		Horizons in STEM Higher Education BENTHAM HOUSE. 4-8 ENDSLEIGH GARDENS, LONDON, WC1H 0EG Day 1 Wednesday 29th June		
09:00-09:45		**Registration** **Room: 221 Hong Kong Alumni Room**		
9:45-10:00		**Welcome and Introduction** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Dr Elinor Jones**		
10:00-10:30		**Plenary 1: Dr Richard Blackburn, University of Leicester** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Professor Sam Smidt, Pro-Vice-Provost (Education and Practice Development), UCL**		
		time to travel between rooms		
	Active learning 1 **Room: LG26 Lecture Room** **Chair: Anna Roffey**	**Assessment 1** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Rachel Hilliam**	**Blended Learning 1** **Room: LG17 Lecture Room** **Chair: Richard Osborne**	**Equality Diversity and Inclusion 1** **Room: LG11 Lecture Room** **Chair: Jasvir Bhamrah**
10:40-11:00	Revisiting the Research-Teaching Nexus Framework: A case study introducing research into programme level, undergraduate teaching	Assignment extensions – use, impact and policy	Exploring post-pandemic fieldwork challenges and opportunities	Award gaps in "The Physics Degree": preliminary results from a large dataset of all UK undergraduates 2012–2020
	Sarah Gretton and Derek Raine	*Cath Brown and Catherine Halliwell*	*Julian Park, Alice Mauchline, Derek France, Katherine Welsh and Brian Whalley*	*Astra Sword, Annika Lohstroh and Sally Jordan*
11:00-11:20	vPBL: Developing a Facilitated Remote Approach to Problem Based Learning	Investigating barriers that prevent students attaining their full potential during their degree	Blended Learning Field Trips and Their Role in a Post-COVID-19 World: Evaluating digital education technologies used to enhance student field trips	The impact of commuting and COVID-19 on assessment gaps at a London university

	Dylan Williams	*Adrian-Mihai Costea, Lija Abu, Nasra Hersi, Felicia Gunawan, Ellen Coakley, Simon Gould and Ahmed Elbediwy*	*Alex Clarke, Christopher Brennan, Thomas Mitchell, Paul Bown and Emma Liu*	*Nigel Page and Gary Forster-Wilkins*
11:20-11:50	**Break for coffee** **Room: 221 Hong Kong Alumni Room**			
	Active Learning 2 **Room: LG26 Lecture Room** **Chair: Simon Harden**	**Assessment 2** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Duncan Parker**	**Blended Learning 2** **Room: LG11 Lecture Room** **Chair: Fiona Truscott**	**Sustainability** **Room: LG17 Lecture Room** **Chair: Neil Williams**
11:50 - 12:10	A New Model for Mathematics Teaching and Learning for Engineers	What does it all mean? Tutor and student experiences of marking grids for assessment on a final year module	A study into engineering students' perceptions towards blended learning	Will future chemical engineers save us from climate change?
	Sarah Peers	*Jenny Duckworth and Harriet Kopinska*	*Irina Lazar, Alicia Gonzalez-Buelga and Sheila Trahar*	*Mark Haw, Hasini Dosapati and Sara Alqattan*
12:10 -12:30	Online video content with embed active learning enhances students' learning experience	Have Open-book Open-Web exams reformed assessment in STEM?	Perceptions, Expectations and Experience of Group Tuition: the Pandemic effect	A Template for Sustainability Education in Chemistry.
	Melissa Lacey, Nigel Francis and David Smith	*Laura Roberts and Joanne Berry*	*Anne-Marie Gallen, Mark Jones and Anne Campbell*	*Victoria Hilborne and Martha Neugarten*
12:30-12:50	From Individual Support to Small-Group Problem-Solving: Encouraging Speech Online.	Teaching and Assessing Programming at Scale: the use of objective rubrics and structured feedback	A Blockchain Framework to Incentivise Engagement in Online Learning	Exploring Policies to Adopt STEM Education in Bangladesh
	Abi Kirk	*Simon Grey and Neil Gordon*	*Matthew Collison and Billy Thornton*	*Asm Shamsul Arefin and Sabbir Ahmed Chowdhury*
12:50-13:50	**Lunch** **Room: 221 Hong Kong Alumni Room**			

