# Curriculum Vitae Sebastian Schwarzacher

Family name, First name: Schwarzacher, Sebastian

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Date of birth: 24th July 1984

Nationality: Austria

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#### Main research areas

Nonlinear partial differential equations (analysis for weak solutions)

Fluid dynamics (fluid-structure interaction, compressible and non-Newtonian fluids)

Analysis for numerics for PDEs (Galerkin methods, convergence rates)

Analysis of evolutionary non-linear PDEs (variable domains, intrinsic geometry)

#### Education

| 2.11.2022  | Habilitation for associate professor, Faculty of Math. & Phys., Charles University |
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| 14.10.2013 | PhD thesis, (Grade: summa cum laude)   |
|            | Ludwig Maximilian University Munich, (Germany).                                    |
| 24.08.2010 | Diploma in Mathematics at the University of Freiburg                               |

## **Employment**

| Fe | b. 2022–  | Associate Professor at Uppsala University, Department of Mathematics                |
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| Fe | b. 2022–  | Group leader at Charles University, Prague, Faculty of Mathematics and Physics      |
| 20 | 17 - 2022 | Assistant Professor, Charles University, Prague, Faculty of Mathematics and Physics |
| 20 | 17 - 2018 | University of Bonn, Inst of Appl. Math., Scientific Assistant                       |
| 20 | 14-2016   | Charles University, Prague, (Czech Rep.), Faculty of Math. and Phys.,               |
|    |           | Post-doctoral fellow  |
| 20 | 10-2014   | Ludwig Maximilian University Munich, (Germany), Scientific Assistant                |

### Grants & Awerds

| 2023 – 2026 | VR Project grant (Swedish Research council), Principal Investigator.       |
|-------------|--|
| 2021 – 2026 | ERC-CZ Grant CONTACT LL2105 (Czech Ministry), Principal Investigator.      |
| 2019 – 2021 | Primus grant PRIMUS/19/SCI/01 (University grant), Principal Investigator.  |
| 2019 – 2021 | GAČR grant GJ19-11707Y (national), Principal Investigator.                 |
| Jan. 2018–  | UNCE/SCI/023, University centre (MathMAC), scientific member.              |
| Jun. 2017   | Visiting grant from the Univ. of Florence for 1 month.                     |
| 2016 – 2017 | ERC-CZ project MORE, LL1202, scientific member.                            |
| Oct. 2014   | PhD thesis awarded with the Carathéodory-Preis of the LMU Munich           |
| Jun. 2014   | Awarded with a <i>Leopoldina-Postdoc-Stipendium</i> , (not accepted).      |
| Sep. 2011   | Diploma thesis awarded with the Alumni-Preis of the University of Freiburg |
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## Co-Organisation of scientific meetings:

| July 2023 | Minisymposium at ICIAM, Tokyo   |
|-----------|---|
| July 2022 | Invited Minisymposium at Equadiff 15, Brno  |
| July 2021 | Brijuni Applied Mathematics Workshop 2021 at Brijuni National Park.                   |
| Sep. 2019 | Hausdorff School: Modeling and analysis of evolutionary problems in materials science |
|           | University of Bonn.   |

- Supervision of graduate students and postdoctoral fellows: Currently. Postdocs: (M. Kampschulte, J. Niinikoski and P. Su), PhD students: (A. Cesik and C. Mindrila). Other members of my group: B. Benesova (senior staff), K. Tuma (senior staff), B. She (senior staff), J. Fara (PhD). Previous Postdocs: J. Burczak (now at Univ. Leipzig), M. Sroczinskis (now at Univ. Konstanz), G. Gravina (now at Temple Univ.), G. Sperone (now Polit. Milano). Supervision of three master students that continued in academia with theses including original research: (C. Mindrila 2017/18, K. Kowalczyk and A. Cesik 2018/2019). One Bachelor student (J. Dopita 2021).
- **Teaching activity and mentoring** Lectures and seminars for Bachelor and Master students in Mathematics as well as service lectures for economy.

## • Lectures at workshops and conferences (selection)

Invited speaker at Workshop Between Regularity and Defects: Variational and Geometrical Methods in Materials Science, (ESI Vienna, Austra, 2023)

Plenary speaker at Workshop: Analysis of Fluid and Elastic Bodies Interactions, (Univ. of Regensburg, Germany, 2022)

Invited speaker at Lake Como School: Partial Differential Equations of Mathematical Physics and Applications (Como, Italy, 2021)

Invited speaker at the (online) Birs workshop: Nonlinear Potential Theoretic Methods in Partial Differential Equations, (Banff, Canada 2021)

Plenary speaker at the INdAM Meeting on "Geometric Properties for Parabolic and Elliptic PDE's", (Palazzone in Cortona, Italy 2019)

Invited speaker to the Workshop on Analytic-Geometric inequalities and related Topics and to the Workshop on Nonlinear Parabolic PDEs, (Institute Mittag Leffler, Sweden, 2018 and 2019).

Plenary speaker to the GAMM-Workshop on the Analysis of PDE, (Stuttgart, Germany 2018)

Invited speaker to the Workshop on Nonlinear Parabolic PDEs, (Institute Mittag Leffler, Sweden, 2019)

Invited speaker at the FSDONA 2019, (Turku, Finland)

Invited speaker at the workshop Geometric Measure Theory and Free Boundary Problems, (Hausdorff Research Institute of Mathematics, Germany, 2019)

Invited speaker at the Nonlinear Flows: Entropy methods, dissipative systems, and applications, (Erwin Schrödinger Inst., Austria, 2016)

As PhD student lectures at the Math. Research Inst. Oberwolfach (Germany, 2013), Institute Mittag Leffler (Sweden, 2013) and the Banach Center Bedlewo (Poland, 2012).

- Reviewing activities (selection): Analysis & PDE, Ann. Mat. Pura ed Appl., Bull. Lond. Math. Soc., IMA J. Num. Anal., J. Math. Fluid Mech., J. Funct. Anal., J. Fluid Mech., Math. Nachrichten, Monatshefte der Mathematik, NoDea, Nonlin. Anal., SIAM J. on Math. Anal.
- 42 accepted publications in scientific peer reviewed journals: Includes the Arch. Ration. Mech. Anal. (3×), Amer. J. Math., J. Fluid Mech., J. Math. Pures Appl. (2×), Anal. & PDE, Annals of PDE, Siam J. Math. Anal. (4×), Siam J. Numer. Anal., Annal. l'Inst. Hen. Poinc. (C) (2×), Jour. Funct. Anal., Trans. AMS, Math. Mod. Meth. Appl. Sci. (3×), Calc. Var. & PDE (3×), Numer. Math. (2×), J. Diff. Eq. (4×).

Link to Google Scholar. Link to list of publications.