Tommaso Russo

Curriculum Vitae

Personal Information

Date of Birth	June 4th, 1991
Nationality	Italian
Email	tommaso.russo@uibk.ac.at (current)
	tommaso.russo.math@gmail.com (permanent)
Profiles	*ORCID*, *ResearchGate*

Current Position

Research field

Functional Analysis, Geometry of Banach spaces, Non-separable Banach spaces, Biorthogonal systems, Differentiability and renormings, Descriptive Topology, Non-linear Functional Analysis.

10/2022–09/2026	**Post-Doc**
	Department of Mathematics
	University of Innsbruck.
09/2020–12/2022	**Assistant Professor**
	Department of Mathematics of the Faculty of Electrical Engineering
	Czech Technical University in Prague.

Previous Positions

07/2020–09/2022	**Post-Doc**
	Institute of Mathematics of the Czech Academy of Sciences.
	Project: Banach spaces of continuous and Lipschitz functions, Grant GF20-22230L
	Principal Investigator: Prof. Wiesław Kubiś.
09/2018–08/2020	**Post-Doc**
	Department of Mathematics of the Faculty of Electrical Engineering
	Czech Technical University in Prague.
	Project: OPVVV mobility CZ.02.2.69/0.0/0.0/16_ 027/0008465
	Mentor: Prof. Petr Hájek.

Education and Training

10/2015–09/2018	**Ph.D. in Mathematical Sciences**
	Università degli Studi di Milano, Department of Mathematics 'Federigo Enriques'
	Thesis: *On some open problems in Banach space theory*
	Advisor: Prof. Clemente Zanco. Co-advisor: Prof. Petr Hájek.
09/2013–09/2015	**Master degree in Mathematics**
	Università degli Studi di Milano, Milano, Italy.
	Thesis: *Banach spaces of (almost) universal disposition*
	Supervisor: Prof. Clemente Zanco. Final mark: 110/110 cum laude.
09/2010–07/2013	**Bachelor degree in Mathematics**

Università degli Studi di Milano, Milano, Italy.

Final mark: 110/110 cum laude.

09/2005–07/2010 **High School Education**

Liceo Scientifico Niccolò Machiavelli, Pioltello (MI), Italy.

Diploma di maturità scientifica. Final mark: 100/100 cum laude.

Publications

Preprints

2. S. Dantas, P. Hájek, and T. Russo, Smooth norms in dense subspaces of $\ell_p(\Gamma)$ and operator ranges, `arXiv:2205.11282`.

1. P. Leonetti, T. Russo, and J. Somaglia, Dense lineability and spaceability in certain subsets of ℓ_∞, `arXiv:2203.08662`.

Accepted papers

1. S. Dantas, P. Hájek, and T. Russo, Smooth and polyhedral norms via fundamental biorthogonal systems, *Int. Math. Res. Not. IMRN* (online first). `arXiv:2201.03379`.

Articles

12. P. Hájek and T. Russo, Projecting Lipschitz functions onto spaces of polynomials. *Mediterr. J. Math.* **19** (2022), 190. `arXiv:2102.02778`.

11. T. Russo and J. Somaglia, Weakly Corson compact trees, *Positivity* **26** (2022), 33. `arXiv:2106.11830`.

10. P. Hájek, T. Russo, J. Somaglia, and S. Todorčević, An Asplund space with norming Markuševič basis that is not weakly compactly generated, *Adv. Math.* **392** (2021), 108041. `arXiv:2007.14201`.

9. C. Correa, T. Russo, and J. Somaglia, Small semi-Eberlein compacta and inverse limits, *Topology Appl.* **302** (2021), 107835. `arXiv:2101.08820`.

8. T. Russo and J. Somaglia, Overcomplete sets in non-separable Banach spaces, *Proc. Amer. Math. Soc.* **149** (2021), 701–714. `arXiv:1912.08690`.

7. P. Hájek, T. Kania, and T. Russo, Separated sets and Auerbach systems in Banach spaces, *Trans. Amer. Math. Soc.* **373** (2020), 6961–6998. `arXiv:1803.11501`.

6. P. Hájek and T. Russo, On densely isomorphic normed spaces, *J. Funct. Anal.* **279** (2020), 108667. `arXiv:1910.01527`.

5. S. Dantas, P. Hájek, and T. Russo, Smooth norms in dense subspaces of Banach spaces, *J. Math. Anal. Appl.* **487** (2020), 123963. `arXiv:1911.09611`.

4. T. Russo, A note on symmetric separation in Banach spaces, *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM* **113** (2019), 3649–3658. `arXiv:1904.12598`.

3. P. Hájek and T. Russo, An uncountable version of Pták's combinatorial lemma, *J. Math. Anal. Appl.* **470** (2019), 1070–1080. `arXiv:1805.06028`.

