

Curriculum Vitae

Spyros Sotiriadis

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PERSONAL INFORMATION

Date of Birth: 28 March 1983

Place of Birth: Athens, Greece

Citizenship: Greek

WORK EXPERIENCE

2017- Postdoctoral research assistant
Advisor: Prof. Tomaz Prosen
University of Ljubljana (Ljubljana, Slovenia)

2016-2017 Postdoctoral research fellow
Advisor: Prof. Alessandro Giuliani
Universita di Roma Tre (Rome, Italy) &
Institut de Mathematiques de Marseille (Marseille, France)

2012-2015 Postdoctoral research fellow

Advisor: Prof. Pasquale Calabrese

Universita di Pisa, (Pisa, Italy) [till 11/2014]

International School for Advanced Studies (SISSA), (Trieste, Italy)
[from 11/2014]

2009-2012 Postdoctoral research fellow

Advisor: Prof. Giuseppe Mussardo

International School for Advanced Studies (SISSA), (Trieste, Italy)
(Statistical Field Theory Group)

EDUCATION

2006-2009 D.Phil., Theoretical Physics

Title: “Quantum Quenches in Extended Systems”

Supervisor: Prof. J.L.Cardv FRS

University of Oxford, UK

Rudolf Peierls Centre for Theoretical Physics

2005-2006 Certificate of Advanced Study in Mathematics

(Part III of the Mathematical Tripos)

University of Cambridge, UK

Department of Applied Mathematics and Theoretical Physics

2000-2004 B.Sc., Physics

University of Athens, Greece

Department of Physics

summa cum laude (9.5/10)

TEACHING EXPERIENCE

- Lecturing course “Out of equilibrium quantum statistical mechanics” to mathematics and physics PhD students at the University of Rome 3 (6×2 hours + oral exams, 2016).
- Co-supervision of: 1 master’s student at the University of Pisa (2014), 5 PhD students: 2 at SISSA (2010-2012, 2015), 1 at the University of Pisa (2014) and 2 at the University of Ljubljana (2017-present).
- Physics tutoring for undergraduate students at the University of Oxford (2007-8, 4 terms).
- Teaching assistantship and supervision at the physics laboratory of the University of Athens (2005, 1 semester).

COMPUTER SKILLS

- Advanced programming skills in:
Mathematica
- Basic programming skills in:
Matlab, C/C++, Python, Fortran, Visual Basic

HONORS & AWARDS

- (*postdoctoral work*)
Research grant of the Slovenian Research Agency
€5000 for scientific visits (2017)
“Seal of Excellence” for the project proposal:
“Quenches, Transport and Entanglement in one-dimensional quantum systems out-of-equilibrium”
submitted under Horizon 2020’s MSCA IF call 2017

“Seal of Excellence” for the project proposal:
“Cluster Expansion Approach to Out-of-Equilibrium Quantum Physics”
submitted under Horizon 2020’s MSCA IF call 2016

Principal Investigator of:
“SISSA Young Researchers Grant 2011-12” PART.649
€13000 (05/2011-06/2012)

Participant in:
“Non-perturbative field theory and strongly correlated systems”
Bilateral CNR/HAS grant (01/2013-12/2015)

- (*graduate studies*)
 - Gates Cambridge Studentship (2005-2006)
 - “Lamb and Flag” Studentship (St John’s College, Oxf., 2006-2009)
 - Leventis Foundation Studentship (2006-2009)
- (*undergraduate study*)
 - Greek State Scholarship Foundation (I.K.Y.) Grant (2001-2004)
 - Papadakis Award (2001-2004)
 - Mari-Kamara Award (2004)

LIST OF PUBLICATIONS

Updated on: September 29, 2018

(*Selected publications marked with an asterisk *.*

For an automatically updated list see:

[arXiv author page](#), [ADS search](#) or [Google Scholar](#).)

