

Adrienne Jenner

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Education

- 2019 **PhD in Applied Mathematics**, University of Sydney, Australia
“Applications of mathematical modelling in oncolytic virotherapy and immunotherapy”
Supervisors: A/Prof Peter Kim, A/Prof Adelle Coster, Auxiliary: A/Prof Federico Frascoli
- 2015 **Bachelor of Science Honours Class I (90/100)**, University of Sydney, Australia
- 2013 **Bachelor of Mathematics (Distinction)**, University of Wollongong, Australia

Professional experience

Professional academic positions

- 2021- current **Lecturer**, Queensland University of Technology, Australia
- 2021-current **Research Affiliate**, University of Sydney, Australia
- 2019-2021 **Postdoctoral Research Fellow**, Université de Montréal, Canada
Supervision: Dr Morgan Craig
- 2019 **Postdoctoral Research Assistant**, University of Sydney, Australia
Supervision: Peter Kim
- 2018 **Research Affiliate (Visiting Scholar)**, Indiana University, United States
Sponsor: A/Prof. Paul Macklin

Other teaching positions

- 2020 **Lecturer**, Université de Montréal
- 2016-2019 **Postgraduate Teaching Fellow**, University of Sydney
- 2017-2019 **Summer School Lecturer**, University of Sydney
- 2014-2016 **Casual academic**, University of Sydney

Publications (h-index 11)

1. C Drovandi, B Lawson, **AL Jenner**, AP Browning (2022), “Population calibration using likelihood-free bayesian inference”, *arXiv*.
2. **AL Jenner**, W Kelly, ... , PS Kim (2022), “Examining the efficacy of localised gemcitabine therapy for the treatment of pancreatic cancer using a hybrid agent-based model”, *bioRxiv*.
3. O Cardinal, C Burlot, ... , M Craig, **AL Jenner** (2022), “Establishing combination PAC-1 and TRAIL regimens for treating ovarian cancer based on patient-specific pharmacokinetic profiles using in silico clinical trials”, *Computational and Systems Oncology*.
4. **AL Jenner**, M Smalley, ... , A Goldman, M Craig (2022), “Agent-based computational modeling of glioblastoma predicts that stromal density is central to oncolytic virus efficacy”, *iScience*, 25(6).
5. AP Browning, N Ansari, C Drovandi, A Johnston, MJ Simpson, **AL Jenner** (2021), “Identifying cell-to-cell variability in internalisation using flow cytometry”, *Journal of the Royal Society Interface*, 19(190): 20220019.
6. CE Engeland, JPW Heidebuechel, RP Araujo, **AL Jenner** (2021), “Optimising immunovirotherapies: the intersection of mathematical modelling and experiments”, *Immunoinformatics*, 100011.
7. A Surendran, ... **AL Jenner**, M Craig (2021), “Approaches to generating virtual patients cohorts with applications in oncology”, *Personalised Medicine Meets Artificial Intelligence*.
8. **AL Jenner**, RA Aogo, S Alfonso, V Crowe, X Deng, AP Smith, PA Morel, CL Davis, AM Smith, M Craig (2021), “COVID-19 virtual patient cohort suggests immune mechanisms driving disease outcomes”, *PLoS pathogens*, 17(7):e1009753
9. P Crosley, ... **AL Jenner**, ... MM Hitt (2021), “Procaspase-Activating Compound-1 synergizes with TRAIL to induce apoptosis in established granulosa cell tumour cell line (KGN) and explanted patient granulosa cell tumour cells in vitro”, *International Journal of Molecular Sciences*, 22(9):4699.