2. P. Hájek, T. Kania, and T. Russo, Symmetrically separated sequences in the unit sphere of a Banach space, *J. Funct. Anal.* **275** (2018), 3148–3168. `arXiv:1711.05149`.

1. P. Hájek and T. Russo, Some remarks on smooth renormings of Banach spaces, *J. Math. Anal. Appl.* **455** (2017), 1272–1284. `arXiv:1705.01384`.

Plenary Talks

May 13, 2022 *Smoothness in normed spaces*, Workshop on Banach spaces and Banach lattices II, Madrid, Spain.

Invited Talks

Sept. 7, 2022 *Linear subspaces of ℓ_∞ with fixed number of accumulation points*, IWOTA 2022: 33rd International Workshop on Operator Theory and its Applications, 20 minutes, Kraków, Poland.

May 25, 2022 *Walks on ordinals and scattered compact spaces*, Seminar on Reckoning, 90 minutes, Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic.

Mar. 18, 2021	$(1+)$-*meters apart: Separated sets in Covid times*, Functional analysis seminar, 90 minutes, online weekly seminar at Institute of Mathematics and Statistics, University of Tartu, Estonia, organised by Rainis Haller.
Aug. 28, 2020	*Asplund spaces with norming Markuševič bases*, Banach spaces webinars, 60 minutes, online weekly seminar at University of North Texas, organised by Bünyamin Sarı.
Jun. 23, 2020	*Asplund spaces and norming Markuševič bases*, Set Theory and Analysis seminar, 90 minutes, Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic.
Jan. 28, 2020	*Smooth renormings on dense subspaces of Banach spaces*, V Congreso de Jóvenes Investigadores de la RSME, 30 minutes, Castellón, Spain.
Nov. 8, 2019	*Overcomplete sets in Banach spaces*, Workshop on Abstract Analysis and Convex Analysis, 45 minutes, Università Cattolica, Milano, Italy.
Jun. 26, 2019	*Auerbach systems in WLD spaces*, Banach Spaces and their Applications, 20 minutes, Lviv, Ukraine.
Feb. 12, 2019	*Separation and Reflexivity*, Settfa – Set Theory and Functional Analysis seminar, 90 minutes, Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic.
Nov. 9, 2018	*Weak compactness, double limits, and a combinatorial lemma*, Workshop in Abstract and Convex Analysis, 40 minutes, Università Cattolica, Milano, Italy.
Sept. 18, 2018	*Systems of coordinates in WLD Banach spaces*, Joint meeting of UMI, SIMAI and PTM, 30 minutes, Wrocław, Poland.
Jan. 11, 2018	*Separated families of unit vectors: an interplay of geometry and combinatorics*, Banach Afternoon, 1 hour, Università degli Studi di Milano, Italy.
Nov. 14, 2017	*Symmetrically separated sequences in the unit sphere of a Banach space*, Settfa – Set Theory and Functional Analysis seminar, 90 minutes, Institute of Mathematics of the Czech Academy of Sciences, Prague, Czech Republic.

Talks

Sept. 21, 2022	*Walks on ordinals, Asplund spaces, and norming Markuševič bases*, Progress in Functional Analysis: Methods and Applications, 25 minutes, Lecce, Italy.
Jul. 25, 2022	*An Asplund space with norming M-basis that is not WCG*, TOPOSYM 2022: Prague Symposia on General Topology, 25 minutes, Prague, Czech Republic.
Jul. 21, 2022	*Weakly Corson compact trees*, 36th Summer Topology Conference, 25 minutes, Vienna, Austria.
Jul. 1, 2022	*Smooth norms and biorthogonal systems*, Functional Analysis in Lille, 25 minutes, Lille, France.
Jan. 30, 2022	*Hunting vector spaces inside non-linear objects*, Winter School in Abstract Analysis: section Set Theory & Topology, 25 minutes, Hejnice, Czech Republic.
Jan. 10, 2022	*Smooth and polyhedral norms via fundamental biorthogonal systems*, 49th Winter School in Abstract Analysis, 25 minutes, Sněžné, Czech Republic.
Jan. 12, 2020	*How different can two dense subspaces of a Banach space be?*, 48th Winter School in Abstract Analysis, 25 minutes, Svratka, Czech Republic.
Nov. 17, 2019	*What do dense subspaces of Hilbert spaces look like?*, Analysis Seminar, 20 minutes, Innsbruck, Austria.
Sept. 11, 2019	*Projections onto spaces of polynomials*, Workshop on Banach spaces and Banach lattices, 30 minutes, Madrid, Spain.
Jun. 17, 2019	*On densely isomorphic normed spaces*, Banach spaces and optimization: Conference on the occasion of Robert Deville's 60th birthday, 20 minutes, Métabief, France.
Jan. 18, 2019	*An uncountable version of Pták's lemma*, 47th Winter School in Abstract Analysis, 20 minutes, Svratka, Czech Republic.
Sept. 24, 2018	*On some open problems in Banach space theory*, presentation of the PhD thesis, 15 minutes, Milan, Italy
Jun. 27, 2018	*On Auerbach systems in Banach spaces*, Geometrical aspects of Banach spaces, 30 minutes, Birmingham, England.
Jun. 09, 2018	*Separated families of unit vectors*, Analysis Seminar, 25 minutes, Traunkirchen, Austria.
Jan. 14, 2018	*Symmetrically separated sequences in the unit sphere of a Banach space*, 46th Winter School in Abstract Analysis, 30 minutes, Svratka, Czech Republic.

