

# Kowshik Bettadapura, PhD

Website: [www.kshkb.info](http://www.kshkb.info)  
LinkedIn: [kowshik-bettadapura](https://www.linkedin.com/in/kowshik-bettadapura)  
GitHub: [github.com/KshkB](https://github.com/KshkB)

## SKILLS, AWARDS AND CERTIFICATES

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- **Programming:** Python (scipy, pandas, scikit-learn, tensorflow), SQL, MATLAB, JavaScript
- **Technology:** L<sup>A</sup>T<sub>E</sub>X, Beamer, Powerpoint, Markdown, Jupyter, HTML/CSS, Git, AWS, arXiv, Bootstrap
- **Awards:** Austr. Postgraduate Award (Austr. Government), Research Scholarship (Austr. Nat. Uni.)
- **Certificates:** Postdoc. cert. (Tsinghua University), Machine Learning and Data Science (MIT edX)

## WORK EXPERIENCE

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| <b>University of Melbourne</b><br>Research fellow, School of Mathematics and Statistics  | Melbourne, AU<br>2021–2022 |
| <ul style="list-style-type: none"><li>– Lead researcher in algebraic geometry and super Teichmüller theory</li><li>– Prepared reports and presentations to senior staff (PowerPoint, L<sup>A</sup>T<sub>E</sub>X, Beamer)</li></ul>        |                            |
| <b>Tsinghua University</b><br>Postdoctoral Fellow, Yau Mathematical Sciences Center  | Beijing, CN<br>2017–2020   |
| <ul style="list-style-type: none"><li>– Published over 100 pages of new results and techniques in high impact, international journals</li><li>– Used Python and MATLAB to run simulations, aid calculations and test conjectures</li></ul> |                            |
| <b>Teaching assistant</b><br>Australian National University, Tsinghua University   | AU, CN<br>2012–2020        |
| <ul style="list-style-type: none"><li>– Worked in teams to prepare in-class material, mark homeworks, assignments and exams</li><li>– Consistently ranked in 95-th percentile on student and teaching evaluations</li></ul>                |                            |

## EDUCATION

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|---|---------------------------|
| <b>Australian National University</b><br>PhD in Mathematical Physics, Mathematical Sciences Institute   | Canberra, AU<br>2012–2016 |
| <ul style="list-style-type: none"><li>– <b>Thesis:</b> <i>Obstruction theory for supermanifolds and deformations of superconformal structures</i></li></ul> |                           |
| <b>Australian National University</b><br>Bachelor of Science/Bachelor of Commerce (with first class honors)   | Canberra, AU<br>2007–2011 |
| <ul style="list-style-type: none"><li>– <b>Specialisation:</b> mathematics, theoretical physics, financial accounting, economics</li></ul>                  |                           |

## PERSONAL PROJECTS

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| <b>Portfolio optimizer</b><br>Implementation of mean-variance analysis to suggest optimal holdings                                 | Python, Jupyter           |
| <b>Personal website</b><br>Registered and hosted with Amazon Web Services. URL: <a href="http://www.kshkb.info">www.kshkb.info</a> | HTML/CSS, JavaScript, AWS |
| <b>Local password manager database</b><br>Program for adding, updating and querying local spreadsheets in Excel from command line  | Python, Excel, SQL        |

Full list of projects available here (online link): [www.github.com/KshkB](https://www.github.com/KshkB)

## SELECT PUBLICATIONS

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1. Bettadapura, K. and Lin, H., “Boundary contributions to three loop superstrings”, *Journal of Mathematical Physics*, vol. 62(4), (2021)
2. Bettadapura, K., “Projective superspace varieties, superspace quadrics and non-splitting”, *Documenta Mathematica*, vol. 25, pp. 65–91, (2020)
3. Bettadapura, K., “Embeddings of complex supermanifolds”, *Advances in Theoretical and Mathematical Physics*, vol. 23(6), pp. 1427–1466, (2019)
4. Bettadapura, K., “On the problem of splitting deformations of super Riemann surfaces”, *Letters in Mathematical Physics*, vol. 109(2), pp. 381–402, (2019)
5. Bettadapura, K., “Obstructed thickenings and supermanifolds”, *Journal of Geometry and Physics*, vol. 139, pp. 25–49, (2019)

Full list of published articles available here (online link): [orcid.org/0000-0002-7836-6067](https://orcid.org/0000-0002-7836-6067)

Full list of all articles in mathematical physics available here (online link): [arXiv/Kowshik-Bettadapura](https://arxiv.org/archive/math)

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