





# Lashi Bandara

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## Personal

Full name Menaka Lashitha Bandara  
Gender Male  
Citizenship Australia  
Languages English (native), Sinhalese (fluent), German (B1), Swedish (A2)

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## Employment

Sep 2023- (ongoing) **Senior Lecturer in Mathematics**, *Deakin University Melbourne Burwood Campus*, Deakin Mathematics Research and Teaching Lab, School of Information Technology. Permanent research and teaching position.

Aug 2021- Jul 2023 **Lecturer/Assistant Professor in Mathematics**, *Brunel University London*, Department of Mathematics. Permanent research and teaching position.

Sep 2017 - Aug 2021 **Wissenschaftlicher Mitarbeiter (Postdoc)**, *University of Potsdam*, Institut für Mathematik, funded under SPP2026 Geometry at Infinity project "Boundary value problems and index theory on Riemannian and Lorentzian manifolds".

Sep 2014 - Sep 2017 **KAW Postdoc**, *University of Gothenburg*, Mathematical Sciences, funded by "Knut Alice Wallenberg (KAW 2013.0322)".

Jan 2015 - May 2015 **Research visitor**, *Hausdorff Research Institute for Mathematics*, funded by "Junior Trimester in Optimal Transport".

Oct 2013 - Sep 2014 **Postdoc**, *Australian National University*, Mathematical Sciences Institute.

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## Grants, awards, honours, fellowships

2022 **Fellowship of the Higher Education Academy (FHEA)**.

2019–2021 **Postdoctoral Grant, SPP2026 Priority Program, 216000€**.  
Co-investigator for grant "Boundary value problems and index theory on Riemannian and Lorentzian manifolds" in collaboration with Christian Bär acting as PI within the German Science Foundation (DFG) priority program SPP2026 "Geometry at Infinity".

2015 **Junior Trimester Program in Optimal Transport Working Grant, 22050€**.  
Principal investigator, along with Mike Munn (formerly New York University, now Google) and Sajjad Lakzian (Isfahan University of Technology), for our work group to be funded for the full term of the trimester program.

2011–2012 **Australian-American Fulbright, AUD\$35000**.  
Competitive grant for research visit to Steve Hofmann (University of Missouri) and Richard Schoen (Stanford University).

2009–2013 **Australian National University Mathematics Department Supplementary Scholarship, AUD\$24000**.  
Supplementary stipend in recognition of high achievement.

- 2009–2013 **Australian Postgraduate Award, AUD\$73500.**  
Stipend for undertaking doctoral studies awarded by the Australian Government.
- 2006 **Monash Pure Mathematics Prize for Top Honours.**
- 2002–2004 **Dean's List Fellow in Science.**

## Education

- 2009–2013 **Doctor of Philosophy, Australian National University.**  
Thesis: *Geometry and the Kato Square Root Problem*  
(<http://hdl.handle.net/1885/10690>),  
Supervisor: Alan McIntosh,  
Date of award: 24 Oct 2013.
- 2005–2006 **Honours Degree in Science (Pure Mathematics), Monash University.**  
Overall Grade: 94% H1 (first class honours),  
Thesis: *White's Compactness Theorem for Integral Currents*,  
Supervisors: Maria Athanassenas, Robert Bartnik, Alan Pryde.
- 2001–2004 **Bachelor of Science, Monash University.**  
Specialisation: Mathematics.
- 2001–2004 **Bachelor of Computer Science, Monash University.**