Jun. 22, 2017	*Smooth approximations of norms with asymptotic improvement*, Septièmes Journées Besançon-Neuchâtel d'analyse fonctionnelle, 20 minutes, Besançon, France.
Mar. 29, 2017	*Lipschitz functions in Banach spaces I* (first part of a joint seminar with J. Somaglia), SAA – Seminario di Analisi Astratta, 1 hour, Università degli Studi di Milano, Italy.
Jun. 13, 2016	*The nonlinear Geometry of Banach spaces*, PhD^2 – PhD Days, 1 hour, Università degli Studi di Milano, Italy.

Poster Presentations

Mar. 5–9, 2018	*Separated Families of Unit Vectors*, Non Linear Functional Analysis, at CIRM - Luminy, Marseille, France.

Organiser Activity

Jul. 7–8, 2022	Workshop *Algebras of Operators and C^*-algebras*, Czech Academy of Sciences, Czech Republic. Organised with T. Bice, B. Horváth, and K. Strung.
A.Y. 21/22	*Algebras of Operators on Banach Spaces and Operator Algebras*, Introduction to research course for the Master degree in Mathematics at Charles University in Prague. Organised with B. Horváth.
Apr. 9 and 16, 2021	Workshop *Banach Afternoons*, Università degli Studi di Milano, Italy. Organised with C.A. De Bernardi, J. Somaglia, and L. Veselý.
Jul. 6, 2018	*PhD^2 – PhD Days* (3rd edition), Università degli Studi di Milano, Italy.

Referee and Reviewer Activity

Referee	*Journal of Functional Analysis*; *Arab Journal of Mathematical Sciences*; *Israel Journal of Mathematics*; *Taiwanese Journal of Mathematics*; *Studia Mathematica*; *Revista de la Real Academia de Ciencias Exactas, Físicas y Naturales. Serie A. Matemáticas*.
Reviewer	ZbMath.

Visiting Periods

02/10/2016 – 03/12/2016: Department of Mathematics and Computer Science at Università di Catania, invited by Prof. D. Puglisi.

31/08/2016 – 01/10/2016, 14/01/2017 – 30/06/2017, 05/09/2017 – 02/12/2017, 13/01/2018 – 30/06/2018: Department of Mathematics of the Faculty of Electrical Engineering, Czech Technical University in Prague, invited by Prof. P. Hájek.

Conferences, Workshops, and Schools

Sept. 19–21, 2022	*Progress in Functional Analysis: Methods and Applications*, Lecce, Italy.
Sept. 6–10, 2022	*IWOTA 2022: 33rd International Workshop on Operator Theory and its Applications* Kraków, Poland.
Jul. 25–29, 2022	*TOPOSYM 2022: Prague Symposia on General Topology*, Prague, Czech Republic.
Jul. 18–22, 2022	*36th Summer Topology Conference*, Vienna, Austria.
Jun. 27–Jul. 1, 2022	*Functional Analysis in Lille: a conference in honour of Gilles Godefroy*, Lille, France.
May 9–13, 2022	*Workshop on Banach spaces and Banach lattices II*, Madrid, Spain.
Jan. 29–Feb. 5, 2022	*Winter School in Abstract Analysis 2022: section Set Theory & Topology*, Hejnice, Czech Republic.
Jan. 8-15, 2022	*49th Winter School in Abstract Analysis*, Sňězné, Czech Republic.
Oct. 24-30, 2021	*Workshop on Generic Structures*, Prague, Czech Republic.
Jun. 23–24, 2021	*Two Days in Real Analysis*, online TEAMS event, Caserta, Italy.
Jun. 14–17, 2021	*Four Days in Linear Dynamics*, online TEAMS event, Caserta, Italy.
Jan. 27–31, 2020	*V Congreso de Jóvenes Investigadores de la RSME*, Castellón, Spain.
Jan. 11–18, 2020	*48th Winter School in Abstract Analysis*, Svratka, Czech Republic.
Dec. 6–9, 2019	*22nd Colloquiumfest*, Prague, Czech Republic.
Nov. 15–17, 2019	*Analysis Seminar*, Innsbruck, Austria.

