

ILARIA COLAZZO

CONTACT INFORMATION	University of Exeter Department of Mathematics Exeter, UK	I.Colazzo@exeter.ac.uk ilariacolazzo@gmail.com www.ilariacolazzo.info
CURRENT POSITION	University of Exeter , Exeter, UK <i>Postdoctoral Research fellow</i>	
RESEARCH INTERESTS	Algebra, Set-theoretical solutions of the Yang-Baxter equation, Skew braces, trusses and generalisations, Regular subgroups of the holomorph, Hopf-Galois extensions, Set-theoretical solutions of the pentagon equation	
RESEARCH EXPERIENCE	University of Exeter , Exeter, UK, <i>Postdoctoral Researcher in Mathematics</i> EPSRC project: Hopf-Galois Theory and Skew Braces. PI: Prof. Nigel Byott	01/06/2021 – Present
	Vrije Universiteit Brussel , Brussels, Belgium, <i>Postdoctoral Researcher in Mathematics</i> Scientific advisor: Prof. Eric Jespers	01/10/2019 – 28/02/2021
	University of Salento , Lecce, Italy <i>Postdoctoral Researcher in Mathematics</i> Research project: "Yang-Baxter equation and related algebraic structures". Scientific advisor: Prof. Francesco Catino	01/12/2017 – 30/11/2018
	Vrije Universiteit Brussel , Brussels, Belgium Postdoctoral Researcher Visiting (host Prof. E. Jespers)	01/09/2018 – 30/11/2018
	University of Salento and University of Basilicata , Lecce, Italy <i>PhD Student</i>	03/03/2014 – 20/07/2017
	University of Warsaw , Warsaw, Poland <i>Visiting PhD Student</i> (host Prof. J. Okniński)	15/11/2016 – 20/12/2016
EDUCATION	University of Salento and University of Basilicata , Lecce, Italy <i>Department of Mathematics and Physics "Ennio De Giorgi"</i> Ph.D., Mathematics and Informatics Dissertation Title: "Left Semi-Braces and the Yang-Baxter equation". Advisor: Prof. F. Catino Final mark: cum Laude	20/07/2017
	University of Salento , Lecce, Italy <i>Department of Mathematics and Physics</i> M.S., Mathematics B.S., Mathematics	25/10/2012 18/12/2008
	University of Salento , Lecce, Italy <i>Scuola Normale Superiore ISUFI</i> <i>Nanoscience and Grid-Computing</i> Licence (it: Licenza Scuola Superiore ISUFI Pre-Laurea I livello)	15/06/2009

PUBLICATIONS

- [1] **I. Colazzo**, E. Jespers, A. Van Antwerpen, C. Verwimp, *Left non-degenerate set-theoretic solutions of the Yang-Baxter equation and semitrusses*, J. Algebra (2022).
- [2] **I. Colazzo**, E. Jespers, L. Kubat. *Set-Theoretic Solutions of the Pentagon Equation*, Commun. Math. Phys. (2020).
- [3] **I. Colazzo**, A. Van Antwerpen, *The algebraic structure of left semi-trusses*, J. Pure Appl. Algebra, 225 (2021) n.2, 106467.
- [4] F. Catino, **I. Colazzo**, P. Stefanelli, *The Matched Product of the Solutions to the Yang–Baxter Equation of Finite Order*, Mediterr. J. Math., 17 (2020), no. 2, Art. 58.
- [5] F. Catino, **I. Colazzo**, P. Stefanelli, *The Matched Product of the Solutions to the Yang–Baxter Equation of Finite Order*, Mediterr. J. Math., 17 (2020), no. 2, Art. 58, .
- [6] F. Catino, **I. Colazzo**, P. Stefanelli, *The matched product of solutions to the Yang-Baxter equation*, J. Pure Appl. Algebra 224 (2020) n. 3, 1173–1194.
- [7] F. Catino, **I. Colazzo**, P. Stefanelli, *Skew left braces with non-trivial annihilator*, J. Algebra Appl. 18 (2019) n.2, 1950033, 23 pp.
- [8] F. Catino, **I. Colazzo**, P. Stefanelli, *Semi-braces and the Yang–Baxter equation*, J. Algebra, **483**, (2017), 163–187.
- [9] F. Catino, **I. Colazzo**, P. Stefanelli, *Regular subgroups of the affine group and asymmetric product of radical braces*, J. Algebra, **455**, (2016), 164–182.
- [10] F. Catino, **I. Colazzo**, P. Stefanelli, *On regular subgroups of the affine group*, Bull. Aust. Math. Soc., **91** (2015), 76–85.

PREPRINTS AND OTHERS

- [1] **I. Colazzo**, M. Ferrara, M. Trombetti, *On derived-indecomposable of the Yang-Baxter equation*, arXiv:2210.08598.
- [2] **I. Colazzo**, *Braces: between regular subgroups and solutions of the Yang-Baxter equation*, Algebra for Cryptography, Collectio Cipharrum, (Extended abstract), ISBN 9791259943286 (2021).

