Silvia Properzi

Vrije Universiteit Brussel
Faculty of Sciences and Bioengineering Sciences
Department of Mathematics and Data Science
Pleinlaan 2, 1050 Brussels, Belgium

email: silvia.properzi@vub.be

Personal Page: `https://properzi.github.io/`

github: https://github.com/Properzi

OrcID: 0000-0002-8228-9156

CURRENT POSITION

November 2022 – present
PhD student
Vrije Universiteit Brussel, Belgium

EDUCATION

October, 2021
Master's degree in Mathematics
University of Pisa, Italy
- Thesis title: Hopf Galois theory and Hopf Galois correspondence: the case of minimal structures.
  [`https://etd.adm.unipi.it/theses/available/etd-10142021-100831/`]
- Grade: 110/110 with honors

September, 2017
Bachelors's degree in Mathematics
University of Pisa, Italy
- Thesis title: Gruppi nilpotenti finitamente generati.
- Grade: 97/110

GRANTS

November 2023 – October 2027
FWO PhD Fellowship
Skew braces, quivers, and applications to the Yang-Baxter equation.

November 2022 – October 2023
OZR backup mandate
Skew braces, quivers, and applications to the Yang-Baxter equation.

PUBLICATIONS

2025
S. Properzi, A. Van Antwerpen, Common divisor graphs for skew braces,Journal of Pure and Applied Algebra, Volume 229, Issue 2, 2025, 107876. [ArXiv:2306.12415]

February 2025
C.Dietzel, S. Properzi, S. Trappeniers, Indecomposable involutive set-theoretical solutions to the Yang-Baxter equation of size p^2, Communications in Algebra, 53(3), 1238–1256. [ArXiv:2403.18653]

PRE-PRINTS

September 2024
C. Dietzel, E. Feingesicht, S. Properzi, Indecomposability and irreducibility of monomial representations for set-theoretical solutions to the Yang-Baxter equation, ArXiv:2409.10648.

Travel Grants

June 2024
VUB Doctoral School Travel grant for research visit "Study of combinatorial solutions to the Yang-Baxter equation and its associated algebraic structures" to University of Leeds, 12 to 16 May 2025

June 2024	VUB Doctoral School Travel grant for the Summer School "Combinatorial Hopf algebras and modern Lie theory with applications" Nordfjordeid, Norway, June 17-21, 2024
September 2023	FWO grant for workshop abroad "Lean for the Curious Mathematician 2023" Düsseldorf, 4-8 September 2023.

ORGANIZED CONFERENCES

June, 2025	Local organizer: The Yang-Baxter equation and all that, Będlewo, Poland https://sites.google.com/impan.pl/ybe/home-page
April, 2025	Local organizer: HOPF25, Brussels, Belgium https://hopfalgb.ulb.be/Hopf2025/
June, 2023	Local organizer: Groups, rings, and the Yang-Baxter equation, Blankenberge, Belgium https://www.ilariacolazzo.info/gryb2023/

TALKS

May 2025	Skew Braces, the YBE, and some results in the classification of solutions, Algebra seminar, Leeds, UK
December 2024	Indecomposable involutive solutions to the Yang-Baxter equation of prime-squared size, Biracks and Biquandles: Theory, applications, and new perspectives, Leeds, UK
May 2024	Indecomposable involutive solutions to the Yang-Baxter equation of size p^2, Skew Braces, Braids and the Yang-Baxter Equation (24w5201), Banff, Canada
February 2024	Graphs, group actions and skew braces, Introduction to Modern Advances in Algebra, Exeter, UK
October 2023	Graphs, groups and skew braces, Workshop on Algebra in l'AQuila 2023, L'Aquila, Italy
June-July 2023	A common divisor graph for skew braces, LOOPS'23, Będlewo, Poland
June 2023	A common divisor graph for skew braces, Groups, Rings and the Yang-Baxter equation 2023, Blankenberge, Belgium
April 2023	A graph associated with finite skew braces, The Interplay Between Skew Braces and Hopf-Galois Theory, Keele University, Keele, UK

WORKSHOPS

September, 2023	Lean for the Curious Mathematician 2023 (LftCM 2023), Düsseldorf, Germany https://lftcm2023.github.io/ [Partially funded by FWO and LftCM 2023 organization]

ATTENDED CONFERENCES

April, 2025	GAP Days Spring 2025, Vrije Universiteit Brussel, Brussels, Belgium https://www.gapdays.de/gapdays2025-spring/
April, 2025	Algebraic structures in the Yang-Baxter equation, Heriot-Watt University, Edinburgh, UK https://sites.google.com/view/yang-baxter-algebras/home
May, 2023	Dutch-Belgian discrete math seminar – 4th edition, Vrije Universiteit Brussel, Brussels, Belgium https://aidaabiad.win.tue.nl/dutchbelgiandiscretemathseminar.html
August, 2022	GAP workshop, Vrije Universiteit Brussel, Brussels, Belgium & online https://www.vub.be/gap-workshop

July, 2022	The algebra of the Yang-Baxter equation, Będlewo, Poland & online https://www.impan.pl/en/activities/banach-center/conferences/21-algebraybaxter
June, 2022	Groups theory in Florence III, University of Firenze, Florence, Italy https://sites.google.com/view/groupsinflorence/main
June, 2022	Groups & Algebras in Bicocca for Young algebraists, University of Milano-Bicocca, Milan, Italy https://staff.matapp.unimib.it/~/gaby/gaby2022/index.html
June, 2022	Ultramath, University of Pisa, Pisa, Italy https://www.ultramath.it/
January, 2022	Braces in Bracelet Bay, Swansea University, online https://sites.google.com/view/lmsmeetingbracesinbraceletbay/home

LANGUAGES

Italian, native speaker

English, upper-intermediate, certificates (University of Pisa): B2 and Academic Writing–Advanced level

French, intermediate

Dutch, beginner