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

Preprints

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. arXiv: *2208.05630 [math.DS]*

David C Groothuizen Dijkema, Vivien Kirk, and Claire M Postlethwaite. (2023). Switching near heteroclinic networks in $\mathbb{R}^4$. *In preparation.*

Awards and scholarships

University of Auckland Department of Mathematics Student Research Conference prize	2021
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 Dean's Honours List	2017, 2018, 2019
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.	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