006
J. Soriano; A. Ott.

79 **Title of the work:** Percolation in Living Neural Networks
Name of the conference: IV Workshop of the Training Network PHYNECS: non-equilibrium physics, from complex fluids to biological systems
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Rehovot, Israel
Date of event: 2006
End date: 2006

J. Soriano; I. Breskin; E. Moses; T. Tlusty.

80 **Title of the work:** Percolation in Living Neural Networks
Name of the conference: 95th Statistical Mechanics Conference
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Rutgers, New Jersey, United States of America
Date of event: 2006
End date: 2006
J. Soriano; I. Breskin; E. Moses; T. Tlusty.

81 **Title of the work:** Percolation in Living Neural Networks
Name of the conference: 9th Granada Seminar - XIV Cngreso de Física Estadística (FISES)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Granada, Spain
Date of event: 2006
End date: 2006
J. Soriano; I. Breskin; E. Moses; T. Tlusty.

82 **Title of the work:** Percolation in Living Neural Networks
Name of the conference: Anual Meeting of the Israel Society for Neuroscience
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Eilat, Israel
Date of event: 2006
End date: 2006
J. Soriano; I. Breskin; E. Moses; T. Tlusty.

83 **Title of the work:** Symmetry-breaking and axis establishment in Hydra
Name of the conference: 69th Annual Meeting of the Deutsche Physikalische Gesellschaft (DPG)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Berlin, Germany
Date of event: 2005
End date: 2005
J. Soriano; S. Rüdiger; P. Pullarkat; M. Kücken; E. Nicola; T. Mai; A. Ott.

84 **Title of the work:** Symmetry-breaking and axis formation in Hydra
Name of the conference: Hydra Developmental Biology
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Kiel, Germany
Date of event: 2005
End date: 2005
J. Soriano; S. Rüdiger; P. Pullarkat; M. Kücken; E. Nicola; T. Mai; A. Ott.

85 **Title of the work:** Axis formation in Hydra.
Name of the conference: III Workshop of the Training Network PHYNECS: non-equilibrium physics, from complex fluids to biological systems.
Type of event: Conference **Geographical area:** International

Type of participation: Participatory - oral communication
City of event: Cargèse, France
Date of event: 2004
End date: 2004
J. Soriano; A. Ott.

86 **Title of the work:** Reaggregation and axis formation in Hydra
Name of the conference: II Workshop of the Training Network PHYNECS: non-equilibrium physics, from complex fluids to biological systems.
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Sant Feliu de Guixols, Spain
Date of event: 2003
End date: 2003
J. Soriano; A. Ott.

87 **Title of the work:** Reaggregation and axis formation in Hydra.
Name of the conference: Hydra and the evolution of signalling pathways
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Tutzing, Germany
Date of event: 2003
End date: 2003
J. Soriano; A. Ott.

88 **Title of the work:** Evidencia experimental de rugosidad anómala en flujos de Hele-Shaw.
Name of the conference: II Workshop de la red temática 'Dinámicas no lineales de auto-organizacion espaciotemporal'
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Barcelona, Spain
Date of event: 2002
End date: 2002
J. Soriano; J. J. Ramasco; M. A. Rodriguez; A. Hernandez-Machado; J. Ortin.

89 **Title of the work:** Evidencia experimental de rugosidad anómala en flujos de Hele-Shaw.
Name of the conference: XI congreso de Física Estadística (FISES)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Tarragona, Spain
Date of event: 2002
End date: 2002
J. Soriano; J. J. Ramasco; M. A. Rodriguez; A. Hernandez-Machado; J. Ortin.

90 **Title of the work:** Anomalous roughening of Hele-Shaw flows with quenched disorder
Name of the conference: XXXI Winter Meeting on Statistical Physics
Type of event: Conference **Geographical area:** International
Type of participation: Participatory - oral communication
City of event: Taxco, Mexico
Date of event: 2002
End date: 2002

Hernandez Machado, A."Physical Review Letters 39, 026102-1-4 (2002)".

