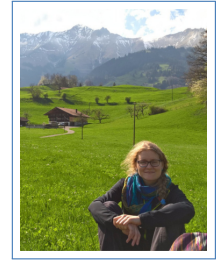


Silvia Steila

Curriculum Vitae



Experience

2016 - today **Postdoctoral fellow**, *Logic and Theory group, University of Bern*, from 1st March 2016.
Advisor: Gerhard Jäger, Universität Bern

Education

2013 – 2016 **PhD in Computer Science**, *Università degli Studi di Torino, Scuola di Dottorato in Scienze della Natura e Tecnologie Innovative*, 26th January 2016.

Thesis title: *Terminating via Ramsey's Theorem*

Supervisor: Stefano Berardi, Università degli studi di Torino

Co-supervisor: Paulo Oliva, Queen Mary University, London

2010 – 2012 **Master in Mathematics**, *Università degli Studi di Torino, Facoltà di Scienze MFN*, 110L, 18th July 2012.

Thesis title: *Partition Relations for Countable Ordinals*

Supervisor: Alessandro Andretta, Università degli studi di Torino

2007 – 2010 **Bachelor in Mathematics**, *Università degli Studi di Torino, Facoltà di Scienze MFN*, 110L, 16th July 2010.

Teaching

2016 – 2017 November 2017. Two lectures of the course: Einführung in die Informatik. University of Bern.

2016 – 2017 November 2016. One lecture of the course: Einführung in die Informatik. University of Bern.

2015 – 2016 October 2015 - February 2016. Tutor (Art. 76 dello Statuto dell'Università di Torino). Course: Matematica Discreta e Logica.

2014 – 2015 October 2014 - February 2015. Tutor (Art. 76 dello Statuto dell'Università di Torino). Course: Matematica Discreta e Logica.

2013 – 2014 March 2014 - July 2014. Tutor (Art. 76 dello Statuto dell'Università di Torino). Course: Basi di Informatica.

2011 – 2012 March 2012 - June 2012. Tutor (Art. 13 L. 390/91 dello Statuto dell'Università di Torino). Course: Algebra con Elementi di Logica.

2011 – 2012 September 2011 - February 2012. Tutor (Art. 13 L. 390/91 dello Statuto dell'Università di Torino). Course: Algebra 1.

2010 – 2011 March 2011 - June 2011. Tutor (Art. 13 L. 390/91 dello Statuto dell'Università di Torino). Course: Algebra con Elementi di Logica.

Scientific reviewing activities

Editor for TAMC 2017

PC Member for TAMC 2017

Reviewer for the Journal of Symbolic Logic
Reviewer for LICS (Logic in Computer Science)
Reviewer for FSCD (Formal Structures for Computation and Deduction)
Reviewer for Mathematical Structure in Computer Science

Memberships in scientific societies

Association of Symbolic Logic
Associazione Italiana di Logica e sue Applicazioni
European Association for Computer Science Logic
Swiss Society for Logic and Philosophy of Science

Organizational Activities

- 2018 Member of the Organizing Committee of AiML & LATD in Bern
- 2018 Member of the Organizing Committee of 11th Young Set Theory Workshop in Lausanne
- 2018 Member of the Organizing Committee of 1st Swiss-Italian Workshop on Proof and Computation in Verona
- 2017 Member of the Organizing Committee of TAMC 2017 in Bern
- 2015 Student volunteer for ETAPS 2015 in London

Awards and Fellowships

- 2017 “Paul Bernays Award” by the Swiss Society for Logic and Philosophy of Science.
- 2015 Erasmus Traineeship for the project “Ramsey’s Theorem in Computer Science”.
- 2013 Optime Award 2013 by the Unione Industriale di Torino.
- 2013 “Angiola Agostinelli Gili” fellowship by the Accademia delle Scienze di Torino for the research project “Il Teorema di Ramsey dal punto di vista dei principi non costruttivi”.
- 2012 Award “Premio per il sostegno alla mobilità internazionale per gli studenti del corso di Laurea Magistrale in Matematica” by the Facoltà di Scienze MFN of the Università degli studi di Torino.

Research Output List

Publications in peer-reviewed scientific journals.

- 1) Emanuele Frittaion, Florian Pelupessy, **Silvia Steila** and Keita Yokoyama. The strength of SCT soundness. Accepted Journal of Logic and Computation, 2018. [ArXiv link](#)
- 2) Paulo Oliva and **Silvia Steila**. A Direct Proof of Schwichtenberg’s Bar Recursion Closure Theorem. Accepted in Journal of Symbolic Logic, 2017. [ArXiv link](#)
- 3) Giorgio Audrito and **Silvia Steila**. Generic large cardinals and systems of filters. Journal of Symbolic Logic, 82(3):860-892, 2017. [JSL link](#), [ArXiv link](#)
- 4) Stefano Berardi and **Silvia Steila**. Ramsey’s Theorem for pairs and k colors as a sub-classical principle of arithmetic. Journal of Symbolic Logic, 82(2):737-753, 2017. [JSL link](#), [ArXiv link](#)
- 5) **Silvia Steila** and Keita Yokoyama. Reverse Mathematical bounds for the Termination Theorem. Annals of Pure and Applied Logic, 167(12): 1213-1241, 2016. [APAL link](#)
- 6) Stefano Berardi and **Silvia Steila**. An intuitionistic version of Ramsey’s Theorem and its use in Program Termination. Annals of Pure and Applied Logic, 166(12):1382-1406, 2015. [APAL link](#)
- 7) Stefano Berardi, Paulo Oliva, and **Silvia Steila**. An Analysis of the Podelski-Rybalchenko Termination Theorem via Bar Recursion. Journal of Logic and Computation, First published online: August 24, 2015. [JLC link](#)