10. **AL Jenner**, T Cassidy, K Belaid, MC Bourgeois-Daigneault, M Craig (2021), "In silico trials predict that combination strategies for enhancing vesicular stomatitis oncolytic virus are determined by tumor aggressivity", *Journal for Immunotherapy of Cancer*, 9(2).
11. S Alfonso, **AL Jenner**, M Craig (2020), "Translational approaches to treating dynamical diseases through in silico clinical trails", *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 30(12):123128.
12. M Craig, **AL Jenner**, B Namgung, LP Lee, A Goldman (2020), "Engineering in medicine to address the challenge of cancer drug resistance: from micro-and nanotechnologies to computational and mathematical modelling", *Chemical Reviews*, 121(6):3352-3389.
13. **AL Jenner**, RA Aogo, CL Davis, AM Smith, M Craig (2020), "Leveraging computation modelling to understand infectious diseases", *Current Pathobiology Reports*, 1-13.
14. **AL Jenner** (2020), "Applications of mathematical modelling in oncolytic virotherapy and immunotherapy", *University of Sydney*.
15. **AL Jenner**, F Frascoli, ACF Coster, PS Kim (2020), "Enhancing oncolytic virotherapy: observations from a Voronoi Cell-Based model", *Journal of Theoretical Biology*, 485:110052.
16. **AL Jenner**, F Frascoli, CO Yun, PS Kim (2020), "Optimising hydrogel release profiles for viro-immunotherapy using oncolytic adenovirus expressing IL-12 and GM-CSF with immature dendritic cells", *Applied Sciences*, 10(8):2872.
17. M Getz, ... **AL Jenner**, ... , P Macklin (2020), "Rapid community-driven development of a SARS-CoV-2 tissue simulator", *BioRxiv*.
18. T Lee, **AL Jenner**, PS Kim, J Lee (2020), "Application of control theory in a delayed-infection and immune-evading oncolytic virotherapy", *Mathematical Biosciences and Engineering*, 17(3):2361-2383.
19. **AL Jenner**, PS Kim, F Frascoli, (2019), "Oncolytic virotherapy for tumours following a Gompertz growth law", *Journal of Theoretical Biology*, 480:129-140.
20. **AL Jenner**, ..., ACF Coster (2018), "Modelling heterogeneity in viral-tumour dynamics: the effects of gene-attenuation on viral characteristics", *Journal of Theoretical Biology*, 454:41-52
21. **AL Jenner**, CO Yun, A Yoon, ACF Coster, P Kim (2018), "Modelling combined virotherapy and immunotherapy: strengthening the antitumour immune response mediated by IL-12 and GM-CSF expression", *Letters in Biomathematics*, 5(2):S99-S116.
22. **AL Jenner**, CO Yun, PK Kim, ACF Coster (2018), "Mathematical modelling of the interaction between cancer cells and an oncolytic virus: insights into the effects of treatment protocols", *Bulletin of Mathematical Biology*, 80(6):1615-1629.
23. **AL Jenner**, ACF Coster, PS Kim, F Frascoli (2018), "Treating cancerous cells with viruses: insights from a minimal model for oncolytic virotherapy", *Letters in Biomathematics*, 5:s117-s136.

Grants	Total \$264,047
2022 QUT Early Career Researcher Scheme	\$20,000
2021 Centre for Data Science First Byte Funding Scheme (Second round)	\$10,000
2021 QUT Mathematical School Research Support Scheme	\$2,575
2021 Centre for Data Science First Byte Funding Scheme (First round)	\$10,000
2019 Quebec Health Research Funds (FRQS) Postdoctoral Scholarship	90,000 CAD
2019 Center for Applied Mathematics in Bioscience and Medicine Postdoctoral fellowship	7,000 CAD
2019 Canadian conference on cancer research travel scholarships	1,000 CAD
2019 Australian Mathematics Society Lift-Off Fellowship	\$4,000
2019 Postgraduate Research Support Scheme	\$3,500
2018 Australian Federation of Graduate Women Tempe Mann Travel Scholarship	\$8,000
2019 Sydney University Graduates Union of North America Alumni	\$2,500
2018 Australian and New Zealand Industrial and Applied Mathematics Travel Support	\$500
2017 K.E. Bullen International Conference Scholarship	\$3,500
2017 Women in Mathematics Special Interest Group Travel Grant	\$600
2017 Society for Mathematical Biology Landahl Travel Award	750 USD
2017 Postgraduate Research Support Scheme Funding	\$3,000
2016 Society for Mathematical Biology Landahl Travel Award	250 USD
2015 Australian Postgraduate Award (APA)	\$80,046
2010 Mathematics Undergraduate Scholarship University of Wollongong	\$9,000