91 **Title of the work:** Experiments on Inteface Roughening in a Hele-Shaw flows with quenched disorder
Name of the conference: X Congreso de Física Estadística (FISES)
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Santiago de Compostela, Spain
Date of event: 2000
End date: 2000
J. Soriano; J. Ortín; A. Hernández-Machado.

92 **Title of the work:** Interfacial instabilities of a fluid annulus in a rotating Hele-Shaw cell
Name of the conference: Reunión Española de Física Estadística (FISES'99)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Santander, Spain
Date of event: 1999
End date: 1999
Carrillo, Ll.; Soriano, J.; Ortín, J.

93 **Title of the work:** Roughening in a Hele-Shaw flows with quenched disorder: theoretical and experimental results.
Name of the conference: Patterns, Noise and Chaos Workshop
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Leiden, Holland
Date of event: 1998
End date: 1998
A. Hernández-Machado; J. Soriano; A. Lacasta; M. A. Rodríguez; L. Ramírez-Piscina; J. Ortín.

94 **Title of the work:** Evolution of a Fluid Annulus in a Rotating Hele-Shaw Cell
Name of the conference: Patterns, non-linear dynamics and stochastic behaviour in spatially extended, complex systems.
Type of event: Conference **Geographical area:** International
Type of participation: 'Participatory - poster
City of event: Budapest, Hungary
Date of event: 1997
End date: 1997
L. Carrillo; J. Soriano; J. Ortín.

Works submitted to national or international seminars, workshops and/or courses

1 **Title of the work:** Approaches from physics of complex systems to model the brain in vitro
Name of the event: Conferencia invitada virtual al 'Instituto de Biocomputación y Física de Sistemas Complejos' (Zaragoza)
Reasons for participation: Upon invitation
City of event: Saragossa, Spain
Date of event: 12/11/2021
End date: 12/11/2021

2 **Title of the work:** Neuronal cultures as model systems: neuroengineering, complex networks and neurological disorders
Name of the event: Conferencia invitada al 'Centro de Tecnología Biomédica'
Reasons for participation: Upon invitation
City of event: Madrid, Spain
Date of event: 30/04/2021
End date: 30/04/2021

3 **Title of the work:** Overview of the MESOBRAIN Project and new industrial opportunities
Name of the event: Conference at the biotech company POIETIS (Bordeaux, France)
Reasons for participation: Speaker
City of event: Bordeaux, France
Date of event: 17/09/2019
End date: 17/09/2019

4 **Title of the work:** 1-week teaching and mentoring of students in the school 'Computational and Theoretical Models in Neuroscience'
Name of the event: Summer school
Reasons for participation: Speaker
City of event: Venecia, Italy
Date of event: 09/09/2019
End date: 09/09/2019

5 **Title of the work:** Genètica: Física o Biologia?
Name of the event: Conferència-debat per públic general al Centre Cívic Vil·la Urània, Barcelona.
Reasons for participation: Speaker
City of event: Barcelona, Spain
Date of event: 26/11/2018
End date: 26/11/2018

6 **Title of the work:** Connectivity and dynamics in neuronal cultures: from physical insights to medicine
Name of the event: Conferència invitada a la Universitat Paris-Diderot
Reasons for participation: Upon invitation
City of event: Paris, France
Date of event: 09/07/2018
End date: 09/07/2018

7 **Title of the work:** Connectivity and Dynamics in Neuronal Cultures: Experiments, Simulations, and Medical Applications
Name of the event: Conferència al Brain Science Institute, RIKEN Center for Science
Reasons for participation: Speaker
City of event: Tòquio, Japan
Date of event: 29/01/2018
End date: 29/01/2018

8 **Title of the work:** Connectivity inference in neuronal cultures: experiments, simulations and neurological disorders
Name of the event: Conferència invitada i escola a la Universidad Pedagógica y Tecnológica de Colombia
Reasons for participation: Upon invitation
City of event: Tunja, Colombia
Date of event: 07/12/2017

End date: 07/12/2017

9 **Title of the work:** Experiments, analysis tools and models in neuronal cultures: exploring complexity of neuronal networks in a dish
Name of the event: Escuela de invierno en Sistemas Complejos (Universidad Pedagógica y Tecnológica de Colombia)
Reasons for participation: Speaker
City of event: Tunja, Colombia
Date of event: 07/12/2017
End date: 07/12/2017

