

Davide Masoero

I am an FCT Researcher at the Group of Mathematical Physics of Lisbon University. I completed the PhD in Mathematics (Mathematical Physics) in 2010 by Scuola Internazionale Superiore di Studi Avanzati (SISSA), under the supervision of Boris Dubrovin. I have published 19 papers (10 in the last 5 years), mostly in top journals. These include Comm. Math. Phys (3 x, all since 2016), Nonlinearity (2x), JHEP, JSTAT, Int. Math. Res. Notices, Physica D, JPhysA, Letters in Mathematical Physics (2x), Nucl. Phys. B. Since 2016, I have obtained over 500.000 (five hundred thousand) Euro, divided into 3 research grants. These are the FCT Investigator Grant (2017-2021, 232.000 Euro), and 2 FCT projects of which I am the P.I.: A mathematical foundation for the ODE/IM correspondence (2017-2022, 50.000 Euro); Irregular connections on algebraic curves and quantum field theory (2018-2021, 222.000 Euro), with ten members (based in Lisbon, Turin, Milan, and New-York). I was a visiting scholar of the R.I.M.S. (Kyoto, July 2010), of The University of Sydney (Nov-Dec 2015), of Centro De Giorgi (Scuola Normale di Pisa, Dec 2017), of the Simons Center for Geometry and Physics (Nov-Dec 2018), and of the Isaac Newton Institute (Cambridge, May 2021). In my career, I delivered about 55 invited talks (23, since 2016). In the framework of the projects I lead, I have organised one international conference, one triennial seminar series, and four mini-courses, whose contributions are recorded and freely available at <https://irregular.rd.ciencias.ulisboa.pt>. I also belong to the organising committee of two forthcoming international conferences: Integrable systems in the memory of Boris Dubrovin (SISSA, 2021) and Integrability in Gauge and String theory (Turin, 2021). I belong to the editorial board of a special volume of Letters in Mathematical Physics (expected date of publication: July 2021), dedicated to the memory of Boris Dubrovin. I currently supervise three post-doc researchers, and I have formerly supervised one graduate student and mentored one graduate and one undergraduate student.

Identification

Personal identification

Full name

Davide Masoero

Gender

Male

Birth date

1982/12/29

Citation names

Masoero, Davide

Author identifiers

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<https://irregular.rd.ciencias.ulisboa.pt/> (Scholar)
<https://www.youtube.com/c/irregularsingularitiesandquantumfieldtheory> (Scholar)

Knowledge fields

Exact Sciences - Mathematics - Pure Mathematics

Languages

Language	Speaking	Reading	Writing	Listening	Peer-review
Italian (Mother tongue)					
English	Advanced (C1)	Proficiency (C2)	Proficiency (C2)	Proficiency (C2)	Proficiency (C2)
Portuguese	Proficiency (C2)	Proficiency (C2)	Proficiency (C2)	Proficiency (C2)	
German	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	Intermediate (B1)	

Education

	Degree	Classification
2010/10/01 Concluded	PhD in Mathematics (Mathematical Physics) (Dottorato di Ricerca) Scuola Internazionale Superiore di Studi Avanzati Sezione Matematica, Italy <i>"Essays on the Painleve First Equation and the Cubic Oscillator" (THESIS/DISSERTATION)</i>	n/a
2006 Concluded	Laurea Specialistica In Fisica Teorica (Laurea Specialistica) Università degli Studi di Torino, Italy <i>"Correspondence between Ordinary Differential Equations and Integrable Models"</i>	110/110 cum Laude

(THESIS/DISSERTATION)

2004 Concluded	Laurea Triennale in Fisica (Laurea)	110/110 cum Laude
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Università degli Studi di Torino, Italy
"Magnetic Resonance" (THESIS/DISSERTATION)

Affiliation**Science**

2017/01/01 - Current	Researcher (Research) Universidade de Lisboa Faculdade de Ciências, Portugal
2021/05/07 - 2021/05/31	Visiting Researcher (Research) Isaac Newton Institute for Mathematical Sciences, United Kingdom
2018/11/13 - 2018/12/02	Visiting Researcher (Research) Simons Center for Geometry and Physics, United States
2017/12/01 - 2017/12/20	Visiting Researcher (Research) Scuola Normale Superiore Centro di Ricerca Matematica Ennio De Giorgi, Italy
2012/01/01 - 2016/12/31	Postdoc (Research) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal
2015/11/10 - 2015/12/10	Visiting Researcher (Research) The University of Sydney School of Mathematics and Statistics, Australia
2011/11/01 - 2011/12/31	Contracted Researcher (Research) The University of Sydney School of Mathematics and Statistics, Australia
2010/11/02 - 2011/10/31	Postdoc (Research) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal
2010/06/15 - 2010/07/07	Visiting Researcher (Research) Kyoto Daigaku Suri Kaiseki Kenkyujo, Japan

