



**University of
Sunderland**

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PATT 37 Malta 2019

Conference Programme

Monday 3 June 2019: All sessions in Lecture Theatre 1	
09:30 – 10:00	Welcome. Registration and coffee.
10:00 – 10:10	Opening statement by Chair: Dr Sarah Pule'
10:10 – 10:20	Opening statement by Rector: Professor Alfred Vella
10:20 – 10:30	Opening statement by PATT representative: Professor Marc de Vries
10:30 – 10:45	Opening statement by Dean, Faculty of Education: Dr Colin Calleja
10:45 – 11:00	Opening statement by Minister for Education & Employment: Hon. Evarist Bartolo
	<i>Session chaired by Marc de Vries</i>
11:30 – 12:00	Design and Technology towards innovation in Malta. Keith Galea, Silvana Gauci
12:00 – 12:30	A quantitative analysis of Maltese educational pathways and their impact on the take-up of the engineering profession. <i>Marc Anthony Azzopardi, Brian Zammit, Daniel Micallef, Daniel Buhagiar, Monique Borg Inguanez, Fiona Sammut, Alexia Pace Kiomall, Mario Cachia, Sarah Pulé</i>
12:30 – 13:00	The objective of technology education: a fresh look at the foundations <i>Antti Pirhonen</i>
13:00 – 13:30	Make Design Learning Visible: Formative assessment tools for design thinking <i>Remke Klapwijk, Kay Stables</i>
13:30 – 14:30	Lunch
	<i>Session Chaired by Piet Ankiewicz</i>
14:30 – 15:00	The truth is in the boat: A case study of pedagogical content knowledge and technical skill development in pre-service technology education teachers <i>David Gill</i>
15:00 – 15:30	Technology Students' attitudes toward STEM and Interest in STEM careers: A South African Perspective <i>Francois Van As</i>
15:30 – 16:00	Pre-Service Teachers' Perceptions of Pedagogical Approaches to STEM Education; Design and Technology <i>Dawne Irving-Bell and David Wooff</i>
16:00 – 16:15	Coffee Break
	<i>Session Chaired by Osnat Dagan</i>
16:15 – 16:45	Individual differences in technology teachers' professional attitude towards technology: An investigation of Chinese high school general technology teachers <i>Meidan Xu, P. John Williams</i>
16:45 – 17:15	Developing university pedagogy in engineering education <i>Sonja Niiranen, Johanna Naukkarinen Lappeenranta</i>
17:15 – 17:45	Laying down the "T" and "E" in STEM education: Design as the basis of an integrated STEM philosophy <i>Jonas Hallström, Piet Ankiewicz</i>
18:00 -	Transport <i>Evening Harbour Cruise at 18:30. Transport directly from University.</i>

	Tuesday 4 June 2019: Lecture Theatre 1
	<i>Session Chaired by Niall Seery</i>
09:30 – 10:00	Vulnerable Youth and STEAM <i>Nika Levikov</i>
10:00 – 10:30	Learning through design and make: producing originally-thought-out products versus producing pre-designed products downloaded from data files <i>Vomaranda Joy Botleng, Stephane Brunel, Philippe Girard</i>
10:30 – 11:00	Pre-service technology education teachers' perceptions of experiential learning through makerspaces <i>David Gill, Gerald Galway</i>
11:00 – 11:30	Models and modelling with digital tools in secondary technology education: Teachers' experiences <i>Helen Brink, Nina Killbrink</i>
11:30 – 11:45	Coffee Break

Parallel Session 1 – Lecture Theatre 1		Parallel Session 2 – Lecture Theatre 2	
	<i>Session Chaired by Sarah Pule'</i>		<i>Session Chaired by Sonja Niranen</i>
11:45 – 12:15	The influence of Exposure to Design and Technology on Choosing or Dropping the Subject: A case Study in Maltese State secondary Schools <i>Marylin Stellini, Sarah Pulé</i>	11:45 – 12:15	Inducting ITE students in assessment practices through the use of comparative judgement <i>Donal Cauty, Jeffrey Buckley, Niall Seery,</i>
12:15 – 12:45	Facets of Creativity Evidenced through a Design and Technology Summer Programme <i>Daniel Zarb, Sarah Pulé</i>	12:15 – 12:45	The perceptions of self-assessment in basic education in craft, design and technology <i>Sari Saarnilahti, Eila Lindfors</i>
12:45 – 13:15	Exploring the nature of young learners' convergent thinking during designing <i>Alice Schut, Nicolaas Blom</i>	12:45 – 13:15	First, Last, Elsewhere...Positioning ACJ in the Design Learning Experience <i>Scott Bartholomew, Liwei Zhang, Garcia Bravo, Greg J. Strimel</i>
13:15 – 13:45	Formative Evaluation of divergent Thinking in Primary Design Education <i>Remke Klapwijk, Niels van den Burg</i>	13:15 – 13:45	Analysing 'values' in collaborative development of D&T education units <i>Ritesh Khunyakar</i>
13:45 – 14:45	Lunch	13:45 – 14:45	Lunch
15:00 -	<i>Pre-historic temples.</i> Transport leaves from University at 15:00. Transport back to Waterfront Hotel will be provided.		

