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University of Melbourne, Parkville, Victoria, 3010, Australia
- Tel:* +61 3 834 42816 *Email:* volker.schlue@unimelb.edu.au
Office: Peter Hall 204 *Web:* <http://blogs.unimelb.edu.au/volker-schlue/>
- CURRENT POSITION **University of Melbourne**
Lecturer in Pure Mathematics (Analysis & Geometry) *December, 2018 —*
- EDUCATION **University of Cambridge**
Ph.D. in Pure Mathematics *October, 2008 — July, 2012*
◦ *Advisor:* Mihalis Dafermos
◦ *College:* King’s College, Cambridge
- ETH Zürich**
Diploma in Physics *October, 2005 — April, 2008*
◦ *Diploma thesis advisor:* Demetrios Christodoulou
- POSTDOCTORAL POSITIONS **Sorbonne Université**
Postdoctoral Researcher *September, 2015 — December, 2018*
◦ *Supervisor:* Jérémie Szeftel
- University of Toronto**
Postdoctoral Fellow *August, 2012 — July, 2015*
◦ *Supervisor:* Spyros Alexakis
- Mathematical Sciences Research Institute, Berkeley**
Postdoctoral Fellow *August, 2013 — December, 2013*
◦ *Mentor:* Hans Lindblad
- PUBLICATIONS **Preprints**
□ (with *Hans Lindblad*) “Scattering for wave equations with sources close to the light-cone and prescribed radiation fields,” 50 pages (2023).
◦ *arXiv:* <https://arxiv.org/abs/2303.10569> (v4)
- Journal Articles**
□ (with *Hans Lindblad*) “Scattering from infinity for semi linear wave equations satisfying the null condition or the weak null condition,” 55 pages.
◦ *Journal:* *Journal of Hyperbolic Differential Equations*, 20 (1) 155-218 (2023).
◦ *arXiv:* <http://arxiv.org/abs/1711.00822> (v3)

- “Decay of the Weyl curvature in expanding black hole cosmologies”, 125 pages.
 - *Journal: Annals of PDE* **8** 9 (2022).
 - *arXiv: <http://arxiv.org/abs/1610.04172>* (v2)
- “Optical functions in de Sitter,” 93 pages.
 - *Journal: Journal of Mathematical Physics* **62** 082501 (2021).
 - *arXiv: <https://arxiv.org/abs/1910.05799>* (v2)
- (with *Grigorios Fournodavlos*) “On ‘hard stars’ in general relativity”, 30 pages.
 - *Journal: Annales Henri Poincaré* **20** 7 (2019), 2135–2172.
 - *arXiv: <http://arxiv.org/abs/1710.00754>*
- (with *Spyros Alexakis*) “Non-existence of time-periodic vacuum spacetimes”, 63 pages.
 - *Journal: Journal of Differential Geometry* **108** 1 (2018), 1–62.
 - *arXiv: <http://arxiv.org/abs/1504.04592>*
- (with *Spyros Alexakis* and *Arick Shao*) “Unique continuation from infinity for linear waves”, 63 pages.
 - *Journal: Advances in Mathematics* **286** (2016) 481–544.
 - *arXiv: <http://arxiv.org/abs/1312.1989>* (v2)
- “Global results for linear waves on expanding Kerr and Schwarzschild de Sitter cosmologies”, 45 pages.
 - *Journal: Communications in Mathematical Physics*, Vol. **334**, Issue 2 (2015), 977–1023.
- “Decay of linear waves on higher dimensional Schwarzschild black holes”, 85 pages.
 - *Journal: Analysis & PDE*, Vol. **6**, No. 3 (2013), 515–600.

Theses

- “Linear waves on higher dimensional Schwarzschild black holes and Schwarzschild de Sitter spacetimes”, Ph.D. Thesis, University of Cambridge (2012), 223 pages.
 - *Available online: <http://www.dspace.cam.ac.uk/handle/1810/243640>*
- “The asymptotics of the gravitational field and the memory effect”, Diploma Thesis, ETH Zurich (2008), 48 pages.
 - *Available online: <https://www.ljll.math.upmc.fr/~schlue/memory.pdf>*

INVITED TALKS

Workshops and Conferences

- “BIRS workshop on Inverse Problems and Nonlinearity”,
Banff International Research Station (Canada) *July 16-21, 2023*
- “Conference on Nonlinear Waves and Mathematical Relativity”,
Tsinghua University (China) *July 10-14, 2023*
- “Australia-NZ Student Conference on Relativity / Cosmology / Astrophysics”,
Monash (online) *May 8-10, 2023*
- “Pacific Rim Conference in the Mathematics,” (Session: PDE, Inviscid Fluid Me-
chanics and General Relativity), UC Berkeley (online) *August 10-11, 2020*
- “10th Australasian Conference on General Relativity and Gravitation,” (ACGRG10),
Victoria University of Wellington (New Zealand) *December 9-13, 2019*