## Selected invited talks

- Jan 2024 **Colloquium, University of Potsdam, Germany.**
- Aug 2023 **Graduate Seminar, African Mathematical Sciences Institute, Ghana.**
- Aug 2023 **Departmental Seminar, University of Ghana, Ghana.**
- Jun 2023 **13th International Conference on Clifford Algebras and Their Applications in Mathematical Physics, Holon Institute of Technology, Israel.**
- May 2023 **Departmental Seminar, La Trobe University, Australia.**
- Apr 2023 **Cumberland Lodge Seminar, King's College London, UK.**
- Dec 2022 **Analysis Seminar, University of Bath, UK.**
- Dec 2022 **London Taught Courses Centre Christmas Lecture, University of London, UK.**
- Nov 2022 **Analysis Seminar, University of Loughborough, UK.**
- Nov 2022 **Analysis of Dirac Type and Higher Spin Operators Conference: Honoring John Ryan, Chapman University, USA.**
- Nov 2022 **Colloquium, University of Leeds, UK.**
- May 2022 **Geometry Seminar, University of York, UK.**
- Feb 2021 **Microlocal and global analysis in geometry and mathematical physics, University of Potsdam, Germany.**
- Feb 2021 **Analysis Seminar, University of Lund, Sweden.**
- Feb 2021 **Analysis Seminar, University of Uppsala, Sweden.**
- Dec 2020 **Geometry Analysis Seminar, City University of New York, United States.**
- Nov 2020 **Analysis Seminar, Technical University of Delft, Netherlands.**
- Oct 2020 **Institutskolloquium am Institut für Analysis, Dynamik und Modellierung, Universität Stuttgart, Germany.**
- Mar 2020 **Analysis seminar, Gothenburg University, Sweden.**
- Nov 2019 **Analysis seminar, Universität Bonn, Germany.**
- Oct 2019 **Seminar Differentialgeometrie, Karlsruher Instiut für Technologie, Germany.**
- Jul 2019 **Analysis Seminar, Universität Oldenburg, Germany.**

- Jun 2019 **Geometry Seminar**, *Universität Regensburg*, Germany.
- Feb 2019 **Geometry Seminar**, *Universität Hamburg*, Germany.
- Nov 2018 **Bivariant K-theory in Geometry and Physics Program**, *Erwin Schrödinger International Institute for Mathematics and Physics*, Austria.
- Oct 2018 **Oberseminar Geometrie**, *Universität Augsburg*, Germany.
- Sep 2018 **Colloquium**, *Linköping University*, Sweden.
- Jul 2018 **Geometry Seminar**, *Instituto de Matemática Pura e Aplicada (IMPA)*, Brazil.
- Feb 2018 **Harmonic Analysis Conference Celebrating the Mathematical Legacy of Alan McIntosh**, *Australian National University*, Australia.
- Jan 2018 **Geometry Seminar**, *Freiburg*, Germany.
- Nov 2017 **Analysis Seminar**, *Universität Hannover*, Germany.
- Sep 2017 **Waterloo Geometry Symposium**, *University of Waterloo*, Canada.
- Jul 2017 **Geometric Analysis and PDE Seminar**, *University of Wollongong*, Australia.
- Mar 2017 **Analysis Seminar**, *Technical University of Delft*, Netherlands.
- Mar 2017 **Analysis Seminar**, *University of Oxford*, United Kingdom.
- Jan 2017 **Geometry Seminar**, *Masaryk University*, Czech Republic.
- Nov 2016 **Analysis seminar**, *University of Warwick*, United Kingdom.
- Oct 2016 **Analysis seminar**, *University of Jyväskylä*, Finland.
- Jun 2016 **Analysis Seminar**, *Karlsruher Institut für Technologie*, Germany.
- May 2016 **Analysis, PDE and Geometry Seminar**, *Monash University*, Australia.
- Apr 2016 **PDE and Analysis Seminar**, *Australian National University*, Australia.
- Apr 2016 **Geometric Analysis and PDE Seminar**, *University of Wollongong*, Australia.
- Mar 2016 **Groupe de travail opérateur de Dirac**, *Université Paris-Sud*, France.
- Jan 2016 **Analysis Seminar**, *Kiel University*, Germany.