Projects**Grant**

Designation

Funders

2012/01 - 2016/12/31	Dispersive Shock and Universality SFRH/BPD/75908/2011 Post-doc Fellow Universidade de Lisboa Grupo de Física Matemática, Portugal Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal	Fundação para a Ciência e Tecnologia (FCT), Portugal
2010/11/01 - 2011/10/31	Probabilistic approach to finite and infinite dimensional dynamical systems PTDC/MAT/104173/2008 Post-doc Fellow Universidade de Lisboa Grupo de Física Matemática, Portugal Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal	

Contract

	Designation	Funders
2017/01/01 - 2021/12/31	A Mathematical framework for the ODE/IM correspondence IF/00069/2015/CP1276/CT0022 Principal investigator Universidade de Lisboa Faculdade de Ciências, Portugal	Fundação para a Ciência e a Tecnologia, Portugal
2018/09/16 - 2021/09/15	Irregular connections on algebraic curves and Quantum Field Theory PTDC/MAT-PUR/30234/2017 Principal investigator	Fundação para a Ciência e a Tecnologia, Portugal
2016/05/16 - 2019/06/09	From Stochastic Geometric Mechanics to Mass Transportation Problems PTDC/MAT-STA/0975/2014 Researcher Universidade de Lisboa Grupo de Física Matemática, Portugal	Fundação para a Ciência e a Tecnologia, Portugal

Outputs

Publications

Book chapter	1	Masoero, Davide; Raimondo, Andrea. "Opers for higher states of the quantum Boussinesq model". In <i>Asymptotic, Algebraic and Geometric Aspects of Integrable Systems (Springer Proceedings in Mathematics Springer Proceedings in Mathematics and Statistics)</i> . 2020. Published
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- 2 Dorey, Patrick; Dunning, Clare; Masoero, Davide; Suzuki, Junji; Tateo, Roberto. "ABCD and ODEs". In *New Trends in Mathematical Physics*, 685-695. Springer Netherlands, 2009.
10.1007/978-90-481-2810-5_45

Journal article

- 1 Masoero, Davide; Roffelsen, Pieter. "Roots of generalised Hermite polynomials when both parameters are large". *Nonlinearity* 34 3 (2021): 1663-1732. <http://dx.doi.org/10.1088/1361-6544/abdd93>.
Published · 10.1088/1361-6544/abdd93
- 2 Riccardo Conti; Davide Masoero. "Counting monster potentials". *Journal of High Energy Physics* (2021): [https://doi.org/10.1007/JHEP02\(2021\)059](https://doi.org/10.1007/JHEP02(2021)059).
10.1007/JHEP02(2021)059
- 3 Davide Masoero; Andrea Raimondo. "Opsers for Higher States of Quantum KdV Models". *Communications in Mathematical Physics* 378 (2020): 1-74. <https://doi.org/10.1007/s00220-020-03792-3>.
10.1007/s00220-020-03792-3
- 4 Masoero, Davide. "Poles of Painlevé IV Rationals and their Distribution". *Symmetry, Integrability and Geometry: Methods and Applications* (2018): <http://dx.doi.org/10.3842/sigma.2018.002>.
10.3842/sigma.2018.002
- 5 Masoero, D.; Raimondo, A.; Valeri, D.. "Bethe Ansatz and the Spectral Theory of Affine Lie algebra-Valued Connections II: The Non Simply-Laced Case". *Communications in Mathematical Physics* (2016): 1-43. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84988336198&partnerID=MN8TOARS>.
10.1007/s00220-016-2744-2
- 6 Mateus, L.; Masoero, D.; Rocha, F.; Aguiar, M.; Skwara, U.; Ghaffari, P.; Zambrini, J. C.; Stollenwerk, N.. "Epidemiological models in semiclassical approximation: an analytically solvable model as a test case". *Mathematical Methods in the Applied Sciences* 39 16 (2016): 4914-4922. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84990841939&partnerID=MN8TOARS>.
10.1002/mma.4108
- 7 De Martino, D.; Masoero, D.. "Asymptotic analysis of noisy fitness maximization, applied to metabolism & growth". *Journal of Statistical Mechanics: Theory and Experiment* 2016 12 (2016): <http://www.scopus.com/inward/record.url?eid=2-s2.0-85019496394&partnerID=MN8TOARS>.
10.1088/1742-5468/aa4e8f
- 8 Masoero, D.; Raimondo, A.; Valeri, D.. "Bethe Ansatz and the Spectral Theory of Affine Lie Algebra-Valued Connections I. The simply-laced Case". *Communications in Mathematical Physics* 344 3 (2016): 719-750. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84969834401&partnerID=MN8TOARS>.
10.1007/s00220-016-2643-6
- 9 Mateus, L.; Ghaffari, P.; Skwara, U.; Rocha, F.; Aguiar, M.; Masoero, D.; Stollenwerk, N.. "Semiclassical approximations of stochastic epidemiological processes towards parameter estimation using as prime example the SIS system with import". *Ecological Complexity* 27 (2016): 63-73. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84944096595&partnerID=MN8TOARS>.
10.1016/j.ecocom.2015.09.001
- 10 Masoero, D.; Raimondo, A.. "A deformation of the method of characteristics and the cauchy problem for hamiltonian PDEs in the small dispersion limit". *International Mathematics Research Notices* 2015 5 (2015): 1200-1238. <http://www.scopus.com/inward/record.url?eid=2-s2.0->