1. * *Correlation functions of the quantum sine-Gordon model in and out of equilibrium*
Ivan Kukuljan, **Spyros Sotiriadis**, Gábor Takács
[Phys. Rev. Lett. **121**, 110402 \(2018\)](#)
(4 citations)
2. *Non-equilibrium quantum transport in presence of a defect: the non-interacting case*

Marko Ljubotina, **Spyros Sotiriadis**, Tomaž Prosen

[arXiv:1802.05697](#)

(2 citations - submitted for publication to SciPost Physics)

3. * *Equilibration in one-dimensional quantum hydrodynamic systems*

Spyros Sotiriadis

[J. Phys. A: Math. Theor.](#) **50** 424004 (2017)

(10 citations - invited contribution to special issue of J. Phys. A dedicated to John Cardy)

4. *Quenches from gaussian bosons to Tonks-Girardeau gas: stationary states and effects of a confining potential*

Alvise Bastianello, Mario Collura, **Spyros Sotiriadis**

[Phys. Rev. B](#) **95**, 174303 (2017)

(10 citations)

5. *Quasi locality of the GGE in interacting-to-free quenches in relativistic field theories*

Alvise Bastianello, **Spyros Sotiriadis**

[J. Stat. Mech.](#) (2017) 023105

(20 citations)

6. * *Memory-preserving equilibration after a quantum quench in a 1d critical model*

Spyros Sotiriadis

[Phys. Rev. A](#) **94**, 031605(R) (2016)

(34 citations - Editors' Suggestion)

7. *Cluster expansion for ground states of local Hamiltonians*

Alvise Bastianello, **Spyros Sotiriadis**

[Nucl. Phys. B](#) **909** 1020 (2016)

(4 citations)

8. *Initial states in integrable quantum field theory quenches from an integral equation hierarchy*

David Horvath, **Spyros Sotiriadis** and Gábor Takács

[Nucl. Phys. B](#) **902** 508 (2016)

(28 citations)

9. *Equilibration and GGE in interacting-to-free Quantum Quenches in dimensions $d > 1$*

Spyros Sotiriadis and Gabriele Martelloni

- [J. Phys. A: Math. Theor. **49** 095002 \(2016\)](#)
(22 citations)
10. *Probing Klein tunneling through quantum quenches*
Leda Bucciantini, **Spyros Sotiriadis** and Tommaso Macri
[J. Phys. A: Math. Theor. **49** 025002 \(2016\)](#)
(2 citations)
 11. *Quantum quench in long-range field theories*
Mohammad Ali Rajabpour and **Spyros Sotiriadis**
[Phys. Rev. B **91** 045131 \(2015\)](#)
(24 citations)
 12. *Quench echo and work statistics in integrable quantum field theories*
Tamas Palmai and **Spyros Sotiriadis**
[Phys. Rev. E **90** 052102 \(2014\)](#)
(18 citations)
 13. * *Validity of the GGE for quantum quenches from interacting to noninteracting models*
Spyros Sotiriadis and Pasquale Calabrese
[J. Stat. Mech. \(**2014**\) P07024](#)
(91 citations / in journal's highlights / most cited article of the year)
 14. * *Boundary State in an Integrable Quantum Field Theory Out of Equilibrium*
Spyros Sotiriadis, Gábor Takács and Giuseppe Mussardo
[Phys. Lett. B **734** 52 \(2014\)](#)
(44 citations)
 15. *Quantum Quench of the trap frequency in the harmonic Calogero model*
Mohammad Ali Rajabpour and **Spyros Sotiriadis**
[Phys. Rev. A **89** 033620 \(2014\)](#)
(26 citations)
 16. *Quench dynamics of a Tonks-Girardeau gas released from a harmonic trap*
Mario Collura, **Spyros Sotiriadis** and Pasquale Calabrese
[J. Stat. Mech. \(**2013**\) P09025](#)
(60 citations / most cited article of the year)
 17. *Statistics of the work done by splitting a one-dimensional quasi-condensate*
Spyros Sotiriadis, Andrea Gambassi and Alessandro Silva

Phys. Rev. E **87** 052129 (2013)
(42 citations)

18. * *Equilibration of a Tonks-Girardeau gas following a trap release*
Mario Collura, **Spyros Sotiriadis** and Pasquale Calabrese
Phys. Rev. Lett. **110** 245301 (2013)
(105 citations)