## Teaching experience

- Mar 2023 - **Lecturer**, *Deakin University*, School of IT.  
Subjects: Introduction to Programming.
- Oct 2022 - **Lecturer (course/unit leader)**, *Brunel University London*, Department of Mathematics.  
Jul 2023  
Subjects: Fundamentals of Mathematics.
- Sep 2021 - **Lecturer (course/unit leader)**, *Brunel University London*, Department of Mathematics.  
Jul 2023  
Subjects: Fundamentals of Mathematics (NCUT Beijing delivery).
- Feb 2022 - **Lecturer (course/unit leader)**, *Brunel University London*, Department of Mathematics.  
Apr 2022  
Subjects: Mathematical Programming.
- Apr 2021 - **Lecturer (course/unit leader)**, *University of Potsdam*, Institute for Mathematics.  
Jul 2021  
Subjects: Boundary Value Problems and Index Theory, (graduate).
- Oct 2019 - **Lecturer (course/unit leader)**, *University of Potsdam*, Institute for Mathematics.  
Mar 2019  
Subjects: Lorentzian Geometry, (graduate).
- Jan 2016 - **Lecturer**, *Gothenburg University*, Mathematical Sciences.  
Mar 2017  
Subjects: Fourier Analysis.

- Oct 2010 - **Mathematicians in Schools Lecturer**, *Commonwealth Scientific and Industrial Research Organisation (CSIRO)*.  
 Jun 2011  
 Designed and ran a course/unit *Logic and Mathematics* for high school students year 10 - year 12 at Hawker College, Canberra. See: [www.math.uni-potsdam.de/~bandara/documents/mins.pdf](http://www.math.uni-potsdam.de/~bandara/documents/mins.pdf).

## Supervision

- Nov 2023 - **Using games in learning**, *Honours*, Deakin University.  
 (ongoing)  
 Jan 2022 - **The uniform topology on the space of metrics**, *PhD*, Brunel University London.  
 (ongoing)  
 Oct 2023 - **Two dimensional Riemannian geometry**, *BSc*, Brunel University London.  
 Mar 2023  
 Oct 2023 - **Curve optimisation via genetic algorithms**, *BSc*, Brunel University London.  
 Mar 2023  
 Oct 2023 - **Dimensions beyond integers**, *BSc*, Brunel University London.  
 Mar 2023  
 Oct 2022 - **Integer linear programming**, *BSc*, Brunel University London.  
 Mar 2022  
 Oct 2022 - **Curve optimisation via genetic algorithms**, *BSc*, Brunel University London.  
 Mar 2022  
 Jan 2020 - **Boundary value problems and graph theory**, *MSc*, Free University of Berlin.  
 May 2021  
 Feb 2019 - **An introduction to wavefront sets and pseudodifferential operators**, *MSc*, University of Potsdam.  
 Nov 2020  
 Jan 2020 - **Globally hyperbolic Lorentzian manifolds**, *BSc*, Technical University of Berlin.  
 Oct 2020

## Editorial boards and Refereeing

- (ongoing) **Special Issue on Global Analysis on Manifolds in honor of Christian Bär for his 60th birthday**, *SIGMA*, Editor.  
 (ongoing) **Communications in Analysis and Geometry**, Referee.  
 (ongoing) **International Mathematical Research Notices**, Referee.  
 (ongoing) **Journal of Functional Analysis**, Referee.  
 (ongoing) **Journal of Geometric Analysis**, Referee.  
 (ongoing) **Mathematika**, Referee.

## Conference organisation and administration

- (ongoing) **Geometric Analysis: Past, Present, Future group on Facebook**, Admin.  
 Mar 2023 **Geometry and Analysis meet at Brunel**, *Brunel University London*, Organiser.  
 Sep 2021- **Mathematics and Statistics Seminar**, *Brunel University London*, Organiser.  
 Jul 2023  
 Nov 2022 **PhD Your Way**, Organiser.  
 Sep 2022 **Global Analysis on Manifolds**, Conference organiser.  
 Sep 2018- **Colloquium**, *University of Potsdam*, One of three organisers of the colloquium.  
 Aug 2021  
 Sep 2013 **HIM Junior trimester program follow-up meeting**, *Hausdorff Research Institute for Mathematics*, Member of main organising committee.

- Jul 2013 **Australian Mathematical Sciences Student Conference**, *Australian National University*, Member of main organising committee, grant application writer (AUD\$20000 or 12230€).
- Sep 2010 **Organiser**, *Australian National University*.  
Organised for the CMA Proceedings Series to be digitised and be made part of Project Euclid.

