European Variety in Chemistry Education 2019

Programme

O = 10 min oral + 10 min discussion  B = 3 min oral with 1 unanimated PPT slide  P = poster A0 portrait max

Wednesday 17th July

9.00-10.30  Registration  Sala Caminetto
10.30-10.45  Welcome  Main sessions in Salone Grollo
10.45 -11.45  Keynote 1  Chair: Iwona Maciejowska

Systems thinking, SOCMEs and educating about the molecular basis of sustainability?

*Peter Mahaffy, King’s University, Canada*

11.45-1.05  Session 1  Chair: Danny Bedgood

O1 Design, implementation, and evaluation of an interactive online lab environment to support undergraduate chemistry labs

*Ciorsdaidh Watts, University of Glasgow, UK*

O2 Determining which cognitive tasks are present in chemistry laboratory experiments

*Robin Stoodley, UBC, Canada*

O3 Evaluative judgement in chemistry practical projects

*Anna Bertram, University of Nottingham, UK*

O4 Preparing students for practical sessions using laboratory simulation software

*Richard Blackburn, University of Leicester, UK*

1.10-1.45  Lunch  Sala Biliardo & Sala Specchi
1.45-3.45  Session 2  Chair: Claire McDonnell

O1 Mainstreaming innovative practice in chemistry education- a survey of practice from UK, Ireland and Australia

*Michael Seery, University of Edinburgh, UK*

O2 Analysing student problem solving: successes and challenges

*Elizabeth Yuriev, Monash University, Australia*

O3 Using experimental design as an authentic experience for teaching and learning in organic chemistry

*Nimesh Mistry, University of Leeds, UK*

O4 Partnering for authentic context

*Angela Ziebell, Monash University, Australia*

O5 Affective chemistry education research: We do not know how to deal with affect

*Aishling Flaherty, Michigan State University, USA*
O6 Empowering and improving peers of all types, including academic staff, through inter-institutional use of Peerwise; and Irish case study

Barry Ryan, Technological University Dublin, Ireland

3.45-4.15 Break Sala Biliardo & Sala Specchi

4.15-5.45 Session 3 Chair: Felix Ho

O1 Turning chemistry on its head: A brave experiment

Ingo Koepfer, Flinders University, Australia

O2 Engaging students in employability skills: a comparative study between Scotland and Australia

Debbie Willison, Strathclyde University UK

O3 Keeping it simple- an alternative assessment approach for threshold learning outcomes

Reyne Pullen, UNSW, Australia

B1 The green formula for international chemistry education

Glenn Hurst, University of York, UK

B2 GoFis(c)her: A student-designed card game in introductory organic chemistry

Dylan Williams, University of Leicester, UK

B3 Science capital in secondary school chemistry

Lilith Ruschenpohler, Ludwigsberg University of Education, Germany

B4 Maths for chemistry: An alternative approach and student progression

Mamun Rashid, Manchester Metropolitan University, UK

B5 New A levels, new visions for inclusive first year undergraduate teaching

Tom Anderson, University of Sheffield, UK

6.00-7.00 Posters Sala Veneziana

7.00-8.00 Reception Terrace
Thursday 18th July

9.30-10.30   Keynote 2   Chair: Chris Thompson
Developing business acumen and employability in chemistry undergraduates: What do students really learn?
*Samantha Pugh, University of Leeds, UK*

10.30-11.15   Session 4   Chair: Glenn Hurst

B1 Virtual and augmented reality – a way to develop university students; spatial ability in organic chemistry
*Karolina Broman, Umea University, Sweden*

B2 Facing up to the challenges of teaching chemistry to an academically diverse foundation year
*Simon Lancaster, University of East Anglia, UK*

B3 The international year of the periodic table – approaches for chemistry teacher education
*Stefanie Herzog, Liebniz Institute for Science and Mathematics Education, Germany*

B4 How can sharing the research on high school chemistry teaching strategies, and models of teacher professional development, contribute to chemistry education at the tertiary level
*Rachel Mamlok-Naaman, Weizmann Institute of Science, Israel*

B5 Mind your language!
*Philippa Cranwell, University of Reading, UK*

B6 Identifying barriers and supporting understanding for novice students in spectroscopy
Christine Mundy, University of Pretoria, South Africa

B7 Escape room- innovative method to teach concepts related to the periodic table
*Vesna Milanovic, University of Belgrade, Serbia*

B8 A framework for the explicit teaching of Johnstone’s triangle, to support conceptual understanding in A level chemistry
*Niki Kaiser, Norwich Research School Notre Dame, UK*