	Active learning 3 Room: SB31 Denys Holland Lecture Theatre Chair: Fiona Truscott	Assessment 3 Room: LG26 Lecture Room Chair: Elinor Jones	Scholarship of LT Room: LG17 Lecture Room Chair: Vicky Hilborne	Online Learning Room: LG11 Lecture Room Chair: Richard Osborne
Workshop 13:50-14:50	WS: Are you SERIOUS?! – Teaching Operations Management through Serious Games: PLEASE NOTE THAT PARTICIPANTS WILL NEED A LAPTOP TO PARTICIPATE	WS: Towards Utopia: Training Teaching Assistants to Mark Consistently	WS: Growing an inclusive (field) teaching environment	Celebrating Innovation of Digital Learning Tools in STEM Education
	Lissy Langer, Thomas Volling and Ines Direito	*Joel Ross, Becky Selwyn and Sean Lancastle*	*Elizabeth Hurrell, Simon Hutchinson and Lynda Yorke*	*LearnSci Teaching Innovation Awards Winners*
14:50-15:10	Enabling Foundation Students during Transition: A study on the impact of the Self Empowerment Journey on student wellbeing	Recognition of Prior Experiential Learning (RPEL) on Entry to STEM Degree Apprenticeship Programmes at the Open University: Challenges and Opportunities		
	Mariko Kishi, Liz Olusegun-Osoba and Jacqueline Mary Phillips	*Christine Gardner*		
15:10-15:30	Supporting students' transition to research methods and statistics modules in a psychology undergraduate course	Gamifying Post COVID STEM Classroom for better student Engagement		
	Stephanie McDonald and Megan Barnard	*Richa Mishra*		
15:30-16:00	**Break for coffee** **Room: 221 Hong Kong Alumni Room**			
	Decolonisation Room: LG11 Lecture Room Chair: Tamara Alhilfi	Employability 1 Room: SB31 Denys Holland Lecture Theatre Chair: Shannon Chance	Pedagogic Research 1 Room: LG26 Lecture Room Chair: Elinor Jones	Student Support 1 / Mathematics Room: LG17 Lecture Room Chair: Simon Harden

16:00- 16:20	Decolonising and Diversifying the Biomedical Sciences Curriculum at the University of Bristol	Experiences of women on computing student placements	Embedding a Theory of Change approach to plan and disseminate STEM scholarship projects	Refreshing students' mathematical knowledge via a massive open online course (MOOC)
	Alice Robson, Alessia Dalceggio, Bronwen Burton and Caroline McKinnon	*Sally Smith and Colin Smith*	*Shailey Minocha and Trevor Collins*	*Lisa Mott and Ria Symonds*
16:20-16:40	Suggestions for Decolonising the Science Curriculum	Design of an inclusive programme to encourage more Black students to engage and embrace careers in the pharmaceutical industry	A review of group-based methods for teaching statistics in Higher Education	Recognising and Coping with Maths Anxiety in Adult Learners, Oral Presentation for Pedagogic Research - (online presentation)
	Neil Williams	*Nigel Page, Jacqui Piner, Amanda Baker, Martha Mador, Gilbert Ampem, Victoria Ademisoye, Olivia Sealy and Zion Sengulay-Thomas*	*Tom Palmer and Elinor Jones*	*John Morgan*
16:40 -17:00	A novel approach to decolonising the curriculum via staff and student partnerships using an active learning framework	Does a life sciences student's demographic background correlate with their access to careers and developmental opportunities and, therefore their academic achievement as well as graduate destinations?	Evaluate the benefits of early embedding reflective practice into student experience and personal skill development	Statistics anxiety: does this differ by qualification?
	Angie Makri and Stephanie McDonald	*Vanessa Armstrong, Sarah Griffin, Ross Good, Sara Marsham, Beth Lawry, Matthew Forshaw, Chris Wells, Damian Parry, Alison Shaw, Lee Higham, Jessica Jung and Kate Rothery*	*Sally Darwiche, Yasin Shafi, Lidya Bellaouane, Jewel James, Aaron Williams, Ian Piper, Karen Whiting and Ahmed Elbediwy*	*Rachel Hilliam, Carol Calvert, Emma Steele and Di Haigney*
17:00-18:00	**Poster Session** **Room: 221 Hong Kong Alumni Room**			
18:45	**Conference Dinner** **Westminster pier** **Golden Salamander**			