Nov. 8, 2019	*Workshop on Abstract Analysis and Convex Analysis*, Università Cattolica del Sacro Cuore, Milano, Italy.
Sept. 9–13, 2019	*Workshop on Banach spaces and Banach lattices*, Madrid, Spain.
Jun. 26–29, 2019	*Banach Spaces and their Applications*, Lviv, Ukraine.
Jun. 16–21, 2019	*Banach spaces and optimization: Conference on the occasion of Robert Deville's 60th birthday*, Métabief, France.
Jan. 12–19, 2019	47th *Winter School in Abstract Analysis*, Svratka, Czech Republic.
Nov. 9, 2018	*Workshop in Abstract and Convex Analysis*, Università Cattolica del Sacro Cuore, Milano, Italy.
Sept. 17–20, 2018	*Joint meeting of the Italian Mathematical Union, the Italian Society of Industrial and Applied Mathematics and the Polish Mathematical Society*, Wrocław, Poland.
Jun. 25–29, 2018	*Geometrical aspects of Banach spaces*, Birmingham, England.
Jun. 8–10, 2018	*Analysis Seminar*, Traunkirchen, Austria.
Mar. 5–9, 2018	*Non Linear Functional Analysis*, at CIRM - Luminy, Marseille, France.
Jan. 13–20, 2018	46th *Winter School in Abstract Analysis*, Svratka, Czech Republic.
Jan. 11, 2018	*Banach Afternoon*, Università degli Studi di Milano, Italy.
Oct. 17–20, 2017	*Conference on Non-Linear Functional Analysis:* 5th *Workshop on Functional Analysis* and *Workshop on Infinite Dimensional Analysis Valencia 2017*, Valencia, Spain.
Jun. 20–23, 2017	*Septièmes Journées Besançon–Neuchâtel d'analyse fonctionnelle*, Besançon, France.
May 14–18, 2017	*Geometric Topology and Geometry of Banach spaces*, Eilat, Israel.
Jan. 14–21, 2017	45th *Winter School in Abstract Analysis*, Svratka, Czech Republic.
Sept. 29–30, 2016	*Workshop Interactions between Algebra and Functional Analysis* Prague, Czech Republic.
Aug. 21–27, 2016	*Scuola estiva di Logica*, Gargnano, Italy.
Jan. 16–23, 2016	44th *Winter School in Abstract Analysis*, Svratka, Czech Republic.
Oct. 23–25, 2015	*Analysis Seminar*, Innsbruck, Austria.
Jul. 27–Aug. 28, 2015	*Corso Estivo di Matematica*, Perugia, Italy. Organized by Scuola Matematica Interuniversitaria (SMI). Courses followed: Functional Analysis and Differential Geometry.

Teaching

A.Y. 21/22	**Discrete Mathematics and Graphs (BE5B01DMG)**
	Bachelor degree in Electrical Engineering at Czech Technical University in Prague.
	Lecturer of the course (42 hours of lectures and 14 hours of labs).
	Algebras of operators on Banach spaces and operator ideals (NMMA651)
	Master degree in Mathematics at Charles University in Prague.
	Lecturer of the course (14 hours of lectures), joint with Bence Horváth.
Past A.Y.	**Discrete Mathematics and Graphs (BE5B01DMG)**
	Bachelor degree in Electrical Engineering at Czech Technical University in Prague.
	Lecturer of the course (42 hours of lectures and 14 hours of labs).
	Academic years: 2018/2019, 2019/2020, 2020/2021.
	Tutor for the course Real Analysis
	Master degree in Mathematics at Università degli Studi di Milano.
	Lecturer: Prof. K. Payne. Correction of homeworks (30 hours).
	Academic year: 2017/2018.
	Tutor for the course Mathematical Analysis 2
	Bachelor degree in Mathematics at Università degli Studi di Milano.
	Lecturer: Prof. K. Payne. Solution of exercises in class (30 hours).
	Academic years: 2014/2015, 2015/2016.

Achievements and Honors

Sept., 2014	1st place award, scholarship offered by INDAM for the introduction to research of graduate students in Mathematics. Level of recognition: National.

Sept. 10, 2010	5th place award, scholarship offered by INDAM for the project Progetto Lauree Scientifiche. The scholarship was then extended for the subsequent two years. Level of recognition: National.

Additional Information

Representative Service	○ 01/2016 – 09/2018: PhD student representative, Università degli Studi di Milano. ○ 05/2014 – 09/2015: Student representative, Department of Mathematics, Università degli Studi di Milano.
GNAMPA	Member of GNAMPA (INDAM), from October 2014.
Languages	Italian, mother tongue.
	English, fluent.
	Czech, beginner.

Prague, October 10, 2022