84929342187&partnerID=MN8TOARS.

10.1093/imrn/rnt223

- 11 Masoero, D.; Raimondo, A.; Antunes, P.R.S.. "Critical behavior for scalar nonlinear waves". *Physica D: Nonlinear Phenomena* 292-293 (2015): 1-7. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84911496144&partnerID=MN8TOARS>.
10.1016/j.physd.2014.09.007
- 12 Masoero, D.. "Painleve I, Coverings of the Sphere and Belyi Functions". *Constructive Approximation* 39 1 (2014): 43-74. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84891025256&partnerID=MN8TOARS>.
10.1007/s00365-013-9185-3
- 13 Masoero, D.; Raimondo, A.. "Semiclassical Limit for Generalized KdV Equations Before the Gradient Catastrophe". *Letters in Mathematical Physics* 103 5 (2013): 559-583. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84876079079&partnerID=MN8TOARS>.
10.1007/s11005-013-0605-x
- 14 Masoero, D.. "Poles of integrale tritronquée and anharmonic oscillators. A WKB approach". *Journal of Physics A: Mathematical and Theoretical* 43 9 (2010): <http://www.scopus.com/inward/record.url?eid=2-s2.0-77249100454&partnerID=MN8TOARS>.
10.1088/1751-8113/43/9/095201
- 15 Masoero, D.. "Poles of intégrale tritronquée and anharmonic oscillators. Asymptotic localization from WKB analysis". *Nonlinearity* 23 10 (2010): 2501-2507. <http://www.scopus.com/inward/record.url?eid=2-s2.0-78049420437&partnerID=MN8TOARS>.
10.1088/0951-7715/23/10/008
- 16 Masoero, D.. "Y-System and Deformed Thermodynamic Bethe Ansatz". *Letters in Mathematical Physics* 94 2 (2010): 151-164. <http://www.scopus.com/inward/record.url?eid=2-s2.0-78049429444&partnerID=MN8TOARS>.
10.1007/s11005-010-0425-1
- 17 Dorey, P.; Dunning, C.; Masoero, D.; Suzuki, J.; Tateo, R.. "Pseudo-differential equations, and the Bethe ansatz for the classical Lie algebras". *Nuclear Physics B* 772 3 (2007): 249-289. <http://www.scopus.com/inward/record.url?eid=2-s2.0-34247628322&partnerID=MN8TOARS>.
10.1016/j.nuclphysb.2007.02.029

Activities

Oral presentation

	Presentation title	Event name Host (Event location)
2020	Counting monster potentials	Virtual Integrable Systems Seminars, 2020 ICMS, Edinburgh

