

Contact Information	<p>Currently at: Department of Mathematics - UC Berkeley Address: 887 Evans Hall, Berkeley, CA-94720 Mobile 1: +1(415)6992223 E-mail: michele.schiavina@berkeley.edu ORCID: 0000-0001-5760-4794</p>	<p>Mobile 2: +41 78 6458218 Skype: schiavina.michele G. Scholar: Michele Schiavina</p>
Currently	<p>Postdoctoral fellow at University of California, Berkeley, USA. Department of Mathematics - Prof. Nicolai Reshetikhin. SNF Swiss National Science Foundation August '18 - February '19.</p>	
Prospective	<p>Postdoctoral fellow at ETH, Zürich, Switzerland. Department of Mathematics - Prof. Giovanni Felder Department of Physics - Prof. Niklas Beisert ITP Zürich, Institute for Theoretical Physics SNF Swiss National fund, SwissMAP February '19 - February '21</p>	
Previous Academic Positions	<p>Guest Researcher at Max Planck Institute, Bonn, Germany. Visiting Scholar at University of California, Berkeley, USA. March '18 - August '18.</p> <p>Postdoctoral fellow at University of California, Berkeley, USA. SNF Swiss National Science Foundation Department of Mathematics - Prof. Nicolai Reshetikhin. August '16 - February '18.</p>	
Ph.D. July '16	<p>Doctor of Natural Sciences (Mathematics). Zürich Graduate School in Mathematics, University of Zürich, Switzerland. Institut für Mathematik - Prof. Alberto S. Cattaneo. Jan '12 - July '16.</p>	
Publications	<p>Published papers and preprints (authors in alphabetical order)</p> <ul style="list-style-type: none"> • with Contreras I., arXiv:1801.09793 (2018) <i>Kähler fibrations in quantum information theory</i> • with Cattaneo A. S. and Selliah I., Lett. Math. Phys., 108 (8), 1873–1884 (2018) <i>BV equivalence between triadic gravity and BF theory in three dimensions.</i> • with Cattaneo A. S., arXiv:1707.06328 (2017) <i>BV-BFV approach to General Relativity: Palatini–Cartan–Holst action.</i> • with Cattaneo A. S., arXiv:1707.05351, to appear in Annales Henri Poincaré (2017/18) <i>The reduced phase space of Palatini–Cartan–Holst theory.</i> • with Cattaneo A.S., Lett. Math. Phys., 107(2) (2016/17) <i>On time.</i> • with Contreras I. and Ercolessi E., J. Math. Phys. 57(6), 062209 (2016) <i>On the geometry of mixed states and the Fisher information tensor.</i> • with Cattaneo A. S., J. Math. Phys. 57(2), 023515 (2015/16) <i>BV-BFV approach to General Relativity: Einstein Hilbert action.</i> • with Micheli G., Adv. Math. Comm. 8 (3), 343-358 (2014) <i>A general construction for monoid-based knapsack protocols.</i> 	

- with Ercolessi E., *Phys. Lett. A* **377** (34-36), 1996-2002 (2013)
Symmetric logarithmic derivative for general n-level systems and the quantum Fisher information tensor for three-level systems.
- with Ercolessi E., *J. Phys. A* **45** 365303 (2012)
Geometry of mixed states for a q-bit and the quantum Fisher information tensor.

-
- PhD Thesis, University of Zürich (2015),
BV-BFV Approach to General Relativity

Approved Research Projects

SNF Swiss National Science Foundation

- *Lawrence Berkeley Lab*, Molecular Foundry User Proposal Research Collaboration, Dec/2018 - Dec/2020
- *Advanced Mobility* Postdoc Grant (USD 76.150), 01/Aug/2018 - 31/Jan/2020
- *Early Mobility* Postdoc Grant (USD 70.650), 01/Aug/2016 - 31/Jan/2018
- *Forschungskredit* Research Grant (CHF 55.200), 01/Jul/2013 - 31/Aug/2014

Awards & Scholarships

Collegio Superiore, University of Bologna

- Excellence Studentship (EUR 13,250 + tuition), Sep/06-Jul/11: B.Sc. & M.Sc.

Students' Supervision

University of California, Berkeley

- Enya Hsiao, Summer research project, Apr '17 - Dec '17,
The boundary structure of two dimensional Einstein–Hilbert gravity.