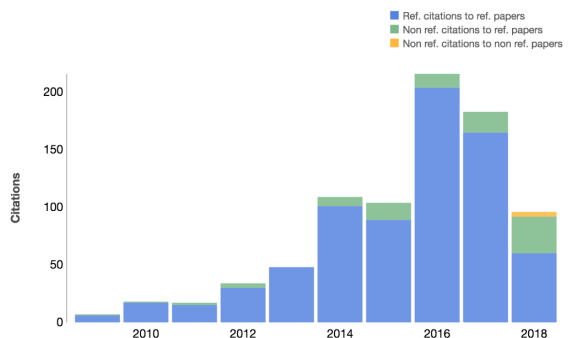
19. *Zamolodchikov-Faddeev Algebra and Quantum Quenches in Integrable Field Theories*
Spyros Sotiriadis, Davide Fioretti and Giuseppe Mussardo
J. Stat. Mech. (**2012**) P02017
(62 citations)

20. * *Quantum quench in interacting field theory:
A self-consistent approximation*
Spyros Sotiriadis and John Cardy
Phys. Rev. B **81** 134305 (2010)
(92 citations - Editors' Suggestion)

21. *Quantum quench from a thermal initial state*
Spyros Sotiriadis, Pasquale Calabrese and John Cardy
Europhys. Lett. **87** 20002 (2009)
(90 citations)

22. *Inhomogeneous quantum quenches*
Spyros Sotiriadis and John Cardy
J. Stat. Mech. (**2008**) P11003
(66 citations)

Citation metrics	ADS	Scholar
Citations:	856	980
Citing papers:	417	
h-index:	16	16
m-index:	1.5	



Number of citations per year

INVITED CONFERENCE TALKS

- “Workshop on time-dependent dynamics and non-equilibrium quantum systems”, University of Budapest (22 May 2010, Budapest, Hungary)
- “Statistical Physics and Low Dimensional Systems” (22 May 2014, Pont-a-Mousson, France)
- “Integrability in Low Dimensional Quantum Systems” (30 June 2014, Tihany, Hungary)
- “Mathematical Aspects of Quantum Integrable Models in and out of Equilibrium”, Isaac Newton Institute (2 February 2016, Cambridge, UK)
- “Nonequilibrium Phenomena in Quantum Systems” (20 December 2017, Krvavec, Slovenia)

TALKS & CONFERENCES

- Poster presentation: Cold Atoms and Optical Lattices, University of Oxford (22-26 September 2008, Oxford)
- Poster presentation: IoP Theory of Condensed Matter Group, Annual Meeting 2008, University of Warwick (18 December 2008, Warwick)
- Short Talk & Poster: The Capri School on Transport in Nanostructures 2009 (29 March 2009, Capri)
- Seminar: University of Oxford, Rudolf Peierls Centre for Theoretical Physics (10 June 2009, Oxford)
- Seminar: University of Athens, Department of Physics, Section of Nuclear and Elementary Particle Physics (12 January 2010, Athens)
- Seminar: Joint ICTP/SISSA Statistical Physics Seminar Series (02 February 2010, Trieste)

- Poster presentation: 8th Bologna Workshop on: CFT and Integrable Models and their applications University of Bologna (12-15 September 2011, Bologna)
- Seminar: University of Amsterdam (31 January 2012, Amsterdam)
- Seminar: University of Oxford (22 February 2012, Oxford)
- Seminar: King's College, London (23 February 2012, London)
- Seminar: University of Nottingham (24 February 2012, Nottingham)
- Seminar: Joint ICTP/SISSA Statistical Physics Seminar Series (28 February 2012, Trieste)
- Poster presentation: "New quantum states of matter in and out of equilibrium", GGI (23 April - 05 May 2012, Florence)
- Invited Seminar: University of Goettingen (07 May 2012, Goettingen)
- Invited Seminar: LPTHE, UPMC - Paris VI (12 June 2012, Paris)
- Seminar: Budapest Eotvos Lorand University (27 June 2012, Budapest)
- Conference Talk: School and Workshop on "The Beauty of Integrability: low-dimensional Physics, Statistical Models and Solitons" (24 July 2012, Natal, Brazil)
- Seminar: University of Pisa (05 December 2012, Pisa)
- Seminar: Joint ICTP/SISSA Statistical Physics Seminar Series (14 December 2012, Trieste)
- Invited Seminar: Budapest University of Technology and Economics, Department of Theoretical Physics (04 June 2013, Budapest)
- Poster presentation: "Quantum Many Body Systems out of Equilibrium International Workshop, Max Planck Institute for the Physics of Complex Systems" (19-23 August 2013, Dresden)
- Seminar: Joint ICTP/SISSA Statistical Physics Seminar Series (22 October 2013, Trieste)
- Seminar: University of Pisa (21 November 2013, Pisa)
- Invited Seminar: Budapest University of Technology and Economics (05 December 2013, Budapest)