INVITED TALKS

INVITED TALKS AT CONFERENCES AND WORKSHOPS

- YB-semitrusses and left non-degenerate solutions to the Yang-Baxter equation*: Conference Hopf algebras and Galois module theory (Omaha/Online) 30 May – 03 June 2022.
- YB-semitrusses with associated bijective solutions*: Braces in Bracelet Bay, Swansea University (Online), 04–06 June 2022
- Skew braces and solutions of the Yang-Baxter equation*: Conference Hopf algebras and Galois module theory (Online), 24–27 May 2021
- Braces: between regular subgroups and solutions of the Yang-Baxter equation*: Workshop *Algebra for Cryptography* (L’Aquila), 10-11 October 2019.
- The matched product of the solutions of the Yang-Baxter equation*: Meeting *Noncommutative and non-associative structures, braces and applications* (Malta), 11-15 March 2018.

SEMINAR TALKS

- Retractability problem for quasi-linear cycle sets*, Seminar Algebra, University of Warsaw (Poland), 20 October 2022.
- Set-theoretic solution of the Pentagon Equation: the involutive case*, QA Seminar, Vrije Universiteit Brussel (Belgium), 18 May 2022.
- Set-theoretic solutions of the Yang-Baxter equation and related associative structure*, University of Padua (Italy), 20 April, 2022.
- Bijective set-theoretic solutions of the Pentagon Equation*, Al@Bicocca take-away, University of Milan – Bicocca, Milan (Italy), 12 November 2021.
- Set-theoretic solutions of the Yang-Baxter equation, skew braces and regular subgroups*, University of Exeter (UK), 11 November 2021.
- Regular subgroups and left semi-braces*, ALGB Seminar, Vrije Universiteit Brussel (Belgium), 31 October 2018.
- Regular subgroups of the affine group*, Seminar Algebra, Seminar Algebra, University of Warsaw (Poland) 24 November 2016.

CONFERENCES
ORGANISED

- *Oberwolfach mini-workshop (2309a)* **26/02–03/03/2023**
Skew Braces and the Yang–Baxter Equation
Oberwolfach (Germany), member of the scientific committee
(with T. Brzezinski, A. Doikou, and L. Vendramin)
- *The algebra of the Yang–Baxter equation* **10–16/07/2019**
Bedlewo (Poland), member of the organising
(with L. Kubat, V. Lebed, J. Okniński, A. Van Antwerpen, L. Vendramin, and M. Wiertel)
- *Conference Young Researchers Algebra Conference 2019* **16–19/09/2019**
Naples (Italy), member of the scientific committee
(with M. Brescia, M. Ferrara, P. Stefanelli and M. Trombetti)
- *Advances in Group Theory and Applications 2019* **25–28/06/2019**
Lecce (Italy), member of the organising committee
(with M. Brescia, M. Ferrara, M. M. Miccoli, P. Stefanelli and M. Trombetti)
- *Advances in Group Theory and Applications 2017* **05–08/09/2017**
Lecce (Italy), member of the organising committee
(with M. M. Miccoli, P. Stefanelli and M. Trombetti)
- *Advances in Group Theory and Applications 2015* **16–19/06/2015**
Porto Cesareo, Lecce (Italy), member of the organising committee
(with M. M. Miccoli, P. Stefanelli)
- *Algebra Reading Seminar* **2015–2019**
Co-organiser of the Department seminar (with F. Catino)
University of Salento, Department of Mathematics and Physics “Ennio De Giorgi”

TEACHING
EXPERIENCE

MAGIC (UK)

a collaboration of 22 universities, coordinated by the University of Exeter.

- *Lecturer*
Duties included preparing and delivering lectures, preparing study material and exercises, marking home-work and the final assignment.
 - MAGIC111 A.Y. 2022–23
Introduction to set-theoretic solutions to the Yang-Baxter equation and skew braces
Course for PhD students

University of Exeter, Exeter, UK

- *Tutor*
Duties included preparing lectures for tutorial classes, fielding of student inquiries, and marking home-work.
 - *MTH2010 – Groups, Rings and Fields* (Course Prof M. Saidi) A.Y. 2022–23
 - *MTH1001 – Mathematical structures* (Course Dr G. Marasingha) A.Y. 2021–22

University of Salento, Lecce, Italy

- *Instructor*
Duties included preparing lectures, fielding of student inquiries, and office hours.
 - Mathematics preliminary course A.Y. 2017–18
for bachelor’s students in Mathematics and in Physics
- *Teaching assistant*
Duties included preparing lectures for tutorial classes for recitation classes and office hours.
 - Group Theory (Course Professor F. Catino) A.Y. 2017–18
 - Group Theory (Course Professor F. Catino) A.Y. 2016–17
 - Group Theory (Course Professor F. Catino) A.Y. 2015–16
 - Algebra II (Course Professor M. M. Miccoli) A.Y. 2015–16
- *Tutor*
Duties included preparing lectures for tutorial classes, fielding of student inquiries, and office hours.
 - Algebra I and II (Course Prof F. Catino and Prof M. M. Miccoli) A.Y. 2018–19
 - Algebra I (Course Prof F. Catino) A.Y. 2016–17
- *Algebra, Exam committee member* (it Cultore della materia) July 2016 – July 2019
Duties included grading final exams.

REFEREING
ACTIVITY

Annales Henri Poincare, Journal Publicacions Matemàtiques, Journal of the London Mathematical Society (JLMS), International Mathematics Research Notices, Journal of Algebra and its Applications, Communications in Algebra, Rendiconti del Circolo Matematico di Palermo Series 2.

SKILLS

Programming Language: GAP, Python.

Language: Italian (native), English (fluent), French (waystage).