10 **Title of the work:** Connectivity, activity fronts and resilience in neuronal cultures: experiments and models
Name of the event: Invited conference at the Max Planck Institute for Dynamics and Self-Organization
Reasons for participation: Upon invitation
City of event: Göttingen, Germany
Date of event: 02/06/2017
End date: 02/06/2017

11 **Title of the work:** 1-week course on "Complexity and Non-linear dynamics in Biological Systems"
Name of the event: Global Initiative of Academic Networks (GIAN)
Reasons for participation: Speaker
City of event: Durgapur, India
Date of event: 12/09/2016
End date: 12/09/2016

12 **Title of the work:** Multi-neuron Calcium Imaging: Activity and Connectivity in Neuronal Cultures
Name of the event: Invited conference at the Stem Cell Center, Lund University
Reasons for participation: Upon invitation
City of event: Lund, Sweden
Date of event: 08/07/2016
End date: 08/07/2016

13 **Title of the work:** Biophysics in the lab: Hydra regeneration, neuronal cultures and neurological disorders
Name of the event: Invited conference at Universitat Politècnica de Catalunya
Reasons for participation: Upon invitation
City of event: Barcelona, Spain
Date of event: 02/05/2016
End date: 02/05/2016

14 **Title of the work:** Neuronal Cultures as Model Systems: Exploring Open Questions in Physics and Medicine
Name of the event: Conferencia invitada a la Universitat d'Aston, Birmingham
Reasons for participation: Upon invitation
City of event: Birmingham, United Kingdom
Date of event: 18/03/2015
End date: 18/03/2015

15 **Title of the work:** Exploring Open Problems in Physics and Medicine through Neuronal Cultures
Name of the event: Conferencia invitada en el Centro de Tecnología Biomédica
Reasons for participation: Upon invitation
City of event: Madrid, Spain
Date of event: 24/10/2014

End date: 24/10/2014

16 **Title of the work:** Clustered Neuronal Cultures: a Versatile Experimental System for Complex Networks
Name of the event: Seminar at the Brain and Spine Institute [L'Institut du Cerveau et de la Moelle épinière]
Reasons for participation: Speaker
City of event: Paris, France
Date of event: 29/09/2014
End date: 29/09/2014

17 **Title of the work:** Preparation of mini-cultures to study to study connectivity and dynamics in neuronal networks
Name of the event: Colloquium 'Interdisciplinary approaches to neuronal activity and connectivity: Physics, Biology, and Engineering'
Reasons for participation: Speaker
City of event: Paris, France
Date of event: 09/06/2014
End date: 09/06/2014

18 **Title of the work:** Spontaneous activity in neuronal cultures: from Physics to Medicine
Name of the event: Conference at the Anatomical Neuropharmacology Unit, Oxford University
Reasons for participation: Speaker
City of event: Oxford, United Kingdom
Date of event: 06/05/2014
End date: 06/05/2014

19 **Title of the work:** Cultivos neuronales: sistema modelo para el estudio de la actividad eléctrica en el cerebro
Name of the event: Conferencia en el curso 'Medidas Bioeléctricas' del máster en Física Biomédica, Universidad Complutense de Madrid
Reasons for participation: Speaker
City of event: Madrid, Spain
Date of event: 25/04/2014
End date: 25/04/2014

20 **Title of the work:** Unveiling network circuitry from spontaneous activity in neuronal cultures
Name of the event: Fundación Ramón Areces. Ciclo de conferencias 'Building up the brain: new interdisciplinary perspectives'
Reasons for participation: Speaker
City of event: Madrid, Spain
Date of event: 16/10/2013
End date: 16/10/2013

21 **Title of the work:** Cultivos neuronales: física, conectividad funcional y patologías neuronales
Name of the event: Curso 'De la especialización funcional al conectoma en el cerebro humano: entendiendo los mecanismos neurológicos de la disfunción cognitiva'
Type of event: Course
Reasons for participation: Speaker
City of event: Madrid, Spain
Date of event: 11/07/2013
End date: 11/07/2013