[Peer-reviewed conference proceedings.](#)

- 8) Emanuele Frittaion, **Silvia Steila**, and Keita Yokoyama. The strength of the SCT criterion. In TAMC, volume 10185 of Lecture Notes in Computer Science, pages 260-273, 2017. [Springer link](#)
- 9) **Silvia Steila**. An intuitionistic analysis of size-change termination. TYPES 2014 pages 288-307, 2015. [TYPES 2014 link](#)
- 10) Stefano Berardi, Paulo Oliva, and **Silvia Steila**. Proving termination of programs having transition invariants of height ω . In ICTCS 2014, pages 237-240. [Ceur link](#)
- 11) Stefano Berardi and **Silvia Steila**. Ramsey theorem as an intuitionistic property of well founded relations. In RTA&TLCA 2014, pages 93-107. [Springer link](#)
- 12) Stefano Berardi and **Silvia Steila**. Ramsey Theorem for Pairs As a Classical Principle in Intuitionistic Arithmetic. In TYPES 2013, pages 64-83. [Types 2013 link](#)

[Contributions to books.](#)

- 13) **Silvia Steila**. A combinatorial bound for a restricted form of the Termination Theorem. Accepted for publication in *Well quasi-orders in computation, logic, language and reasoning. A unifying concept of proof theory, automata theory, formal languages and descriptive set theory*. Ed. Peter Schuster, Monika Seisenberger, Andreas Weiermann, Trends in Logic, Springer.

[Oral contributions to conferences \(talks and posters\).](#)

- 2018 "SCT through the reverse mathematical looking glasses", 1st Swiss-Italian Workshop on Proof and Computation, January 19th, 2018, Verona
- 2017 "How large are proper classes? ", ABM Winter Meeting, December 14th, 2017, Munich
- 2017 "Playing with equivalent forms of CH", XXVI incontro AILA, September 25th, Padova
- 2017 "On some fixed point statements over Kripke Platek", Minisymposium: Applied Proof Theory and the Computational Content of Mathematics in OEMG - DMV 2017, September 14th, Salzburg
- 2017 "On some fixed point statements over Kripke Platek", Special section of proof theory - Logic Colloquium, August 18th, Stockholm
- 2017 "Playing with equivalent forms of CH", 10th Young Set Theory Workshop, July 14th, Edinburgh
- 2017 "A combinatorial bound for a restricted form of the Termination Theorem", WiL Workshop, June 19th, Reykjavik
- 2017 "On Σ_1 -fixed point statements in Kripke Platek", Workshop on Constructivism, Logic and Topology, January 18th, Bern
- 2016 "On Σ_1 -fixed point statements in Kripke Platek", ABM Winter Meeting, December 8th, Munich
- 2016 "Reverse Mathematical Bounds for the Termination Theorem", Logic, Complexity and Automation - CLA2016, September 5th, Obergurgl
- 2016 "A Direct Proof of Schwichtenberg's Bar Recursion Closure Theorem", ABM Spring Meeting, May 27th, Bern
- 2016 "From equivalent forms of CH to CH-systems", Operation Sets and Types, April 20th, Münchenwiler
- 2016 "From equivalent forms of CH to CH-systems", Mini-Workshop on Non-Classical Logics, March 24th, Bern
- 2016 "Systems of Filters", Winter School in Abstract Analysis section: Set Theory and Topology, February 5, Hejnice
- 2015 System of Filters. Poster with Giorgio Audrito. 8th YSTW, Jerusalem, 24-31 October, 2015. [Poster link](#)
- 2015 "Definable versions of algebraic equivalents of CH", XX Congresso UMI, September 8, Siena
- 2015 "Reverse Mathematical Bounds for the Termination Theorem", PhD AILA, August 25, Gargnano

- 2015 “Reverse Mathematical Bounds for the Termination Theorem”, Logic Colloquium, August 5, Helsinki
- 2015 “Reverse Mathematical Bounds for the Termination Theorem”, Logic and Information ST 2015 (Münchenwiler Meeting), March 26, Münchenwiler
- 2015 “Avoidable polynomials and *all reals are constructible*”, Winter School in Abstract Analysis section: Set Theory and Topology, February 4, Hejnice
- 2014 “Effective Bounds on the Podelski-Rybalchenko Termination Theorem”, PSC, July 17, Wien
- 2014 “Ramsey Theorem as an intuitionistic property of well-founded relations”, RTA&TLCA, July 15, Wien
- 2014 “Proving termination with transition invariants of height ω ”, CL&C, July 13, Wien
- 2014 “Determinare la terminazione di programmi con il Teorema di Ramsey”, Seminario di Logica Permanente, June 6, Salerno
- 2014 “Finite and Infinite Ramsey Theorem”, Browsing through Mathematics, April 28, Torino
- 2013 “Ramsey Theorem for pairs as a classical principle in Intuitionistic Arithmetic”, British Logic Colloquium, September 6, Leeds