Horizons in STEM Higher Education
BENTHAM HOUSE. 4-8 ENDSLEIGH GARDENS, LONDON, WC1H 0EG
Day 2
Thursday 30th June

9:00-9:20	**Registration** **Room: 221 Hong Kong Alumni Room**			
9:20-9:50	**Plenary 2 - Brunel University student panel** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Professor Katherine Holt (Vice Dean Education, Faculty of Mathematical and Physical Sciences)**			
	time travel between rooms			
	Active Learning 4 **Room: LG17 Lecture Room** **Chair: Sue Pawley**	**Assessment 4** **Room: LG11 Lecture Room** **Chair: Rachel Hilliam**	**Equality Diversity and Inclusion 2** **Room: LG26 Lecture Room** **Chair: Anna Roffey**	**Employability 2** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Neil Williams**
10:00- 10:20	A walk in the virtual woods – embedding active learning into immersive worlds	On Unpacking the Coursework Assignment	Measuring Student Awareness of Equality, Diversity and Inclusion in the Chemical Sciences	Year in Research: Enhancing graduate employability with another tool in the Work-integrated Learning toolbox
	Joseph Berry and Alison Gibson	*Emmanuel Tadjouddine*	*Dylan Williams and Khalku Karim*	*Laura Roberts, Penny Neyland, Nishan Clarke, Wendy Harris and Aimee Pritchard*
10:20-10:40	Using STEAM to power HPV vaccine awareness and advocacy among Irish post-primary students	Collaborative exams to enhance student experience in physics and chemistry	Designing inclusive learning environments: Building learning communities, identifying benefits, and overcoming barriers in blended and active learning environments	The Changing Shape of Computing in the UK: Perspectives from Higher Education and Industry
	Iain Macdonald, Céline Healy, Eva Malone, Richard Firth and Alexandra McDermott	*Andrea Jimenez Dalmaroni and Stephen Potts*	*Stephanie McDonald, Bethany Huntington and Harriet Allen*	*Matthew Collison and Chris Phippen*

Time				
10:40-11:00	Building Primary and Secondary Computer Science and Cybersecurity Teaching Self-Efficacy	Creating a collaborative feedback environment to enhance the student academic experience at Kingston University	Science Capital and Engineering Education: Exploring the nature of engineering and its lack of diversity in the United Kingdom	Employability skills gained through engagement with practical investigations
	Michael Nowatkowski and Ashley Gess	*Simon Lambe and Baljit Thatti*	*Rory McDonald*	*Janet Haresnape*
11:00-11:20	Enhancing anatomy and physiology education through design of simulation suits	Promoting a feedback dialogue with students: implementation and impact	Are there value conflicts between Engineering & EDI?	Outreach in the curriculum: Impact on transferable skills and science identity in undergraduate and postgraduate students
	Natasha Barrett and Elizabeth Lander	*Pedro Barra, Angela Chale and Hilda Mulrooney*	*Patricia Xavier and Natalie Al Kakoun*	*Katherine Rawlinson, Sue Campbell and Melissa Lacey*
11:20-11:50	**Break for coffee** **Room: 221 Hong Kong Alumni Room**			
Workshop 11:50-12:50	WS: Exploring different styles of online tuition to enhance student experience Room: SB31 Denys Holland Lecture Theatre Chair: Richard Osborne	WS: Gamifying STEM Classrooms for Better and Sustained Student Engagement Room: LG26 Lecture Room Chair: Hilda Mulrooney	WS: Applying for an Advance HE fellowship/award (sponsored by the Society for Natural Sciences) Room: LG17 Lecture Room Chair: Elinor Jones	WS: Inclusion into what? — Unpacking effective inclusive STEM teaching using "out-of-STEM" perspectives Room: LG11 Lecture Room Chair: Anna Roffey
	Janet Haresnape, Fiona Moorman and Janette Wallace	*Richa Mishra*	*Sarah Gretton*	*Gabriel Cavalli, Agne Kocnevaite, Janet De Wilde and Colleen Cotter*
12:50-13:50	**Lunch** **Room: 221 Hong Kong Alumni Room**			
	Equality Diversity and Inclusion 3 **Room: LG26 Lecture Room** **Chair: Elinor Jones**	**Student Support and wellbeing 2** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Chris Cane**	**Pedagogic Research 2** **Room: LG11 Lecture Room** **Chair: Mark Jones**	**Active learning 5 / Engineering** **Room: LG17 Lecture Room** **Chair: Ines Direito**
13:50-14:10	Remodelling learning, teaching and assessment to support transitioning students	Exploring student and staff expectations and experiences of university life.	Improving Delivery of Primary Science Through Teacher Development	Development of an interactive digital tool to encourage active learning in heat transfer

