Prof Richard Sandberg (UniMelb)

Prof Sean Smith (NCI)

Mr Matthew Downton (NCI)

Dr Alexis Espinosa Gayosso (Pawsey)

A/Prof Fatemeh Salehi (Macquarie Uni)

Dr Rowan Gollan (UQ)

Prof Emilie Sauret (QUT)

Dr Callum Atkinson (Monash)

Dr Andrew Kiss (ANU)

Michael Bergmann (DLR Germany)

Prof Matthew Cleary (USyd)

Dr Lewis Clark (LEAP Australia)

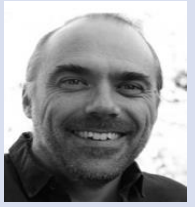
Dr Darrin Stephens (Laminar2 Turbulent)

A/Prof Christopher Leonardi (UQ)

A/Prof Bishakhdatta Gayen (Uni Melb)

HPC and Data in Computational Fluid Dynamics is a collaborative graduate-level teaching initiative for the Australian CFD research community. Below you find some brief professional bio details of the stellar teaching team. In each case, the name is linked to their webpage and the video thumbnail links to a short excerpt from their live online teaching sessions delivered as part of the course! To enrol as an Australian postgraduate student or researcher in the CFD related fields, please follow click **HERE**.

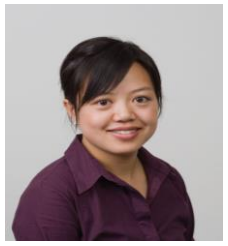
Richard Sandberg is a Chair Professor of Computational Mechanics at the University of Melbourne, leading the Power Generation and Transport program at the Melbourne Energy Institute. His interests include high-fidelity simulation of transitional and turbulent flows for flow and noise understanding, and novel machine-learning for improving low-order models. He earned his PhD in Aerospace Engineering from the University of Arizona in 2004 and was previously a Professor at the University of Southampton, heading the UK Turbulence Consortium.	
Sean Smith is Director of the Australian National Computational Infrastructure (NCI) and conjointly Professor at the Australian National University (ANU). He gained his PhD at the University of Canterbury in New Zealand. He undertook postdoctoral research at Universität Göttingen and at UC Berkeley. He has held academic and management appointments at The University of Queensland, Oak Ridge National Laboratory, UNSW Sydney and ANU.	
Matthew Downton is Associate Director (HPC Performance Optimization and Productivity) at NCI Australia since December 2021. He obtained his PhD in computational materials physics at the University of Bristol before undertaking postdoctoral research at the Max Planck Institute for Dynamics and Self-Organization, Goettingen, and Technische Universitaet Berlin. He then took up a role for 8 years with IBM Australia as Research Staff and conjoint Senior Research Fellow at University of Melbourne, before joining NCI Australia as a Senior HPC Specialist in February 2019. He has extensive experience in materials physics and bioinformatics workflows.	
Alexis Espinosa Gayosso is a Supercomputing Applications Specialist at Pawsey Supercomputing Centre where he gives support to research groups on the use and optimisation of HPC tools. Alexis is a Mechanical Engineer, completed a PhD on Environmental Engineering at the University of Western Australia and has worked on Computational Fluid Dynamics research for 20+ years. After joining Pawsey 5.5 years ago, he has been part of the team supporting workflows, including tools for CFD, bioinformatics, astronomy, and machine learning.	

Fatemeh Salehi is an Associate Professor at the School of Engineering at Macquarie University. She received her PhD in Renewable Energy Engineering from the University of New South Wales in 2015. She then worked as an Associate Postdoctoral Fellow at the University of Sydney for three years before taking up her faculty position at Macquarie in 2018. She is a 2021 Fulbright alumnus and an International Hydrogen Fellow.	
Rowan Gollan gained his PhD from the Centre for Hypersonics at The University of Queensland. He was a Research Scientist at the NASA Langley Research Center, and an ARC DECRA Fellow at UQ. He now holds a faculty position at UQ.	
Emilie Sauret is Professor in the School of Mechanical, Medical & Process Engineering, Queensland University of Technology (QUT). She received a PhD degree in Turbulence Modelling from the University Pierre & Marie Curie, Paris, France in 2004. Prior to her postdoctoral position (2009-2012) at the University of Queensland, she spent 5 years in the automotive and oil and gas industry both in France and in Australia. In 2013, she was awarded an ARC-DECRA and joined QUT. Dr. Sauret has extensive interdisciplinary research experience in computational fluid dynamics, applied mathematics and applied physics. Her research focusses on the development of advanced computational techniques to accurately simulate complex non-ideal fluid flows that are critical for the rational design and robust optimisation of engineering applications, in particular in the field of energy and biomedical engineering. Emilie was awarded an ARC-Future Fellowship in 2020 to uncover fundamental microscale physics, pioneering research on computational microfluidics.	
Callum Atkinson gained his PhD in a Cotutelle program between Monash University and École Centrale de Lille. He was awarded an ARC DECRA Fellowship with Monash University before transitioning to his present role as a Senior Lecturer in the Department of Mechanical and Aerospace Engineering.	
Andrew Kiss gained his PhD in geophysical fluid dynamics at the Australian National University, and subsequently held an ARC Postdoctoral Fellowship at ANU followed by a lectureship at UNSW Canberra. He is currently a Fellow at the Research School of Earth Sciences, ANU, and leads the development of high-resolution global coupled ocean and sea ice model configurations in the Consortium for Ocean and Sea Ice Modelling in Australia. His research interests include the fluid dynamics of ocean currents, the ocean's response to forcing perturbations and the role of ocean dynamics in Earth's climate.	

