

Georgia Tsambos

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Education

Doctor of Philosophy (Statistics and Stochastic Processes)

University of Melbourne/Melbourne Integrative Genomics

Aug 2017 – Present

- Submitted thesis in December 2021.
- Supervised by Damjan Vukcevic and Stephen Leslie.
- Visited Jerome Kelleher's group at the University of Oxford between April-October 2019.

Master of Science (Statistics and Stochastic Processes)

University of Melbourne

Feb 2015 – Nov 2016

- Completed with Distinction.
- Supervised by Damjan Vukcevic and Stephen Leslie.

Bachelor of Advanced Mathematics (Hons) (Pure Mathematics)

University of New South Wales

Mar 2009 – Dec 2013

- Completed with First Class Honours.
- Honours project work in functional analysis and dynamical systems supervised by Gary Froyland and Cecilia Gonzalez-Tokman.

Bachelor of Arts (Political Economy)

University of New South Wales

Mar 2009 – Dec 2012

Publications to date

- Adrion, J. R. et al. (2020). A community-maintained standard library of population genetic models. *ELife*, 9, 1–39. <https://doi.org/10.7554/eLife.54967>
 - Joint first authorship.
- Baumdicker, F. et al. (2021). Efficient ancestry and mutation simulation with msprime 1.0. *bioRxiv*. <https://doi.org/10.1101/2021.08.31.457499v1>
 - Joint first authorship.

Contributions to scientific software

tskit

<https://github.com/tskit-dev/tskit>

Jun 2019 - present

- Code for primary features, tests, documentation, tutorials.

msprime

<https://github.com/tskit-dev/msprime>

Aug 2019 - present

- Code for secondary features, tests, documentation, tutorials.

stdpopsim

<https://github.com/popsim-consortium/stdpopsim>

Dec 2019 - Dec 2020

- Bugfixes, documentation, tutorials.

Teaching, supervision and workshops

Masters research supervisor

School of Mathematics and Statistics, University of Melbourne

Melbourne, Australia

Jan 2020 - June 2021

- Supervised Sam S., 'Inferring admixture with local ancestry'

Workshop instructor

PopSim Consortium

Online

Dec 2020

- Led a workshop introducing the stdpopsim package.

Workshop instructor

Society for Molecular Biology and Evolution

Tjarno, Sweden

Jun 2019

- Led a workshop introducing the msprime and tskit packages.

Undergraduate research supervisor

School of Mathematics and Statistics, University of Melbourne

Melbourne, Australia

Jan 2019 - Feb 2019

- Supervised Zheng F., 'Meta-analysis with a general genetic model'

Teaching assistant and sessional tutor

Faculties of Science and Engineering, UNSW

Sydney, Australia

Feb 2013 - Nov 2014

- Tutored MATH1141 (a first-year calculus class)
- Tutored and lectured SCIF1121, SCIF1131, and MMAN3000 (classes about professional writing and communication for science and engineering students)

Conferences

Australian Statistical Conference

Analysis, inference and simulation of identity-by-descent in large datasets (talk)

Online

July 2021

3 Minute Thesis Science Finals, University of Melbourne

The history written in our DNA (talk)

Online

June 2019

- 2nd place

Probabilistic Modelling in Genomes

Online

<i>Analysis, inference and simulation of identity-by-descent in large datasets (poster)</i>	<i>Apr 2021</i>
GeneMappers <i>Efficient simulation of identity-by-descent and ancestry in large datasets (talk)</i>	Sydney, Australia <i>Nov 2019</i>
Probabilistic Modelling in Genomes <i>Efficient simulation of introgression, admixture and local ancestry (poster)</i>	Aussois, France <i>Oct 2019</i>
Society for Molecular Biology and Evolution <i>Efficient simulation of introgression, admixture and local ancestry (poster)</i>	Manchester, UK <i>July 2019</i>
Quantitative Genomics <i>Efficient simulation of introgression, admixture and local ancestry (talk)</i>	London, UK <i>June 2019</i>
GeneMappers <i>Accounting for disease diversity in genetic association studies (talk)</i>	Geelong, Australia <i>Apr 2017</i>
Australian Statistical Conference <i>Accounting for disease diversity in genetic association studies (talk)</i>	Canberra, Australia <i>Dec 2016</i>
<ul style="list-style-type: none"> ○ Awarded the runner-up Pitman Prize. 	

Other professional activities

Paid roles.....

Research assistant

<i>Melbourne Integrative Genomics, University of Melbourne</i>	<i>Feb 2017 - Feb 2018</i>
<ul style="list-style-type: none"> ○ Developed software pipelines for large-scale imputation of human immune system genes in the Leslie lab. 	

Summer researcher

<i>Climate Change Research Centre, University of New South Wales</i>	<i>Nov 2014 - Feb 2015</i>
<ul style="list-style-type: none"> ○ Studied the influence of soil moisture variability on Australian climate extremes under the supervision of Dr Ruth Lorenz. 	

Summer cadet

<i>Reserve Bank of Australia, Economic Research Division</i>	<i>Nov 2013 - Feb 2014</i>
<ul style="list-style-type: none"> ○ Studied the relationship between home prices, economic consumption and household spending in Australia. 	

Unpaid roles.....

Young Statistician's Representative for Victoria

<i>Statistical Society of Australia</i>	<i>2017 - 2019</i>
<ul style="list-style-type: none"> ○ Organised branch events for early career members. 	

President (2017), various other roles (2015-2018)

Statistics and Mathematics Postgraduate Society, University of Melbourne

2015 - 2018

- Oversaw and managed the society's activities and events.
- Advocated for maths and stats students in the broader university community.

Subject tutor

Curious Minds

2015 - 2017

- Provided STEM-related academic support and pastoral care to high school girls from rural, Indigenous and low socio-economic backgrounds.

Awards, prizes and scholarships

Maurice Belz travel award

School of Mathematics and Statistics, University of Melbourne

Mar 2019

Helen R Freeman scholarship

University of Melbourne

Jul 2015 - Nov 2016

Faculty of Science Vacation Research Scholarship

University of New South Wales

Nov 2011

Faculty of Science Undergraduate Scholarship

University of New South Wales

Apr 2009 - Nov 2013

Various awards for undergraduate entry

University of New South Wales / Australian Government

2009

- UNSW Scientia scholarship, Australian Student Prize, UNSW Academic Achievement Prize

References

Damjan Vukcevic

Senior Lecturer in Statistical Genomics

University of Melbourne

Melbourne, Australia

✉ damjan.vukcevic@unimelb.edu.au

Jerome Kelleher

Senior Statistical Programmer

Big Data Institute, University of Oxford

Oxford, United Kingdom

✉ jerome.kelleher@well.ox.ac.uk

Stephen Leslie

Professor in Statistical Genomics

University of Melbourne

Melbourne, Australia

✉ stephen.leslie@unimelb.edu.au

Peter Ralph

Associate Professor

Departments of Mathematics and Biology,

University of Oregon

Eugene, Oregon, USA

✉ plr@uoregon.edu