Awards

2022 Cherry Ripe Prize ANZIAM Annual Meeting
2021 Fresh Science (ShortListed)
2021 QLD Flying Scientist
2018 State finalist for FameLab
2017 B.H. Neumann Prize AustMS Annual Meeting
2016 Runner up in the Three-Minute Thesis Competition at the AustMS Annual Meeting
2016 First prize poster at Séminaire de Mathématiques Supérieures, University of Alberta
2016 T.M. Cherry Prize ANZIAM Annual Meeting
2015 Honourable mention for the B.H. Neumann Prize AustMS Annual Meeting
2015 Australian Federation of Graduate Women Prize in Mathematics
2015 Chris Cannon prize for the best Applied Honours presentation

Supervision

2022-current	Georgia Weatherley,	Honours student,	Queensland University of Technology
2022-current	Geneva Birtles,	Honours student,	Queensland University of Technology
2022-current	Kaitlyn Brown,	PhD Candidate,	Queensland University of Technology, Australia
2022	Noa Levi,	PhD Candidate,	Queensland University of Technology, Australia
2021-current	Xiaoyu Wang,	PhD Candidate,	Queensland University of Technology, Australia
2021	Hrishika Alajpur,	Research Assistant,	Queensland University of Technology, Australia
2021	Isobelle Parfitt,	Research Assistant,	Queensland University of Technology, Australia
2021	Noa Levi,	Honours student,	Queensland University of Technology, Australia
2021	Jaymie Tilbury,	Honours student,	Queensland University of Technology, Australia
2020-current	Justin Le Sauteur,	PhD Candidate,	Université de Montréal, Canada
2020	Olivia Cardinal,	Summer internship,	Université de Montréal, Canada
2020	Chloé Burlot,	Summer internship,	Université de Montréal, Canada
2019	Steve Laubie,	Internship,	University of Sydney, Australia
2018	Ilham Harmach,	Internship,	University of Sydney, Australia

Professional and community outreach activities

2022 Coordinator of the QUT Mathematics Career Evening
2022 Panel member at the 2022 ANZIAM Annual Meeting
2022 Committee member for the QUT Maths Summer School
2021-current Associate Editor for PLOS Computational Biology
2021-current Website publication committee member Society for Mathematical Biology
2021-current Engagement coordinator for the School of Mathematical Sciences
2021-current Editor at Immunoinformatics
2021 Invited contribution to the [Mathematical Oncology Blog](#)
2021 Panel chair for the Women in Mathematics Society (WIMSIG) Annual meeting
2019 Presenter at the live [Ockham's Razor Event](#) as part of Vivid Sydney
2018 Interviewed on the [ABC 7.30 Report](#)
2018 Volunteer mentor at the Accenture Girl's in STEM day
2018 Presenter in the Science Tent at Splendour in the Grass
2018 Vice President of the University of Sydney Mathematics Postgraduate Society (MaPS)
2016 Society for Mathematical Biology Annual Meeting 2018 Social Media Coordinator
2017 Inaugural Debate participant at the Australian Mathematics Society Annual Meeting
2017 Student Volunteer for International Science week "Meet a Geek"
2017 Girl's in Math Day Out panel member

Organised workshops

2023 Banff International Research Station (BIRS) "Computational modelling of cancer biology and treatments"
2023 Mathematical Biology Special Interest Group (MBSIG) Annual Meeting
2021 Centre of mathematical research (CRM) "Computational modelling of cancer biology and treatments"
2020 Centre of mathematical research and centre for applied mathematics in biosciences and medicine (CAMBAM) "Computational modelling to study cancer biology and treatments"