B9 Organic chemistry going ‘flipped’ – university students’ perceptions of a new teaching and learning approach
*Karolina Broman, Umea University, Sweden*

11.15-11.45   Break   Sala Biliardo & Sala Specchi

11.45-1.10   Session 5   Chair: Karolina Broman

O1 The effect of the development of the experimental design skills on the students’ attitude
*Zoltan Toth, University of Debrecen, Hungary*

O2 From research into education: Linking chemistry with chemistry education and digital media
*Stefanie Herzog, Leibniz Institute for Science and Mathematics Education, Germany*
O3 Science pre-service teachers’ TPACK and beliefs about learning with digital media

Julian Kusel, Ludwigsberg University of Education, Germany

O4 Chemistry self-concept: Psychological patterns and relations with gender and culture

Lilith Ruschenpohler, Ludwigsberg University of Education, Germany

O5 The role of guidance in engaging in chemistry studies: A collaborative action model

Piia Valto, University of Jyväskylä, Finland

1.10-2.00 Lunch Sala Biliardo & Sala Specchi

2.00-3.30 Session 6 Chair: Zoltan Toth

O1 Teaching assistant’s PCK for first year organic chemistry: Opportunities for intervention

Marietjie Potgieter, University of Pretoria, South Africa

O2 First year undergraduate student expectations of chemistry degree programmes in the UK

Dylan Williams, University of Leicester, UK

O3 Were students better in the old days? Rasch analysis of three first approaches to university chemistry and a model for benchmarking between universities

Danny Bedgood, Charles Sturt University, Australia

B1 Hands-on laboratories and online assessment

Row Lowry, University of Plymouth, UK

B2 Going paperless: The digital teaching laboratory

Anna Bertram, University of Nottingham, UK

B3 Reinvigorating first year laboratories at Australia’s oldest university

Stephen George-Williams, University of Sydney, Australia

B4 Teaching HPLC method development through inquiry learning: Construction of a virtual lab

Laurence Orlando, Monash University, Australia

B5 Resitting the exam! Learning retention in a first year chemistry course

Barbara Macfarlane, Monash University, Australia

B6 Chemistry education of the elementary pre-service teachers

Dragica Trivic, University of Belgrade, Serbia

3.30-4.00 Break Sala Biliardo & Sala Specchi

4.00-5.00 Session 7 Chair: Jan Apotheker

O1 Making chemistry relevant for pharmacy curricula

David Manallack, Monash University, Australia
O2 EuChemS course ‘Good chemistry, methodological, ethical and social implications’- case study from Poland

Iwona Maciejowska, Jagiellonian University in Krakow, Poland

O3 How do students become experts? Development of domain specific fluency in a course of materials chemistry

Stefanie Lenzer, Justus-Liebig-University Giessen, Germany

7.30 Conference dinner La Scoglio restaurant
Friday 19\textsuperscript{th} July

\textbf{9.30-10.30} \textbf{Keynote 3} Chair: Tina Overton

Sticky Chemistry: scaffolding student thinking about thinking in hybrid learning environments.

\textit{Gwendolyn Lawrie, University of Queensland, Australia}

\textbf{10.30-11.15} \textbf{Session 8} Chair: Debbie Willison

B1 Student understanding of graphs in chemical kinetics – mathematical narratives and the crossroad between chemistry and mathematics

\textit{Felix Ho, Upsalla University, Sweden}

B2 Using infographic creation as a tool for science communication assessment and means of connecting students to local research

\textit{Richard Blackburn, University of Leicester, UK}

B3 Flipped problem classes to assist case study teaching of synthesis

\textit{Richard Blackburn, University of Leicester, UK}

B4 Popular science articles as the auxiliary method for chemistry teaching for non-chemist students

\textit{Ketevan Kupatadze, Ilia State University, Georgia}

B5 Slovenian university teachers’ approaches in teaching chemistry

\textit{Iztok Devetak, University of Ljubljana, Slovenia}

B6 Challenges for scientists’ career evolution

\textit{Pascal Mimero, CPE Lyon, France}

B7 Systemic cause-effect relation maps (SCREM) to reduce cognitive overload in analytical science

\textit{Jerome Randon, University Claude Bernard, France}

B8 A comparative analysis of chemistry curriculum – dash a possible tool for education reform

\textit{Eva Stratilova Urvalkova, University Karlova, Czech Republic}

B9 Design of a three year laboratory programme for international delivery

\textit{Julie Hyde, University of Sheffield, UK}

\textbf{11.15-11.45} \textbf{Break} Sala Biliardo & Sala Specchi

\textbf{11.45-1.10} \textbf{Session 9} Chair: Natasa Brouwer

O1 ‘They help you realise what you’re actually gaining’: Displaying badges to enhance recognition of transferable skill development in undergraduate chemistry

\textit{Michelle Hill, Monash University, Australia}

O2 Contextualisation strikes back!

