

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: Profs. Claire Postlethwaite and 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: Prof. Claire 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

2011 – 2015

NZQA Scholarships English and History, Outstanding

University Entrance

NCEA Levels 1, 2, & 3, endorsed with Excellence

Publications

David C Groothuizen Dijkema and Claire M Postlethwaite. (2023). Travelling waves and heteroclinic networks in models of spatially-extended cyclic competition.

Nonlinearity, **36**(12) 6546–6588. DOI: [10.1088/1361-6544/ad0212](https://doi.org/10.1088/1361-6544/ad0212).

arXiv: [2208.05630](https://arxiv.org/abs/2208.05630) [[math.DS](#)]

Awards and scholarships

Australia and New Zealand Industrial and Applied Mathematics (ANZIAM)

2023

Prize for Best Poster Presentation

Honourable mention for the New Zealand Mathematical Society (NZMS)

Aitken Prize for Best Student Talk

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)

COMPSCI 225 (Discrete Structures in Mathematics and Computer Science)

MATHS 108 (General Mathematics I)

MATHS 120 (Algebra I)

MATHS 130 (Calculus I)
MATHS 253 (Algebra and Calculus III)
MATHS 260 (Differential Equations)
Mathematics Assistance Room

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. Nov. 2019 – Mar. 2020
Assistant Optimisation Engineer

Watercare Services Ltd. Oct. 2018 – Nov. 2019
Undergraduate Engineer

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