Curriculum Vitae, November 24, 2023

- “63rd Annual Meeting of the Australian Mathematical Society” (AustMS 2019) (Talks in Sessions: Geometric Analysis and PDE; Harmonic and Semi-Classical Analysis), Monash University (Australia) *December 3-6, 2019*
- “Dynamics, Equations and Applications” (Session D41, DEA 2019), AGH University of Science and Technology, Krakow (Poland) *September 16-20, 2019*
- “Probing the Earth and the Universe with Microlocal Analysis,” BIRS, Banff (Canada) *April 14-19, 2019*
- “Conference on Mathematical General Relativity”, Institut Henri Poincaré, Paris (France) *May 28-June 1, 2018*
- “Conference in Mathematical General Relativity”, Tsinghua Sanya International Mathematics Forum in Sanya, Hainan (China) *January 5-9, 2016*
- “Dynamics of Self-Gravitating Matter”, Workshop, Institut Henri Poincaré, Paris (France) *October 26-29, 2015*
- “Mathematical Aspects of General Relativity”, Workshop, Mathematisches Forschungsinstitut Oberwolfach (Germany) *July 12-18, 2015*
- “General Relativity & Gravitation: A Centennial Perspective”, Session A1: Mathematical General Relativity, Penn State (US) *June 8, 2015*
- “International Conference on Black Holes”, Fields Institute, Toronto (Canada) *June 2, 2015*
- “Mathematical Problems in General Relativity”, Workshop, Simons Center for Geometry and Physics, Stony Brook (US) *January 21, 2015*
- “Nonlinear Wave Equations and General Relativity”, Workshop, Mathematical Institute, University of Oxford (UK) *January 13-14, 2014*
- “Miami Waves”, FRG Workshop, University of Miami (US) *December 18-21, 2012*
- “Mathematical Aspects of General Relativity”, Workshop, Mathematisches Forschungsinstitut Oberwolfach (Germany) *August 4, 2012*

Colloquia

- Colloquium, University of Adelaide *March 3, 2023*
- CMC Seminar, Korea Institute for Advanced Study (South Korea) *December 4, 2017*
- Colloquium, University of Miami (US) *February 2, 2014*

Seminars

- Analysis and PDE Seminar, UC Berkeley (US) *July 24, 2023*
- Pure Maths Seminar, University of Melbourne (Australia) *May 12, 2023*
- Differential Geometry Seminar, University of Adelaide (Australia) *March 3, 2023*
- Seminar, Institut Mittag-Leffler (Sweden) *September 12, 2019*
- Mathematical Physics Seminar, University of Melbourne (Australia) *May 14, 2019*
- Analysis & PDE Seminar, Monash University (Australia) *April 30, 2019*
- Topology and Geometry Seminar, University of Sydney (Australia) *March 11, 2019*
- Mathematical GR Seminar, Sorbonne Université (France) *October 29, 2018*
- Analysis Seminar, Imperial College London (UK) *October 26, 2018*
- PDE Seminar, Técnico Lisboa (Portugal) *September 19, 2018*
- Mathematical GR Seminar, Sorbonne Université (France) *November 20, 2017*
- General Relativity and Geometric Analysis Seminar, Columbia University (US) *April 21, 2017*
- Institut Fourier, Grenoble (France) *March 2, 2017*
- Analysis and PDE Seminar, Stanford University (US) *January 9, 2017*
- Geometry and Analysis Seminar, Queen Mary University of London (UK) *December 6, 2016*
- Mathematical General Relativity Seminar, Université Pierre et Marie Curie (France) *November 21, 2016*
- Séminaire Laurent Schwartz, Institut des Hautes Études Scientifiques (France)

- PDE Seminar, Técnico Lisboa (Portugal) *October 18, 2016*
- Oberseminar Geometrische Analysis, Universität Tübingen (Germany) *June 15, 2016*
- Geometric Analysis and PDE Seminar, University of Cambridge (UK) *February 11, 2016*
- Vienna Relativity Seminar, University of Vienna (Austria) *November 2, 2015*
- and Geometric Analysis and Physics joint seminar, University of Vienna and Vienna University of Technology (Austria) *October 22, 2015*
- Analysis and PDEs Seminar, Johns Hopkins University (US) *October 22, 2015*
- Analysis Seminar, Princeton University (US) *March 10, 2014*
- Geometry Seminar, Stanford University (US) *March 3, 2014*
- MSRI Postdoc Seminar, University of California, Berkeley (US) *November 11, 2013*
- MGR Programmatic Seminar, MSRI, Berkeley (US) *October 25, 2013*
- Analysis Seminar, Princeton University (US) *October 1, 2013*
- Analysis and Applied Mathematics Seminar, University of Toronto (Canada) *November 19, 2012*
- Geometric Analysis Seminar, AEI, Golm (Germany) *October 5, 2012*
- *April 11, 2011*

General Audience

- MUMS Lecture, Melbourne Uni Maths & Stats Society (online) *October 17, 2020*
- King's Lunchtime Seminar, King's College, Cambridge (UK) *May 4, 2012*

TEACHING

University of Melbourne

- Partial Differential Equations (MAST90133) *2021, 2023*
 - *Lecture notes:* <https://blogs.unimelb.edu.au/volker-schlue/#tab237>
- Calculus 2: Advanced (MAST10021) *2020, 2021, 2022, 2023*
 - *Lecture notes:* <https://blogs.unimelb.edu.au/volker-schlue/#tab237>
- Differential Geometry (MAST90143) *2022*
 - *Lecture notes:* <https://blogs.unimelb.edu.au/volker-schlue/#tab237>
- Measure Theory (MAST90012) *2019*

STUDENTS

University of Melbourne

PhD students

- Louie Bernhardt *2021 —*

MSc students

- Daniel Traicos *2022 — 2023*
- Sean Wynn *2020 — 2022*
- Madeleine Johnson *2019 — 2020*
- Caelan Turvey *2019 — 2020*

SERVICE

Conference Organisation

MATRIX, Creswick Campus

- *Hyperbolic PDEs and Nonlinear Evolution Problems* *September, 2023*
(joint with J. Gell-Redman, A. Hassel, T. Oliynyk, and Z. Wyatt)
- *Hyperbolic Differential Equations in Geometry and Physics* *April, 2022*
(joint with J. Gell-Redman, A. Hassel, T. Oliynyk)