22 **Title of the work:** Dynamics in Neuronal Cultures: from Activity Patterns to Neurological Disorders
Name of the event: CIMA - Seminarios del área de neurociencias
Type of event: Seminar
Reasons for participation: Speaker
City of event: Pamplona, Spain
Date of event: 19/04/2013
End date: 19/04/2013

23 **Title of the work:** Interplay activity-connectivity: dynamics in patterned neuronal cultures
Name of the event: IBEC Seminar
Reasons for participation: Speaker
City of event: Barcelona, Spain
Date of event: 05/10/2012
End date: 05/10/2012

24 **Title of the work:** Connectivity and Dynamics in Living Neuronal Networks
Name of the event: Physics Department Seminars, Humboldt Universität zu Berlin
Reasons for participation: Speaker
City of event: Berlin, Germany
Date of event: 25/04/2012
End date: 25/04/2012

25 **Title of the work:** Experiments on Patterned Neuronal Networks. Probing Cultures to Understand Brain Complexity
Name of the event: Biophotonics and Biomedical Optics Seminars at ICFO
Reasons for participation: Speaker
City of event: Castelldefels, Spain
Date of event: 06/04/2011
End date: 06/04/2011

26 **Title of the work:** Connectivity and Dynamics in Living Neural Networks
Name of the event: Seminar at Universidad Rey Juan Carlos
Reasons for participation: Speaker
City of event: Madrid, Spain
Date of event: 20/05/2010
End date: 20/05/2010

27 **Title of the work:** Connectivity and Percolation in Living Neural Networks
Name of the event: Colloquium at the Physics Department of the University of Oslo
Reasons for participation: Speaker
City of event: Oslo, Norway
Date of event: 06/05/2010
End date: 06/05/2010

28 **Title of the work:** Connectivity in Living Neural Networks. Can we build a brain?
Name of the event: Seminar at IFISC (Instituto de Física Interdisciplinar y Sistemas Complejos)
Reasons for participation: Speaker
City of event: Palma de Mallorca, Spain
Date of event: 17/03/2010
End date: 17/03/2010

29 **Title of the work:** Connectivity in Living Neural Networks
Name of the event: Seminar at Universitat Politècnica de Catalunya
Reasons for participation: Speaker
City of event: Terrassa, Spain
Date of event: 29/04/2009
End date: 29/04/2009

30 **Title of the work:** Extracting Connectivity in Living Neural Networks
Name of the event: Seminar at the Max Planck Institute for the Physics of Complex Systems
Reasons for participation: Speaker
City of event: Dresden, Germany
Date of event: 11/03/2008
End date: 11/03/2008

31 **Title of the work:** Connectivity in Neural Cultures
Name of the event: Colloquium at the Department of Biology, Ludwig-Maximilians University Munich
Reasons for participation: Speaker
City of event: Munich, Germany
Date of event: 14/12/2007
End date: 14/12/2007

32 **Title of the work:** Percolation in Living Neural Networks
Name of the event: Colloquium at the Physics Faculty, Ludwig-Maximilians University, Munich
Reasons for participation: Speaker
City of event: Munich, Germany
Date of event: 05/04/2007
End date: 05/04/2007

33 **Title of the work:** Percolation in Living Neural Networks
Name of the event: Colloquium at the Department of Physics, Humboldt University, Berlin
Reasons for participation: Speaker
City of event: Berlin, Germany
Date of event: 02/04/2007
End date: 02/04/2007

34 **Title of the work:** Development of Connections in Neural Cultures
Name of the event: Colloquium at the Department of Physics, Tel Aviv University
Reasons for participation: Speaker
City of event: Tel Aviv, Israel
Date of event: 25/01/2007
End date: 25/01/2007

35 **Title of the work:** Research in Biophysics (in COMPLEX SYSTEMS: NEW TRENDS AND APPLICATIONS)
Name of the event: 25th Summer Courses, Universidad de Cantabria
Reasons for participation: Speaker
City of event: Laredo, Spain
Date of event: 08/09/2005
End date: 08/09/2005

