

█ Contact Information

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█ Personal Information

Date of Birth June 24, 1987
Place of Birth Macerata, Italy
Citizenship Italian
Sex Male
Marital Status Single

█ Education

- 2012–22/03/2016 *Graduate: Ph.D in Physics and Relativistic Astrophysics*, Sapienza University of Rome, Italy – IRAP PhD program
Thesis title: Structure of rotating self-gravitating figures of equilibrium in Newtonian gravity and general relativity with an emphasis on neutron stars
Thesis Advisors: Prof. Simonetta Filippi and Prof. Jorge Armando Rueda Hernandez
Classification: Excellent
- 2009–2012 *Master Degree: Mathematics*, University of Camerino, Italy
Thesis title: Avoidance of singularities for charged collapsing solutions in spherical symmetry
Thesis Advisor: Roberto Giambó
Final Degree Remark: 110/110 cum laude
- 2006–2009 *Bachelor Degree: Mathematics*, University of Camerino, Italy
Thesis title: Rational Tangles and Continued Fractions
Final Degree Remark: 110/110 cum laude

Additional Qualifications

Computer Skills

Operative Systems	Linux, Windows, Mac OS
Computer Languages	Python, C/C++, bash for command line, Fortran 90, vb.NET, R
Scientific Software	Mathematica, Matlab, Maple, R, Gnuplot, LaTeX
Scientific codes	RNS, JETSPIN
CAD	Siemens NX
Personal codes	CLASS_ROT: <i>build numerical models of equilibrium configurations of differentially rotating polytropes in newtonian gravity (based on method by Eriguchi and Mueller)</i>

Languages

Italian	Native
English	Spoken (fluent), listen comprehension (very good), written (very good)

Employment History

- April 2016–October 2016 Short term cooperation agreement with IAC group of CNR in Rome. Collaborator of doc.s Sauro Succi, Marco Lauricella and Giuseppe Pontrelli, working with JETSPIN public Fortran code, that is a coarse-graining implementation used to numerically model the industrial electrospinning process, that allows the production of polymeric nano-fibres. My objectives were to test, modify and implement this code in order to obtain novel results, which then I should statistically analyse in order to write scientific papers.
- January 2017–March 2018 (Apprenticeship contract for 30 months) I have been hired as “Research Technician for Industrialization Processes” by the SIGMA s.p.a. company at the offices in Rubbianello (FM), in order to take care of several problems concerning the slight but continuous expansion of the company. My duties were to write some macros in vb.NET to automate some tasks with the Siemens NX CAD software (like making evaluations of costs of devices designed with the CAD or obtain an image preview of existing 3D models), to retrieve, collect and organize information on part painting and protective coating in order to make the production process less dependent from particular supplier and to build up a code in order to statistically analyse important data (like number of transactions or number of in field intervention on installed machineries) with the purpose to forecast their values.
- April 2018–in progress (two years contract) I won a competition by INFN for a two year PostDoc within the TIFPA institute in Trento University to collaborate in the research project of prof. Bruno Giacomazzo concerning numerical modeling in a full GR framework of neutron stars binaries as sources of gravitational waves.

Scientific Schools and Talks

Conferences

- June 20, 2016 “Supernovae, Hypernovae and Binary Driven Hypernovae - An Adriatic Workshop”, Pescara (Italy)
- July 20-24, 2015 “14th Italian-Korean Symposium on Relativistic Astrophysics”, Pescara (Italy)
- July 12-18, 2015 “Fourteenth Marcel Grossmann Meeting - MG14”, Rome (Italy)
- September 8-19, 2014 “Third BEGO Rencontres-IRAP PhD Erasmus Mundus School”, Nice (France)
- May 11-16, 2014 “Supernovae, Gamma-ray bursts and the Induced gravitational collapse”, Les Houches (France)
- February 23-March 2, 2014 Nice Winter school, Nice (France)
- September 2013 Nice BEGO school, Nice (France)
- Spring 2013 ICRANet meeting on Relativistic Astrophysics on the Occasion of the 50th anniversary of the Kerr solution of the Einstein’s equations, Pescara (Italy)
- May 2013 Nice BEGO school, Nice (France)