Michael Bergmann gained his Master's degree in 2015 from the Hamburg University of Applied Sciences and is presently a PhD candidate. He has joined the German Aerospace Centre (DLR) since 2015 as a research associate in the numerical method department of the Institute of Propulsion Technology. His primary research focusses on the development of a modern high-order Discontinuous-Galerkin solver as part of DLR's turbomachinery CFD-framework TRACE. The research on robust high-order methods enables efficient high-fidelity scale-resolving simulations of turbomachinery components, which provide insights into complex phenomena within propulsion systems and help to improve the capabilities of state-of-the-art CFD design tools.	
Matthew Cleary is Professor of Mechanical Engineering in the School of Aerospace, Mechanical and Mechatronic Engineering at the University of Sydney. He gained his PhD from the University of Sydney in 2005 and held positions at Imperial College and the University of Queensland before returning to Sydney in 2012. Cleary's research focuses on computational modelling of turbulent, combusting and two-phase flows with applications to energy, propulsion, defence and environmental flows. Over the past 12 years he has led the development of the opensource Monte Carlo solver called mmcFoam which is a collaborative effort between researchers at about 10 universities worldwide. He is the leader of the Data-centric Engineering mission in the Digital Sciences Initiative and teaches courses in engineering dynamics, energy and environment, fluid mechanics, combustion and propulsion.	
Lewis Clark is the Fluids Technical Manager at LEAP Australia – an Ansys Elite Channel Partner – providing CFD consulting, training, and support across a wide range of industries. He has substantial experience with both experimental techniques (PIV) and numerical methods (CFD). Lewis received a Ph.D. from UNSW on the topic of flame propagation, flow-field, and turbulence analysis in an optical SI engine. Since moving to industry, his main focus has been on turbomachinery, high-speed flows, multiphase flows, and optimisation.	
Darrin Stephens is the Chief Technical Officer at the engineering consultancy Laminar2 Turbulent. He earned his mechanical engineering B.Eng. and PhD degrees from James Cook University in Townsville, Queensland, and is a Fellow of Engineers Australia. Dr Stephens has an extensive background in modelling a wide range of fluid dynamics scenarios and a wealth of experience with OpenFOAM.	
Christopher Leonardi is a faculty member of the School of Mechanical and Mining Engineering at The University of Queensland, where he teaches computational mechanics and introductory programming to engineering students. He completed his PhD in computational mechanics at The University of Wales, Swansea, and his BE(Hons) in mechanical engineering at James Cook University, where he graduated with First Class Honours and a University Medal. His research is focused on the development and application of computational models of complex fluid-solid interactions, including suspension transport, porous media flow, multiphase flows, and poromechanics. He is an expert in a range of computational techniques, including the lattice Boltzmann, discrete element, and finite element methods. His team collaborates closely with national computing facilities, such as Pawsey Supercomputing Centre, to development, implement, and apply these techniques to large-scale engineering problems.	

Bishakhdatta Gayen is an Associate Professor and Australian Research Council (ARC) Future Fellow in the Department of Mechanical Engineering at The University of Melbourne. He holds a Bachelor's degree in Mechanical Engineering from Jadavpur University, and an M.S. in Engineering Science from the Jawaharlal Nehru Centre for Advanced Scientific Research. His Ph.D. was conferred by the University of California, San Diego, and his exceptional work was recognized with the prestigious Andreas Acrivos Dissertation Award, a notable early-career accolade from the American Physical Society-Division of Fluid Dynamics. His contribution to the field has been further recognized with the Discovery Early Career Fellowship from the ARC, the RJL Hawke Fellowship from Australian Antarctic Science, and the John Booker Medal from the Australian Academy of Science. His research interests center on computational fluid dynamics, turbulent convection, Antarctic ice melting modelling, and the role of convection in Southern Ocean and global ocean circulation.

Coordinating, Tutorial and Supporting Teams

						
Dr Meiyun Chang-Smith Co-organizer & Coordinator (Intersect)	**Dr Zhongzheng Wang Tutorial Instructor (QUT)**	**Fred Fung Tutorial Support HPC Training (NCI)**				
						
Anurodh Tiwari Webinar Host (Intersect)	**Fayette Fung Webinar Host (Intersect)**	**Thomas Michael Kabelitz Webinar Co-Host (Intersect)**	**Janil Perez Video & Doc Editing (Intersect)**	**Sesa Singha Roy Video & Doc Editing (Intersect)**		


INTERSECT
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Australian National University
QUT
MONASH University
THE UNIVERSITY OF SYDNEY
THE UNIVERSITY OF MELBOURNE
MACQUARIE University
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