\textit{Katherine Fernandez, Monash University, Australia}

O3 Systems thinking in green chemistry education

\textit{Glenn Hurst, University of York, UK}
O4 Teaching of the experimental design skills

*Edina Kiss, Eotvos Lorand University, Hungary*

O5 Behind closed doors—questions students ask about research

*Odilla Finalyson, Dublin City University, Ireland*

1.10-2.00  Lunch  Sala Biliardo & Sala Specchi

2.00-3.30  Session 10  Chair: Julie Hyde

O1 ‘What does the term critical thinking mean to you?’ A qualitative analysis of chemistry undergraduate, teaching staff and employers views of critical

*Stephen Danczak, Monash University, Australia*

O2 Evaluation of an online course to enhance teaching practice in university science laboratory courses

*Claire McDonnell, Technological University of Dublin, Ireland*

O3 Undergraduate research experiences: Insights from weekly reflections

*Dorian A Canelas, Duke University, USA*

3.30  Closing ceremony and announcement of ECRICE 2020
Posters

P1 Developing high quality online course for chemistry educators without a budget
Natasa Brouwer, University of Amsterdam, The Netherlands

P2 Pre-service and in-service chemistry teachers education for sustainable development
Vesna Milanovic, University of Belgrade, Serbia

P3 Rasch analysis of examination results provides information about student performance and exam validity
Danny Bedgood, Charles Stuart University, Australia

P4 Community engaged learning and research initiative in chemistry at Technological University Dublin
Claire McDonnell, Technological University of Dublin, Ireland

P5 The application of Corinth application on students’ motivation and their level of knowledge of natural sciences
Milada Tepla, Charles University, Czech Republic

P6 Collaboration ability assessment of Chinese STEM undergraduates studying abroad
Zhou Wei, Monash University, Australia

P7 University students’ experiences of organic chemistry laboratory studies
Tanja Lahtinen, University of Jyvaskyla, Finland

P8 An effective introductory limiting reagent lab
William G van de Sluys, Pennsylvania State University at Altoona, USA

P9 Designing a course in HE
Jan Apotheker, University of Groningen, The Netherlands

P10 Utilising social media for engagement with and contextualisation of chemistry
Glenn Adam Hurst, University of York, UK

P11 Development of fundamental analytical skills using a Arduino based projects: from signal to measurement accuracy
Jérôme Randon, Université Claude Bernard Lyon1, France

P12 From research to the teaching labs: crafting research inspired laboratory projects for general chemistry with students as active participants. Design and optimisation of an electrochemistry water remediation projects
Vaso Lykourinou, Northeastern University, USA

P13 The growing role of ethical considerations in chemistry education
Remco Vasterink, HU Utrecht University of Applied Sciences, The Netherlands

P14 ‘How have I grown? What works best for me?’- a metacognitive reflection session for 2nd year chemical engineering students
Felix M. Ho, Uppsala University, Sweden
P15 Formative assessment in a primary school chemistry education in the topic ‘mixtures’

Mária Babinčáková, Pavol Jozef Šafárik University in Košice, Slovakia
P16 ‘How do take that theory and put it into practice?’ – the usefulness of chemistry in everyday life at different stages of education

Ludwika Kolec – Janiak, University of Lodz, Poland
P17 Analysis of task content based on a variety of tearing forms – matriculation examination

Robert Zakrzewski, University of Lodz, Poland
P18 Using NUMBAS for e-assessment of undergraduate chemistry students

Oscar Siles Brügge, University of Nottingham, UK
P19 Digitising chemistry teaching

Magdalena Wajrak, Edith Cowan University, Australia
P20 Popularising chemistry in Hong Kong

K. K. Jason Chan, The Hong Kong University of Science and Technology, Hong Kong
P21 Do online resources support learning in forensic chemistry?

Anna Kirkham, University of Central Lancashire, UK
P22 Interactive adobe flash animation- digestion in the human body

David Šarboch, Charles University, Czech Republic
P23 Teaching 21st century science with 21st century skills

Peter E. Childs, University of Limerick, Ireland