

David Cornelis Groothuizen Dijkema

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[University of Auckland profile](#)

Education

University of Auckland

Doctoral Candidate in Mathematics Mar. 2022 – present
Thesis topic: Dynamical dependence on topology of symmetric heteroclinic networks
Supervisors: Assoc. Prof. Claire M. Postlethwaite and Prof. Vivien Kirk

Bachelor of Science (Honours) 2021
with First Class Honours in Applied Mathematics
Honours Dissertation: A heteroclinic network in a spatially-extended four species interaction model
Supervisor: Assoc. Prof. Claire M. Postlethwaite

Bachelor of Engineering (Honours) 2017 – 2020
with First Class Honours in Engineering Science
Part IV Project: Synthetic-aperture radar processing on the NVidia Jetson AGX Xavier
Supervisors: Dr. John E. Cater and Dr. Nicholas J. Rattenbury

Howick College

NZQA Scholarships English and History, Outstanding 2011 – 2015
University Entrance
NCEA Levels 1, 2, & 3, endorsed with Excellence

Preprints

Dvid C Groothuizen Dijkema and Claire M Postlethwaite. (2022). Travelling waves and heteroclinic networks in models of spatially-extended cyclic competition. *Submitted to Nonlinearity*. [arXiv:2208.05630](https://arxiv.org/abs/2208.05630).

David C Groothuizen Dijkema, Vivien Kirk, and Claire M Postlethwaite. (2023). Switching near heteroclinic networks as a border-collision bifurcation. *In preparation*.

Awards and scholarships

University of Auckland Department of Mathematics 2021
Student Research Conference prize
First in Course Award in MATHS 761 (Dynamical Systems)
University of Auckland Postgraduate Honours Scholarship
University of Auckland Summer Research Scholarship 2020 – 2021
First in Course Award in ENGSCI 355 (Applied Modelling in Simulation and Optimisation) 2019
University of Auckland Faculty of Engineering 2017, 2018, 2019
Dean's Honours List
Howick College Senior Scholar (Dux) 2015
Howick College Award, for outstanding commitment

Teaching positions

University of Auckland

Department of Mathematics, Faculty of Science Jul. 2022 – present
Graduate Teaching Assistant for
COMPSCI 120 (Mathematics for Computer Science)
MATHS 120 (Algebra I)
MATHS 130 (Calculus I)
MATHS 253 (Algebra and Calculus III)
MATHS 260 (Differential Equations)

Department of Engineering Science, Faculty of Engineering Mar. 2020 – Nov. 2020

Teaching Assistant for
ENGSCI 255 (Modelling and Analytics in Operations Research)
ENGSCI 211 (Mathematical Modelling II)

Employment
history

Suez Smart Solutions Ltd.
Assistant Optimisation Engineer

Nov. 2019 – Mar. 2020

Watercare Services Ltd.
Undergraduate Engineer

Oct. 2018 – Nov. 2019

Professional
affiliations

New Zealand Mathematical Society (NZMS)
Australia and New Zealand Industrial and Applied Mathematics (ANZIAM)
Society for Industrial and Applied Mathematics (SIAM)
Student member