Lena Collienne

Curriculum Vitae

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github.com/lenacoll

Research

Postdoctoral Research, *Fred Hutch Cancer Center*.
Novel methods for phylogenetic inference, including online methods.

Postdoctoral Research, *University of Canterbury*.
Extending subtree prune and regraft operations to ranked phylogenetic trees and investigating thereby introduced distance measures for phylogenetic time trees.

PhD Research, *University of Otago*.
Introducing and analysing spaces of phylogenetic time trees based on nearest neighbour interchange tree rearrangements.

M.Sc. Research, *University of Greifswald*.
Establishing properties of ranked nearest neighbour interchange moves between ranked phylogenetic trees

Education

2018–2021 **Doctor of Philosophy**, *Computer Science*, University of Otago (NZ).
2016–2018 **Master of Science**, *Biomathematics*, University of Greifswald (GER).
2012–2015 **Bachelor of Science**, *Biomathematics*, University of Greifswald (GER).

Work Experience

2023–now **Postdoctoral Research Fellow**, *Matsen group*, Fred Hutch Cancer Center (US).
2022–2023 **Postdoctoral Research Fellow**, *BioDS lab, School of Mathematics and Statistics*, University of Canterbury (NZ).
2022 **Lecturer**, *STAT211: Random Processes*, University of Canterbury (NZ).
2019 **Tutor**, *COSC341: Theory of Computing*, University of Otago (NZ).
2015–2016 **Summer Research Project**, *University of Auckland (NZ)*.

Scholarships and Awards

2022 *Hatherton Award* (Royal Society of New Zealand)
2021 *Exceptional PhD thesis* (Division of Science, University of Otago)
2018–2021 *University of Otago Doctoral Scholarship*
2018 *Externally Funded Research Grant* (Max Planck Institute Plön)
2015 *Summer Research Scholarship* (University of Auckland)

2015 *PROMOS Travel Scholarship* (University of Greifswald)

2014–2015 *Deutschlandstipendium* (Alfried Krupp von Bohlen und Halbach Foundation/Federal Government of Germany)

Additional Activities

2021 President of the Otago Computer Science Society (University of Otgao)

2019–2021 Member of the Postgraduate Committee (Department of Computer Science, University of Otago)

2019–2021 Organising the annual Postgraduate Symposium (Department of Computer Science, University of Otago)

2019–2021 Member of Student Council (Institute for Mathematics and Computer Science, University of Greifswald)

Talks

Conference Talks

2022 **SMB meeting 2023**, *Columbus (OH, US)*.
Invited minisymposium talk: Spaces of Discrete Time Trees

2022 **Phylomania 2022**, *Hobart (AU)*.
Contributed talk: Subtree Prune and Regraft on Ranked Trees

2021 **Phylomania 2021** (Best Student Talk Award), *Online*.
Contributed talk: Distances between Phylogenetic Time Trees

2021 **NZ Phylogenomics Meeting**, *Akaroa (NZ)*.
Contributed talk: The Space of Discrete Coalescent Trees

2020 **NZ Phylogenomics Meeting**, *Waiheke (NZ)*.
Contributed talk: Online Algorithms in Computational Biology

2019 **NZ Phylogenomics Meeting**, *Napier (NZ)*.
Contributed talk: The Ranked Nearest Neighbour Interchange Space of Phylogenetic Trees

Invited Seminar Talks

2021 **Departmant of Mathematics**, *University of Otago (NZ)*.
The Space of Discrete Coalescent Trees

2020 **Online Seminars on Algorithms and Complexity in Phylogenetics**, *Online*.
Computing the Ranked Nearest Neighbour Interchange Distance between Ranked Phylogenetic Trees

2019 **Max Planck Instityte for Mathematics in the Science**, *Leipzig (GER)*.
The Ranked Nearest Neighbour Interchange space of phylogenetic trees

2017 **Computational Evolution Group**, *ETH Zurich (CH)*.
Discrete Time Trees

Other

2022 **School of Mathematics and Statistics**, *University of Canterbury (NZ)*.
How to Give a (Good) Talk

2020 **Postgraduate Symposium** (1st place Best Presentation Award), *University of Otago (NZ)*.
The Complexity of Computing the RNNI Distance between Phylogenetic Trees

2020 **Seminar of Departments of Computer Science and Information Science**, *University of Otago (NZ)*.
The Complexity of Computing Nearest Neighbour Interchange Distances between Ranked Phylogenetic Trees

2019 **Postgraduate Symposium** (2nd place Best Presentation Award), *University of Otago (NZ)*.
Online Algorithms in Computational Biology

Publications

Collienne, L., Whidden, C. & Gavryushkin, A. (2024). Ranked Subtree Prune and Regraft. *Bulleting of Mathematical Biology 86, 24. https://doi.org/10.1007/s11538-023-01244-2*

Berling, L., **Collienne, L.** & Gavryushkin, A. (2023). Estimating the mean in the space of ranked phylogenetic trees. *BioRxiv*. https://doi.org/10.1101/2023.05.08.539790.

Bouckaert, R., **Collienne, L.** & Gavryushkin, A. (2022). Online Bayesian Analysis with BEAST2. *BioRxiv*.

Collienne, L. (2021). Spaces of phylogenetic time trees (Thesis, Doctor of Philosophy). University of Otago. Retrieved from http://hdl.handle.net/10523/12606

Collienne, L., Elmes, K., Fischer, M., Bryant, D. & Gavryushkin, A. (2021). Discrete Coalescent Trees. *Journal of Mathematical Biology 83.5, p. 60. issn: 1432-1416.*

Collienne, L. & Gavryushkin, A. (2021). Computing nearest neighbour interchange distances between ranked phylogenetic trees. *Journal of Mathematical Biology 82.1, p. 8. issn: 1432-1416*.