- Workshop: SFT 2014 - Lectures on Statistical Field Theories (03-14 February 2014, Florence)
- Conference: “Statistical Physics and Low Dimensional Systems” (22 May 2014, Pont-a-Mousson, France)
- Conference Talk: “New Frontiers in Theoretical Physics” (29 May 2014, Cortona, Italy)
- Conference: “Finite-size Technology in Low Dimensional Quantum Systems (VII)” (16 - 27 June 2014, Budapest)
- Invited Seminar: Scuola Normale Superiore di Pisa (15 October 2014, Pisa)
- Invited Seminar: University of Bologna (03 December 2014, Bologna)
- Conference: “Mathematical physics of non-equilibrium quantum systems”, King’s College London (18-19 December 2014, London)
- Seminar: Joint ICTP/SISSA Statistical Physics Seminar Series (10 March 2015, Trieste)
- Invited Seminar: LPTHE, UPMC - Paris VI (14 January 2016, Paris)
- Seminar: University of Marseille (11 January 2016, Rome)
- Seminar: University of Rome 3 (12 April 2016, Rome)
- Conference: “Universality, Scaling Limits and Effective Theories”, Sapienza Università di Roma, (11-15 July 2016, Rome)
- Conference: “Entanglement and Non-Equilibrium Physics of Pure and Disordered Systems”, ICTP (25-27 July 2016, Trieste)
- Workshop: “Condensed Matter and Critical Phenomena”, INFN - Frascati, (5-7 September 2016, Rome)
- Invited Seminar: University of Ljubljana (15 November 2016, Ljubljana)
- Poster Presentation: “Breakdown of ergodicity in quantum systems: from solids to synthetic matter”, The Royal Society, (6-7 February 2017, London)

- Conference: “Future directions in non-ergodic dynamics in quantum systems”, Kavli Royal Society Centre (8-9 February 2017, Chicheley Hall)
- Conference Talk: “SigmaPhi, International Conference on Statistical Physics” (10-14 July 2017, Corfu, Greece)
- Conference Talk: “Symposium on Quantum Matter”, (13-14 July 2017, Corfu, Greece)
- Conference Talk: “Exact methods in low dimensional statistical physics”, IESC (25 July - August 2017, Cargese, Corsica)
- Conference Talk: “Correlation functions of quantum integrable systems and beyond”, ENS - Lyon (23-26 October 2017, Lyon)
- Invited Seminar: Institut Jean Lamour, University of Lorraine (31 October 2017, Nancy)
- Conference Talk: “16th Christmas Symposium of Physicists of the University of Maribor”, CAMTP - University of Maribor, Slovenia (14-16 December 2017, Maribor, Slovenia)
- Conference Talk: “Nonequilibrium Phenomena in Quantum Systems”, Krvavec (17-20 December 2017, Krvavec, Slovenia)
- Workshop: “Integrable and chaotic quantum dynamics: from holography to lattice”, Bled (3-9 June 2018, Bled, Slovenia)
- Conference Talk: “Recent Advances in Quantum Integrable Systems”, Annecy, (10-14 September 2018, Annecy, France)

RESEARCH INTERESTS

Out-of-Equilibrium Quantum Statistical Physics
 Quantum Quenches
 Ultracold atoms & quantum gases
 Quantum Transport
 Low-dimensional systems
 Entanglement

Quantum Field Theory
Integrable Field Theory
Conformal Field Theory
Random Matrix Theory