2020	The Painlevé I equation and the A2 quiver	Geometry Webinar CMAF (Lisboa)
2020	Counting Monster Potentials	TQFT Seminar IST (Lisboa)
2019/09/04	Opers for higher states of quantum KdV models	Integrability Combinatorics And Representations (Hyères, France)
2019	On the asymptotic distributions of roots of the generalised Hermite polynomials	Séminaire de physique mathématique et topologie algébrique University of Angers
2019	Meromorphic opers and the Bethe Ansatz	String Theory Seminar IST (Lisboa)
2019	Asymptotic distribution of singularities of solutions to ODEs in the complex plane	Analysis seminar Mathematical Department of Aveiro University
2018/11/20	Opers corresponding to Higher States of the g-Quantum KdV model	Exactly Solvable Models of Quantum Field Theory and Statistical Mechanics Simons Center for Geometry and Physics (Stonybrooke, United States)
2018/02/20	Looking for poles of solutions of Painlevé equations	Mathematics Colloquium Universidade de Lisboa (Lisboa, Portugal)
2017/11/10	The isomonodromic deformation method for Painleve I and meromorphic functions with 5 transcendental singularities	Algebraic Geometry Seminar Sheffield University (Sheffield)
2017/02/15	Affine Opers with one irregular singularity and the Bethe Ansatz	Irregular Connections, Character Varieties and Physics Paris VII (Paris, France)
2017/01/20	Rational solutions of Painlevé IV	Asymptotic and computational aspects of complex differential equations Centro Ennio De Giorgi (Pisa)
2017	Asymptotic distribution of singularities of solutions to ODEs in the complex plane	Analysis seminar Universidade Nova de Lisboa
2016/07/04	Bethe Ansatz and Affine Lie algebra-valued connections	SIDE 12 Centre de Recherches Mathématiques, Montreal

2016	Computing the growth rate distribution from metabolism, in E. Coli	Theoretical Physics Winter Meeting Physics Department of Turin University
2016	Affine Opers and Bethe Ansatz	3rd Christmas Workshop in Genova University of Genova
2016	Algebraic aspects of the ODE/IM correspondence	Paris Algebraic Seminars Institute Henri Poincare, Paris
2015	Bethe Ansatz and the Spectral Theory of Affine Lie algebra-valued connections	Integrable Systems 2015 The University of Sydney
2015	Bethe Ansatz and the Spectral Theory of Affine Lie algebra-valued connections	Algebra and geometry in integrable systems The University of Kent
2015	Bethe Ansatz and the Spectral Theory of Affine Lie algebra-valued connections	Australian National University, Canberra
2015	Bethe Ansatz and the Spectral Theory of Affine Lie algebra-valued connections	Complexo Interdisciplinar, Lisbon
2014/07	Universality for Scalar Nonlinear Waves	Advances in Mathematical Fluid Mechanics, Stochastic and Deterministic Methods Faculdade de Ciências da Universidade de Lisboa
2014	Hamilton-Jacobi equation from epidemiological models	Workshop on Geometric and Analytic Aspects of Integrable and nearly-Integrable Hamiltonian Systems University of Milano-Bicocca
2014	Laplace's method for sums and semiclassical population dynamics	Fifth Workshop Dynamical Systems Applied to Biology and Natural Sciences Complexo Interdisciplinar, Lisbon
2013/07	String Equation and Scalar PDEs in the Semiclassical Regime	Hamiltonian PDEs, Frobenius Manifolds and Deligne Mumford Moduli Spaces Scuola Internazionale Superiore di Studi Avanzati (Trieste, Italy)
2013	Phase Transitions of Nonlinear PDEs and Emerging Integrability	University of Milano-Bicocca
2013	Universality for Partial Differential Equations	CENTRA's seminar CENTRA (Lisboa)

2013	Universality for Partial Differential Equations	CFTC Seminar CFTC, Lisbon
2013	What is a Hamiltonian Equation?	Complexo Interdisciplinar, Lisbon
2013	KdV as a Completely Integrable Hamiltonian System	Complexo Interdisciplinar, Lisbon
2013	A deformation of the method of characteristics and the Cauchy problem for Hamiltonian PDEs in the small dispersion limit	Nonlinear Waves and Integrable Systems 2013 SISSA
2012	Painlevé I, (Branched) Coverings of the Sphere and Belyi Functions	Centre de recherches mathématiques
2012	Poles of solutions of Painleve I and Belyi functions	Frontiers of Nevanlinna Theory 4: Nevanlinna theory and number theory UCL (London)
2012	Painleve, Nevanlinna and Riemann	Workshop on Geometric and Analytic Aspects of Integrable Systems University of Milano-Bicocca
2012	Painleve, Nevanlinna and Riemann	Physics Department of Turin University
2012	Some results concerning the semiclassical limit of (Generalized) KdV before the gradient catastrophe	Dispersive Shocks SISSA
2011	Monodromy Data of Painleve I and Nevanlinna Theory	School of Mathematics, Sydney University
2011	Dispersive shock waves in 1+1 dimension, conjectures and preliminary results	ANZIAM NSW-ACT Meeting ANZIAM
2011	Dispersive shock waves in 1+1 dimension, conjectures and preliminary results	School of Mathematics, Sydney University
2011	Dispersive shock waves in 1+1 dimension, conjectures and preliminary results	Complexo Interdisciplinar, Lisbon
2011	Some results concerning the semiclassical limit of KdV before the gradient catastrophe	GDIS, Sintra 2011 Grupo de Física Matemática da Universidade de Lisboa