36 **Title of the work:** Axis formation in Hydra
Name of the event: Seminar at the Zoological Institute, University of Kiel
Reasons for participation: Speaker
City of event: Kiel, Germany
Date of event: 29/04/2004
End date: 29/04/2004

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

1 **Committee title:** Secretaria i Consell de direcció de l'UBICS (Universitat de Barcelona Institute of Complex Systems)
Affiliation entity: Universitat de Barcelona
Start date: 20/12/2016

2 **Committee title:** Editorial Board Member of Scientific Reports
Affiliation entity: NATURE PUBLISHING GROUP
Start date: 2016

3 **Committee title:** Renovació del pla d'estudis de l'ensenyament de Física
Affiliation entity: Universitat de Barcelona
Start date: 1998

Organization of R&D activities

Title of the activity: 'Starstim IV' prototype
Type of activity: Scientific collaboratioin with the company STARLAB S.L., to develop applications for their prototype 'Starstim IV'. The objective of the activity was to use neuronal cultures to investigate the effects of an electrical stimulation on the dynamics of a neuronal network, and to advance towards the development of medical tools focused on the treatment and diagnose of neurodegenerative disorders.
Start date: 2011

R&D management

1 **Name of the activity:** Càrrec en Institut de Recerca
Start date: 2017

2 **Name of the activity:** Avaluador de Projectes
Start date: 2017

3 **Name of the activity:** Avaluador de Projectes
Start date: 2016

4 **Name of the activity:** Avaluador de Projectes
Start date: 2015

5 **Name of the activity:** Avaluador de Projectes
Start date: 2014

6 **Name of the activity:** Avaluador de Projectes
Start date: 2013

7 **Name of the activity:** Avaluador de Projectes
Start date: 2012

Other achievements

Stays in public or private R&D centres

1 **Entity:** Dept. Matière et Systèmes Complexes - Université Paris Diderot
City of entity: Paris, France
Start date: 2018 **Duration:** 1 month
Goals of the stay: Guest
Provable tasks: Activity patterns in neuronal networks with dictated connectivity: experiments and model

2 **Entity:** Department of Physics, University of Oslo
City of entity: Oslo, Norway
Start date: 2001 **Duration:** 1 month
Goals of the stay: Pre-Doctoral - Colaboration during PhD.
Provable tasks: Experiments of viscous fingering and fracture in artificial clay.

3 **Entity:** Department of Physics and Astronomy, University of Massachusetts
City of entity: Amherst, MA, United States of America
Start date: 1998 **Duration:** 3 months
Goals of the stay: Pre-Doctoral - Colaboration during PhD.
Provable tasks: Study of rough interfaces and water-air interface dynamics in porous media, and using computerized axial tomography to obtain a three-dimensional reconstruction of the physical process.

Summary of other achievements

1 **Description of the achievement:** Research lines: Scaffolds and neuronal cages for regenerative neuroscience ; 01/07/2011 --
Accrediting entity: Facultat de Física & ICFO
Conferral date: 01/07/2011

2 **Description of the achievement:** Coordination: Member of the coordination committee of the Biophysics Master (U. Barcelona). Responsible of the students' admission process, web resources and teaching.
Accrediting entity: Universitat de Barcelona
Conferral date: 01/01/2009

3 **Description of the achievement:** Research lines: Neuroscience - Spontaneous Activity in Neuronal Networks; 31/11/2008 --
Accrediting entity: Universitat de Barcelona
Conferral date: 11/2008

4 **Description of the achievement:** Research lines: Neuroscience - Connectivity in Neuronal Cultures; 15/06/2005 -- 15/10/2008
Accrediting entity: Weizmann Institute of Science, Rehovot, Israel
Conferral date: 15/06/2005

5 **Description of the achievement:** Research lines: Development and Axis Formation During Hydra Regeneration; 15/03/2003 -- 15/06/2005
Accrediting entity: Experimentalphysik I (Biophysik), Universität Bayreuth (Germany)
Conferral date: 15/03/2003

