

KEYNOTE SPEAKERS

THE AUSTRALIAN CONFERENCE ON SCIENCE AND MATHEMATICS EDUCATION 2020

PROFESSOR ELIZABETH JOHNSON

Elizabeth Johnson is Deputy Vice Chancellor Education where she leads Deakin's ambitious Student Learning and Experience strategy, including the drive to premium digital education and the partnership with FutureLearn. Liz has led whole-of-institution curriculum reform projects at Deakin University and La Trobe University and nationally funded projects, most recently Successful WIL in Science, on work-integrated learning in science faculties, funded by the Office of the Chief Scientist of Australia and the Department of Education and Training. Liz previously held senior university leadership positions at La Trobe University (Dean, Faculty Science, Technology and Engineering) and Deakin University (Pro Vice-Chancellor, Teaching and Learning) and was the inaugural Director of the Teaching and Learning Centre of the Australian Council of Deans of Science. Liz's leadership in learning and teaching has been recognised by citations for outstanding contributions to teaching and learning from La Trobe University and from the Carrick Institute. In recognition of her ongoing contributions to biochemistry education, in 2007 she received the prestigious Invitrogen Education award from the Australian Society for Biochemistry and Molecular Biology (ASBMB), and the 2007 Vice-Chancellor's award for teaching from La Trobe University.

ASSOCIATE PROFESSOR TINA ACUÑA AND DR JO-ANNE KELDER

Tina Acuña and Jo-Anne Kelder are the inaugural ACDS Teaching & Learning Fellows. Tina Acuña is the Associate Dean Learning and Teaching for the College of Sciences and Engineering at the University of Tasmania. She teaches and undertakes research in high rainfall cropping systems in the Agriculture and Food Systems discipline. Tina led the development of national Learning and Teaching Academic Standards for Agriculture in higher education. Jo-Anne Kelder is Senior Lecturer, Curriculum Innovation and Development in the Academic Division, at the University of Tasmania. She has been employed at University of Tasmania in a range of roles (casual teaching, project officer, academic), with a focus in education. She has worked on institutional and national projects, including Learning and Teaching Academic Standards (Science) ALTC (2010-2011), AgLTAS (2013-2015) and Peer Assisted Teaching Scheme (PATS) extension project (2015). She is interested in all aspects of higher education that relate to improving and measuring quality and her role includes supporting staff capability for evidence-based, scholarly curriculum design and teaching delivery.

ASSOCIATE PROFESSOR CHRIS THOMPSON

Chris Thompson works in the School of Chemistry at Monash University and holds the position of Associate Dean (Education). His discipline area is physical chemistry, mass spectrometry and spectroscopy, and he continues to teach from first year through to honours level chemistry. Chris leads the Chemistry and Science Education Research Group (ChaSERs) at Monash University covering research topics including inquiry-based and problem-based learning, representations in chemistry, active learning and alternative learning strategies in chemistry, student transition, transferable skill development and graduate employability.

DR MADELEINE SCHULTZ

Madeleine Schultz is a Senior Lecturer in the School of Life and Environmental Sciences at Deakin University, where she teaches first year, second year and third year chemistry. She is deeply involved in the community of practice of Australian chemistry educators through the Chemistry Discipline Network, which she has directed since founding it in 2011, and is currently serving on the Royal Australian Chemical Institute (RACI) Chemical Education Division Committee. Her research interests include student concept acquisition and the development of pedagogical content knowledge in secondary and tertiary chemistry teachers. Recently, she has become passionate about teaching the molecular basis of sustainability. An appreciation of the importance of laboratory experiences in supporting student learning underlies her research and teaching practice.

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ASSOCIATE PROFESSOR LIZ ANGSTMANN

Liz Angstmann is an Education Focused Associate Professor in the School of Physics at the University of New South Wales, Sydney. She leads the teaching arm of the Physics Education Research for Evidence Centered Teaching (PERfECT) group and is the first-year physics director, running courses with thousands of enrolments. She is passionate about professional development of university and high school physics educators—especially in an online environment—and is responsible for the introduction of the graduate certificate in physics for science teachers. Liz is most interested in applying the findings of the educational research literature to the courses she runs and designs, and uses concept inventory tests to measure learning gains.

ASSOCIATE PROFESSOR SHAUN BELWARD

Shaun Belward is a mathematician and the Associate Dean Learning and Teaching of the College of Science and Engineering at James Cook University. A common theme running through Shaun's research is in facilitating understanding of the numeracy demands of tertiary curricula. Mathematicians are uniquely placed for this role and Shaun has demonstrated this in two broad areas: designing curricula that develop quantitative skills in science students and in designing curricula for preservice secondary mathematics teachers. The demands of the ADLT role has also led to an interest in the pragmatics of leadership at scale in an environment of disruption. He seeks to identify and find ways of sharing effective program evaluation and refresh. Pitching professional development opportunities to entice the myriad of personality types to engage in sharing of practice is something he aspires to do.

DR DINO SPAGNOLI

Dino Spagnoli is a Senior Lecturer in the School of Molecular Sciences at the University of Western Australia. He is the coordinator of first year studies in chemistry and biochemistry, teaches in a number of first year chemistry units and facilitates in the coordination of all chemistry and biochemistry laboratories. Dino's research can be classified into two distinct areas: Computational Chemistry and Chemical Education. His research in the field of Computational Chemistry involves applying computer simulation techniques to study the processes that occur at the solid-liquid interface, which include adsorption of species and pollutants to surfaces, dissolution, crystal growth, and aggregation. In the field of Chemical Education, he is interested in developing and using technology to enhance the learning and transferable skills in the chemistry undergraduate laboratories.

PROFESSOR ROY HALL

Roy Hall is Professor of Virology at the School of Chemistry and Molecular Biosciences and founding member of the Australian Infectious Diseases Research Centre at the University of Queensland. His teaching interests are in Microbiology and Immunology and Microbes and Human Health. He is the coordinator of a large third year Virology Unit. Roy's research interest revolves around the study of the structure and function of flavivirus proteins with a focus on their role in viral pathogenesis and their potential as targets for antivirals and diagnostics. These studies focus on globally important mosquito-borne pathogens, including Zika virus, West Nile virus and Chikungunya virus. These studies have recently led to the development of novel vaccine candidates, and new diagnostic assays. Another major theme of his research is viral ecology and epidemiology.

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