2011	Some results concerning the semiclassical limit of KdV before the gradient catastrophe	Completely Integrable Systems and Applications Erwin Schroedinger Institute, Wien
2010	Painlevé I and the Cubic Oscillator	Complexo Interdisciplinar, Lisbon
2010	The (Un)reasonable Effectiveness of the Complex WKB Method	Function Theory and Dynamical Systems UCL (London)
2010	Y-system and Deformed TBA	Einstein SISSA
2010	Geometry of Monodromy Data and Deformed TBA	Recent Developments in Resurgence Theory and Related Topics R.I.M.S. (Kyoto)
2010	Geometry of Monodromy Data and Deformed TBA	Shizuoka University
2010	Poles of integrale tritronquee and cubic oscillators	R.I.M.S. (Kyoto)
2010	Painlevé I and the Cubic Oscillator	Integrable Systems in Pure and Applied Mathematics SISSA
2010	Painlevé I, anharmonic oscillators, WKB analysis and Deformed TBA	Numerical Solution of Painlevé equations ICMS (Edinburgh)
2010	Painlevé first equation, anharmonic oscillators and coverings of the sphere	Winter meeting in Lattice Gauge Theories and Integrable Models Physics Department of Turin University
2009	WKB analysis of poles of solutions to the Painlevé first equation	Nonlinear Waves and Integrable Systems University of Roma III
2009	The Painlevé first equation	University of Napoli

Supervision

	Thesis Title Role	Degree Subject (Type) Institution / Organization
2019/10/01 - 2020/06/30	ODE/IM correspondence in the large momentum limit Supervisor of Riccardo Conti	(Scientific initiation) Universidade de Lisboa Grupo de Física Matemática, Portugal

Event organisation

	Event name Type of event (Role)	Institution / Organization
2020/12 - Current	Integrability in Gauge and String Theory (2021/07 - 2021/07) Conference (Member of the Organising Committee)	Università degli Studi di Torino Dipartimento di Fisica, Italy
2020/12 - Current	Mini-course on Frobenius manifolds, irregular singularities, and isomonodromy deformations (2021/02/02 - 2021/02/19) Other (President of the Organising Committee)	Universidade de Lisboa Grupo de Física Matemática, Portugal
2020/01/01 - Current	Integrable Systems in Geometry and Mathematical Physics, Conference in Memory of Boris Dubrovin (2021/06 - 2021/06) Conference (Member of the Organising Committee)	Scuola Internazionale Superiore di Studi Avanzati, Italy
2020/01/01 - 2020/02/08	9th IST Lectures on Algebraic Geometry and Physics — 2020 (2020/02/03 - 2020/02/08) Workshop (Co-organisor)	Universidade de Lisboa Instituto Superior Técnico, Portugal
2019/11/01 - 2020/01/20	The Science of Climate Change: current situation and future perspectives (2019/12/06 - 2019/12/06) Meeting	Hipácia, Associação dos Investigadores Italianos em Portugal, Portugal
2018/07/08 - 2019/07/11	The International Conference (Ir)regular singularities and Quantum Field Theory, Lisbon 2019. (2019/07/08 - 2019/07/11) Conference (President of the Organising Committee)	Universidade de Lisboa Grupo de Física Matemática, Portugal
2019/04 - 2019/05	Short Course on Hitchin Integrable Systems (2019/05 - 2019/05) Other (President of the Organising Committee)	Universidade de Lisboa Grupo de Física Matemática, Portugal
2011/11/01 - 2012/05/20	Contemporary Ways Of Integrability, A Workshop for Young Researchers in Integrable Systems and their Ramifications (2012/05/16 - 2012/05/19) Conference (President of the Organising Committee)	Universidade de Lisboa Grupo de Física Matemática, Portugal