University of Zürich

- Iswaryaa Selliah, Master thesis project, Jan '16 - Dec '17,
BV equivalence between triadic gravity and BF theory in three dimensions.

Teaching

Full Courses

- *General Relativity for mathematicians*, Zürich, Spring '16

Seminars and minicourses

- Max Plank Institute, Bonn - April to June '18
Learning seminar on quantum field theory and BV formalism.
- Collegio superiore, Alma Mater Studiorum, University of Bologna - Feb '14
Geometric methods for physics and quantisation.
- Collegio superiore, Alma Mater Studiorum, University of Bologna - Feb '13
Co-adjoint orbit of compact Lie groups.

Reading Seminars Organisation

- *Learning seminar on quantum field theory and BV formalism.*, Bonn, Spring '18.
- *Log-symplectic geometry and applications*, Zürich, Autumn '15.
- *Mathematical methods in quantum field theory*, Zürich, Spring '15.

Teaching Assistance

- *Introduction to General Relativity and gauge theories for mathematicians* - Zürich, Spring '15
- *Quantum mechanics for mathematicians* - Zürich, Autumn '14
- *Classical mechanics for mathematicians* - Zürich, Spring '14
- *Lie groups and Lie algebras* - Zürich, Autumn '13
- *Linear algebra II* - Zürich, Spring '13
- *Linear algebra I* - Zürich, Autumn '12
- *Mathematics for chemistry II* - Zürich, Spring '12

Scientific Duty

- Referee for Communications in Mathematical Physics.
- Referee for Letters in Mathematical Physics.
- Reviewer for the American Mathematical Society.

Academic activities

Invited research talks

University of Freiburg, Germany, June '18

Equivalence of field theories in the BV-BFV formalism. Insights from General Relativity.

Max Planck Institute for Mathematics, Bonn, Germany, Mar '18

Equivalence of field theories in the BV-BFV formalism. The example of (three dimensional) General Relativity.

Univeristy of Bologna, Italy - June '17

Equivalence of theories in the BV-BFV formalims, the case of GR.

Perimeter Institute, Waterloo, Canada - May '17

Equivalence of theories in the presence of boundaries: the example of General Relativity

Northwestern University, Evanston, USA - May '17

BV-BFV formalism and General Relativity.

University of Illinois at Urbana Champaign, USA - May '17

A geometrical perspective on the quantum Fisher information index.

University of California at Davis, USA - Apr '17

BV-BFV formalism and General Relativity.

University of California at Berkeley, USA - Mar '17

BV-BFV formalism and General Relativity.

University of California at Davis, USA - Feb '17

A geometrical perspective on the quantum Fisher information index.

UFR de mathématiques de l'université Paris Diderot, Paris, Fr - Dec '15

BV-BFV approach to General Relativity.

Max Plank Institute for Mathematics, Bonn, De - Nov '15

Semiclassical BV-BFV approach to General Relativity.

Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Ca - Oct '15

BV-BFV approach to General Relativity.

University of California, Berkeley, USA - Feb '15

Gauge theories on manifolds with boundaries.

University of Bologna, It - Feb '14

Classical and quantum gauge theories on manifolds with boundaries.

ETH Zürich, Ch - Apr '13

What is... a BV-BFV theory.

University of Lille, Fr - Jan '13

Coadjoint orbits of classical Lie groups.

Invited conference talks, posters and workshops

Field Theories and Higher Structures in Mathematics and Physics, Banff center for Mathematical Research, Oaxaca, ME - June '17 [Workshop]

Quantum Field Theory on Manifolds with Boundary and the BV Formalism, Perimeter Institute, Waterloo, CA - May '17 [Talk + Workshop]

Lichnerovicz Memorial Conference, IHP, Paris, FR - Dec '15 [Poster]

Algèbres L_∞ , Homotopie rationnelle, opérades et super géométrie, Rabat, MO - Jun '15 [Talk]

Perspectives in physical mathematics, University of Bologna, IT - Dec '14 [Talk]

Organised seminars

Representation Theory and Mathematical Physics Seminar, UC Berkeley - Fall '17

Graduate talks in mathematics, University of Zürich - Spring '14 through Spring '16

Education 2006 - 2011

University of Bologna, Italy.

- Bachelor and Master of Science in Theoretical Physics.
Prof. Elisa Ercolessi and Prof. Luca Migliorini.
- Diploma of excellence studies - *Collegio Superiore*, University of Bologna.
Prof. Ettore Remiddi.