6 **Description of the achievement:** Research lines: Rough Interfaces in Hele-Shaw fronts with Quenched Disorder; 01/01/1998 -- 15/03/2003
Accrediting entity: Universitat de Barcelona
Conferral date: 01/01/1998

7 **Description of the achievement:** (Scientific Career Summary)
Jordi Soriano has a Physics degree from the University of Barcelona (1997), where he also developed his doctorate in experimental studies of fluid interfaces in disordered systems. He developed along 5 years a new experimental technique to study scaling properties of rough fronts. The richness of the experimental work was recognized by the publication of 2 Phys. Rev. Lett., 1 Europhys. Lett., and 2 Phys. Rev. E.
The thesis got the Cum Laude distinction and the award for the experimental thesis at the University of Barcelona (2003).
First post-doctoral stay (2003-2005): Prof. Albrecht Ott (Bayreuth, Germany). Research was carried out within the European training network PHYNECS (Non Equilibrium Physics, from Complex Fluids to Biological Systems), and was oriented towards biophysics. The project consisted in the study of the self-organization mechanisms of the fresh water polyp Hydra. The project combined aspects of non-equilibrium physics, developmental biology and genetics, and gave rise to 4 publications, 2 Phys. Rev. Lett. (2006 and 2012) and 2 Biophysical Journal (2008 and 2009).
Second post-doctoral stay (2005-2008): Prof. Elisha Moses (Weizmann Institute of Science, Israel). Research was centered in neuroscience, and consisted in the development of a new experimental technique to study connectivity in living neuronal networks. Research gave rise to major impact publications, in special a Phys. Rev. Lett. (2006), a Physics Reports (2007), and a PNAS (2008).
From 2008 to 2013, Jordi Soriano was contracted as Ramón y Cajal researcher at the Faculty of Physics of the University of Barcelona, where he initiated a new laboratory in neuroscience focus on the study of the spontaneous activity in neuronal networks, and the use of neuronal cultures to as model system in Physics and Medicine.
From 2013 to 2015, Jordi Soriano was contracted through the 'talented researchers' program (Fundació Bosch i Gimpera, University of Barcelona), and at the end oif 2015 he obtained a permanent position as Associate Professor ('Agregat Interí' in the Catalan scheme).
The research group of Jordi Soriano is currently formed by 2 PhD students (Elisenda Tibau, Lluís Hernández) and 1 post-doc (Javier G. Orlandi).
In 2016, Soriano's group was granted with a FET-OPEN project together with 5 other research groups, with a total budget of 3.3 milion euro.
Main collaborators:
1) J. Casademunt (U. Barcelona) --- Theoretical and computational neuroscience.
2) Jordi Alberch (U. Barcelona) --- Neurodegenerative disorders.
3) A. Arenas (U. Rovira i Virgili, Tarragona) --- Complex networks.
5) M. Valencia, (U. Navarra - CIMA, Pamplona) --- Signal analysis in neuronal data.
6) P. Loza-Álvarez (ICFO, Barcelona) --- Photonics applied to neuroscience.
6) T. Geisel (MPI Dynamics and Self-Organization, Göttingen) --- Computational neuroscience.
7) S. Rüdiger (Humboldt-Universität zu Berlin) --- Theoretical neuroscience.

Main research lines:
1) Multi-neuron calcium imaging to study the initiation and propagation of spontaneous activity in neuronal networks.
2) Neuroengineering.
3) Functional connectivity in neuronal networks.
4) Reconstruction of network topology from activity data using Transfer Entropy.
5) Use of neuronal cultures as model system in Physics (complex networks) and medicine (neurodegenerative disorders and pharmacology).
6) Electric stimulation of neuronal circuits: memory and network robustness.
7) Spontaneous activity in healthy and diseased neuronal networks. Application to genetic and pharmacologic therapies in Sanfilippo and Huntington diseases.

8 **Description of the achievement:** Award of the University of Barcelona for the best PhD thesis in experimental physics (granted in 17th May, 2005)

9 **Description of the achievement:** I3 Certficate of Research Excellence (granted on January 18th, 2013).

10 **Description of the achievement:** AQU Certificate of Research Excellence (granted on July 11th, 2011).