Jury of academic degree

	Theme Role	Candidate name (Type of degree) Institution / Organization
2018/11/12	Riemann surfaces and dessin d' enfants (Thesis) Arguer	Javier Alcaide Pérez (Master)

Association member

	Society Organization	Role
2019/02/01 - Current	Hipácia, Associação dos Investigadores Italiano em Portugal	Founding member, Auditor
2007/01/01 - Current	Gruppo Nazionale per la Fisica Matematica (GNFM, Italia)	Member

Committee member

	Activity description Role	Institution / Organization
2020/02/01 - Current	Recruitment of a Post Doc researcher under the FCT Project "A Mathematical framework for the ODE/IM correspondence" President / Vice-president	Universidade de Lisboa Faculdade de Ciências, Portugal
2020/01/01 - Current	Recruitment of a Reseachr under the FCT Project Meromorphic connections on algebraic curves and quantum field theory President / Vice-president	FCiênciasID Associação para a Investigação e Desenvolvimento de Ciências, Portugal
2019/10/01 - Current	Editor of the Proceedings of "Integrable Systems in Geometry and Mathematical Physics, Conference in Memory of Boris Dubrovin", to appear in Letters in Mathematical Physics Member	
2019/06/01 - 2019/07/15	Recruitment of a Pre-Doctoral Researcher under the FCT Project 'A mathematical framework for the ODE/IM correspondence' President / Vice-president	Universidade de Lisboa Faculdade de Ciências, Portugal
2018/12/01 - 2018/12/31	Recruitment of a Reseachr under the FCT Project Meromorphic connections on algebraic curves and quantum field theory Coordinator	FCiênciasID Associação para a Investigação e Desenvolvimento de Ciências, Portugal

Course / Discipline taught

	Academic session	Degree Subject (Type)	Institution / Organization
2020/02/18 - Current	Riemann Surfaces and Integrable Systems	Matemática (Doutoramento)	Universidade de Lisboa Faculdade de Ciências, Portugal
2019/02 - 2019/06	Topic in Mathematical Physics (Riemann Surfaces and Integrable Systems)	Física Matemática (Doutoramento)	Universidade de Lisboa Faculdade de Ciências, Portugal
2018/02/18 - 2018/07/16	Métodos matemáticos nas ciências	Matemática (Licenciatura)	Universidade de Lisboa Faculdade de Ciências, Portugal
2016/09 - 2017/01	Metodos Matemáticos na Física	(Licenciatura)	Universidade de Lisboa Faculdade de Ciências, Portugal
2015/11 - 2015/12	Mini Course on Painlevé equations and Anharmonic Oscillators	Mathematics (Doctor of Philosophy)	The University of Sydney School of Mathematics and Statistics, Australia

Mentoring / Tutoring

	Topic	Student name
2020/10 - Current	Supervision of the Post-Doc researcher Dr. Giordano Cotti: Frobenius Manifolds and quantum Differential Equations	Giordano Cotti, PhD
2020/07 - Current	Supervision of the Post-Doc researcher Dr. Riccardo Conti: The ODE/IM correspondence in the large momentum limit	Riccardo Conti, PhD
2019/04 - Current	Supervision of the Post-Doc researcher Dr. Tom Sutherland: Irregular Connections and Space of Stability Conditions.	Dr. Tom Sutherland, PhD
2019/10/01 - 2020/07/20	Initiation to research of the master student Robinson Pompeu on: Bosonic Oscillator Representation of the Virasoro Algebra	Robinson Pompeu
2015/11 - 2017/01	Mentoring of Pieter Roffelsen, PhD student of The University of Sydney on: Asymptotic Analysis of Painlevé equations and Anharmonic Oscillators. The mentoring resulted in two high-quality publications, SIGMA 2018 and Nonlinearity 2021.	Pieter Roffelsen

Distinctions

Title

2017	Abilitazione Scientifica in Fisica Matematica, Professore Associato Agenzia Nazionale Di Valutazione Del Sistema Universitario E Della Ricerca, Italy
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Other distinction

2006	Classified First in the Selection Procedure for the PhD in Mathematical Physics Scuola Internazionale Superiore di Studi Avanzati, Italy
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