	Wednesday 5 June 2019: Lecture Theatre 1
	<i>Session Chaired by Jonas Hallström</i>
09:30 – 10:00	How teachers value skills in Technology teaching in Swedish compulsory school - interpreted traditions <i>Charlotta Nordlof, Susanne Engstrom</i>
10:00 – 10:30	Study of correlations between treatments of the didactics incidents and interactive decisions. Case of a session of technological teaching in a Tunisian college <i>Nour ElHouda Essefi</i>
10:30 – 11:00	Connecting the past and the present to the future: Hangarau, indigenous Maori technological practice in New Zealand <i>Ruth Lemon, Kerry Lee, Hemi Dale</i>
11:00 – 11:30	Technology Education in a Sami School <i>Cecilia Axell</i>
11:30 – 11:45	Coffee Break

Parallel Session 1 – Lecture Theatre 1		Parallel Session 2 – Lecture Theatre 2	
	<i>Session Chaired by Jeffrey Buckley</i>		<i>Session Chaired by Ronan Dunbar</i>
11:45 – 12:15	Another way of teaching programming for technology education <i>Lars Bjorklund</i>	11.45 – 12.15	Using CAVTA (Conversation Analysis and Variation Theory Analysis) in a Learning Study on Welding <i>Nina Kilbrink, Stig-Borje Asplund</i>
12:15 – 12:45	Design & Technology and Computer Science in the CAMAU Project: The Genesis of Learning Progression in the New Curriculum for Wales <i>David Morrison-Love, Peter Donaldson, Janine Barnes</i>	12.15 – 12.45	Developing a methodological approach to measure cognitive load during complex problem solving - working to understand the role of spatial ability in problem solving <i>Clodaugh Reid, Ronan Dunbar, Jeffrey Buckley</i>
12:45 – 13:15	Programming as a new content in Swedish preschool: What is it and how is it done? <i>Cecilia Axell, Karin Stolpe</i>	12.45 – 13.15	Scale Development for Measuring iDesign Content Connections in Pre-Service STEM teachers <i>Elizabeth Deuermeyer, Michael de Miranda</i>
13:15 – 13:45	The Body within the Loop - Identifying Primary Metaphors in Computer Programming Educational Resources <i>Andreas Larsson</i>	13.15 – 13.45	Fashion Design Education: The effects of users as the design core and inspirational source <i>Neshane Harvey, Piet Ankiewicz, Francois Van As</i>
13:45 – 14:15	Teachers' attitudes towards teaching programming in Swedish technology education <i>Eva Hartell, Andrew Doyle, Lena Gumaelius</i>	13.45 – 14.15	Re-designing Design and Technology Education: A living literature review of stakeholder perspectives <i>Dawne Irving-Bell, David Wooff, Matt McLain</i>
14:45 – 15:45	Lunch	14.45 – 15.45	Lunch
16:00 -	Transport directly from University to Mdina. Transport from Mdina to Waterfront Hotel.		

	Thursday 6 June 2019: Lecture Theatre 1
	<i>Session Chaired by Cecilia Axell</i>
09:30 – 10:00	Integrative STEM education - A new M.ED. Program: Development Objectives and Challenges <i>Osnat Dagan</i>
10:00 – 10:30	A comparative study of the content of two documents: The Design and Technology National Curriculum in England and New Zealand's Technology curriculum. <i>Stephanie Atkinson</i>
10:30 – 11:00	Curriculum Development for Technology Teacher Education - Integrating Pedagogy, Epistemology and Capability <i>Ronan Dunbar, Jeffrey Buckley, Niall Seery</i>
11:00 – 11:30	Existential risk in technology education <i>Markus Stoor</i>
11:30 – 11:45	Coffee Break
	<i>Session Chaired by Lars Bjorklund</i>
11:45 – 12:15	Models and modelling in technology education textbooks <i>Per Norstrom</i>
12:15 – 12:45	The effect of Spatial Ability on Retention in Engineering / Technology Education in Post-Primary Education <i>Tomas Hyland, Jeffrey Buckley, Niall Seery, Seamus Gordon</i>
12:45 – 13:15	Developing a questionnaire to measure students' conceptions of the nature of technology <i>Katrin Vaino, Toomas Vaino, Miia Rannikmaa</i>
13:15 – 14:00	Lunch
	<i>Session Chaired by Stephanie Atkinson</i>
14:00 – 14:30	Investigating perceptions of intelligence as an approach to understanding female representation in technology and engineering education <i>Jeffrey Buckley, Tomas Hyland, Niall Seery, Lena Gumaelius, Arnold Pears</i>
14:30 – 15:00	What are they doing? Tool use and self-image of girls aged 9 to 12 when engaging in technology education <i>Ulrika Sultan, Cecilia Axell, Jonas Hallström</i>
15:00 – 15:30	Students' Goal Orientation during an Educational Engineering Design Process <i>Eila Lindfors, Siiri, Knuuttila</i>
15:30 – 16:00	
16:00 – 16:30	Bridge between industry and education <i>Jeanette Axisa</i>
16:30 – 17:00	Plenary Session. <i>Moderator:</i> John P. Williams Developing a Knowledge Economy through Technology and Engineering Education: What does it entail? How can it be done? What is the role given to Design skills?
17:00 – 17:30	Closing address by Sarah Pulé and Marc de Vries
17:30 – 18:00	Refreshments
18:00	Transport to Waterfront Hotel

17 May 2019