## Computer skills

**Mathematics:** MatLab, Octave, Sage, Maxima, Gnuplot.  
**Languages:** C, C++, C#, Java, Python, PERL, R, ML, Bash/Sh, LaTeX.  
**Operating Systems:** Linux, BSD, Windows, MacOSX.  
**Software:** Blender 3D, Vi/ViM, GNU Debugger.

## Equality, diversity and inclusiveness efforts

- (ongoing) **Member of the Committee for Women and Diversity in Mathematics.**, *London Mathematical Society.*
- (ongoing) **Mentorship of post-Bachelors student in Sri Lanka.**
- (ongoing) **Active promoter of exhibition**, *Australian Women of Mathematics*.  
[sites.google.com/view/pierre-portal/australian-women-of-mathematics](https://sites.google.com/view/pierre-portal/australian-women-of-mathematics)
- (ongoing) **Active promoter of exhibition**, *Women in Mathematics from around the world. A galley of portraits.*  
[womeninmath.net](http://womeninmath.net)
- (ongoing) **Opportunity project**, in collaboration with Claudio Paganini (University of Regensburg), aimed at helping discriminated students from developing countries gain access to scholarships and education in Germany.  
[thehappyproton.ch/wp-content/uploads/2019/11/Opportunity\\_eng.pdf](http://thehappyproton.ch/wp-content/uploads/2019/11/Opportunity_eng.pdf)
- Jan 2022 - Jul 2022 **Project coordinator for the study of the attainment gap.**, *Brunel University London.*

## Media and outreach

- (ongoing) **Volunteer tutor for maths circles for primary and high school students.**  
[wesolveproblems.org.uk](http://wesolveproblems.org.uk).
- (ongoing) **YouTube Channel: Lashi's Maths Channel**, *recordings of lectures given.*  
[www.youtube.com/channel/UCEvCFLCgX089WgoTykpGotA](https://www.youtube.com/channel/UCEvCFLCgX089WgoTykpGotA).
- Nov 2016 **Article: Lashi Bandara: "Um problema de Matemática é como uma amante" in Observador (in Portuguese)**, *interviewed as an early career mathematician.*  
[observador.pt/especiais/lashi-bandara-um-problema-de-matematica-e-como-uma-amante](http://observador.pt/especiais/lashi-bandara-um-problema-de-matematica-e-como-uma-amante).
- Oct 2016 **Window of Science - Science Slam, Gothenburg University**, *winner of 3 minute showcasing of my research to high school students.*  
[www.youtube.com/watch?v=VYOkB5-y\\_mM#t=5m54s](https://www.youtube.com/watch?v=VYOkB5-y_mM#t=5m54s).
- Dec 2014 **Global Week Science Slam, Gothenburg University**, *showcasing of my research to the Gothenburg community in 3 minutes.*  
[www.youtube.com/watch?v=h3kJrTjT0wU&feature=youtu.be#t=14m55s](https://www.youtube.com/watch?v=h3kJrTjT0wU&feature=youtu.be#t=14m55s).
- Jan 2014 **Featured in 100 Faces of Science**, *exhibition of old and young high impact researchers in Australia.*  
 Exhibition at CSIRO Discovery Centre.

- Oct 2013 **Radio appearance on Fuzzy Logic, Canberra Community Radio 2XX**, interviewed, along with Alex Amenta, to explain the role of mathematics research to the Canberra public.  
[fuzzylogicon2xx.podbean.com/e/fuzzy-with-numbers](http://fuzzylogicon2xx.podbean.com/e/fuzzy-with-numbers).
- Nov 2011 **Article: Taking maths to the masses**, interview about life as a maths PhD after winning Fulbright award.  
ANU Reporter Canberra Times Supplement.
- Aug 2011 **The Conversation article: The point of pure mathematics**, author of article to describe the significance of pure mathematics to the public.  
[theconversation.edu.au/explainer-the-point-of-pure-mathematics-2385](http://theconversation.edu.au/explainer-the-point-of-pure-mathematics-2385).
- May 2011 **ABC Catalyst Profile: Mad for Maths**, interview showcasing the life of a PhD student on Catalyst program of the Australian Broadcasting Corporation, Season 12, Episode 13.