Talks

- June 20, 2016 *Structure of relativistic, rapidly rotating Neutron Stars: interior and exterior spacetime* during “Supernovae, Hypernovae and Binary Driven Hypernovae - An Adriatic Workshop”, Pescara (Italy)
- July 20-24, 2015 *Models for equilibrium configurations of rotating self-gravitating Polytropic Stars*, during “14th Italian-Korean Symposium on Relativistic Astrophysics”, Pescara (Italy)
- July 20-24, 2015 *Structure And Stability For Realistic Rapidly Rotating NS: Full GR Treatment*, during “14th Italian-Korean Symposium on Relativistic Astrophysics”, Pescara (Italy)
- July 12-18, 2015 *Structure And Stability For Realistic Rapidly Rotating NS: Full GR Treatment*, during “Fourteenth Marcel Grossmann Meeting - MG14”, Rome (Italy)
- September 8-19, 2014 *Rapidly Rotating Neutron Stars in full GR*, during “Third BEGO Rencontres-IRAP PhD Erasmus Mundus School”, Nice (France)

Scientific publications and work in progress

Proceedings

- 2015 *Black holes, neutron stars and supernovae within the induced gravitational collapse paradigm for GRBs*, L. Becerra, C. L. Bianco, F. Cipolletta et al. AIP Conf. Proc. 1693, 020002 (2015).
- 2015 *Physics and astrophysics of neutron stars*, R. Belvedere, F. Cipolletta et al. AIP Conf. Proc. 1693, 030001 (2015).

Published

- 2017 *Effects of orthogonal rotating electric fields on electrospinning process* M. Lauricella, F. Cipolletta, G. Pontrelli, D. Pisignano, S. Succi, Physics of Fluids, 29.8, 082003, Published online: August 2017, Accepted: July 2017.
- 2017 *Last stable orbit around rapidly rotating neutron stars*, F. Cipolletta, C. Cherubini, S. Filippi, J. A. Rueda, R. Ruffini, Phys. Rev. D 96, 024046, Published 25 July 2017.
- 2017 *Equilibrium Configurations of Classical Polytropic Stars with a Multi-Parametric Differential Rotation Law: A Numerical Analysis*, F. Cipolletta, C. Cherubini, S. Filippi, J. A. Rueda, R. Ruffini, Communications in Computational Physics, 22.3: 863-888, Published September 2017, Published online: 06 July 2017.
- 2015 *Angular Momentum Role in the Hypercritical Accretion of Binary-Driven Hypernovae*, L. M. Becerra, F. Cipolletta, C. L. Fryer, J. A. Rueda, R. Ruffini, ApJ, 812, 100, Published 13 October 2015.
- 2015 *Fast rotating neutron stars with realistic nuclear matter equation of state*, F. Cipolletta, C. Cherubini, S. Filippi, J. A. Rueda, R. Ruffini, Phys. Rev. D 92, 023007, Published 13 July 2015.
- 2012 *COLLAPSE OF SPHERICAL CHARGED ANISOTROPIC FLUID SPACETIMES*, Federico Cipolletta and Roberto Giambó 2012, Class. Quantum Grav. 29 245008. doi:10.1088/0264-9381/29/24/245008, Received 3 August 2012, in final form 15 October 2012, Published 19 November 2012.

Awards

- Oct 2012-Oct 2015 IRAP PhD Scholarship, in Sapienza University of Rome
- 2009-2011 Excellence Scholarship, in University of Camerino, during Master Degree
- 2006-2009 Excellence Scholarship, in University of Camerino, during Bachelor Degree

References

- Prof. Bruno Giacomazzo Associate Professor, Physics Department, University of Trento
bruno.giacomazzo@unitn.it <http://www.brunogiacomazzo.org>
- Prof. Remo Ruffini Director of the International Center for Relativistic Astrophysics Network (ICRANet), Professor of Theoretical Physics, Physics Department, “Sapienza” Università di Roma, Rome–Italy
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en.wikipedia.org/wiki/Remo_Ruffini
- Prof. Jorge A. Rueda Faculty Professor of the International Center for Relativistic Astrophysics Network (ICRANet), Member of ICRANet Faculty, IRAP PhD Faculty
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- Prof. Simonetta Filippi Full Professor in Mathematical Physics (MAT/07), Head, Laboratory of Non Linear Physics and Mathematical Modeling, Pro-Rector for Education, University “Campus BioMedico”, Via A. del Portillo 21, I-001285 Rome–Italy,
s.filippi@unicampus.it
- Prof. Christian Cherubini Associate Professor (Fis/02) in Theoretical Physics and Mathematical Models, Biomedical Engineering Faculty, University “Campus Bio-Medico”, Via A. del Portillo 21, I-001285 Rome–Italy
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- Prof. Roberto Giambó Full Professor (MAT/05) of Mathematical Analysis at the Mathematics Division of the School of Science and Technology, University of Camerino (Unicam)
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