	Laura Roberts, Joanne Berry, Penny Neyland, Wendy Harris, Sophie Hocking and Aisling Devine	*Hilda M Mulrooney, Alison F Kelly, Magdalena Dolecka, Noor U Khan and Vanee Sivagurunathan*	*Andrea Mallaburn, Linda Seton and Victoria Brennan*	*Jonathan Macha, Rebecca Selwyn and Joel Finnigan*
14:10- 14:30	Influence of a diverse curriculum on students' knowledge and attitudes to diversity in health sciences	Development of an enhanced personal and professional development programme supported through a tutee peer network to facilitate transition, inclusion and belonging	Born in the USA - Exploring the PLTL Model in U.K Higher Education	Implementation of novel approaches in the design of a first-year curriculum in Architectural Engineering
	Elizabeth Lander and Natasha Barrett	*Nigel Page, Darren Clarke, Annie Yonkers and Tom Spurway*	*Lesley Howell and Redwan Shahid*	*Shannon Chance, Emanuela Tilley and Mariam Makramalla*
14:30- 14:50	Caught ZZZing? Engineering Education and Gen Z	Exploring the extent of maths anxiety within the STEM faculty at a distance learning University	Decolonising Computing education and practice – a sociotechnical perspective	Situational Awareness in Aerospace Engineering Education
	Robin Clark, Roger Penlington and Jane Andrews	*Susan Pawley and Sally Organ*	*Steve Walker*	*Jason McFadzean and Patricia Xavier*
14:50- 15:10	Scholarly Empiricism in Engineering Education: Developing Connected Engineers in a Disjointed World	Peer group interactions with a blended learning space, how students are using social media to answer assessment questions.	A Review of Pedagogic Best Practice for Technology-Driven Design Curriculum	Experiences of under-represented and widening participation medical students during their time at medical school
	Graeme Knowles, Nichola Knowles and Jane Andrews	*David Smith, Meleissa Lacey and Katherine Rawlinson*	*Eujin Pei, James Self, Lucia Corsini and Federico Colecchia*	*Alison Graham, Almaaz Shaikh, Katharine Hubbard and Jason Boland*
15:10-15:30	**Break for coffee** **Room: 221 Hong Kong Alumni Room**			
	Student Support 3 **Room: LG17 Lecture Room** **Chair: Janet Haresnape**	**Projects** **Room: LG11 Lecture Room** **Chair: Nigel Page**	**Public Engagement** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Pedro Barra**	**Employability 3** **Room: LG26 Lecture Room** **Chair: Sarah Gretton**
15:30- 15:50	Improving undergraduate self-efficacy in science learning by leveraging the design process	Practical or data-based projects? Types of undergraduate capstone projects chosen by distance-learning biology and environmental science students at the Open University	Art and Science Case Study: Increasing public engagement in a non-science space and the impact on the audience demographic with students as presenters	Opportunities to enhance graduate employability across the disciplines/

	Jennifer Bateman and Ashley Gess	*Hannah Gauci, Julie Robson, Jon Golding and Janette Wallace*	*Melissa Lacey, Catherine Duckett and Katherine Rawlinson*	*Simon O'leary*
15:50-16:10	Food asset mapping to enhance belonging in university staff and students.	Investigating how to enhance the idea generation process for academic projects by engineering students	Toolkit: Making the Most of Public Engagement	Pathways to Success in the Physics Workplace in the midst of a pandemic
	Hilda M Mulrooney and Olga Wojadzis	*Martin Braun*	*Melissa Lacey, Rachel Schwartz-Narbonne, Naomi Holmes and Katherine Rawlinson*	*Andrea Jiménez-Dalmaroni*

16:10-16:20	**New Directions - conference publication** **Room: SB31 Denys Holland Lecture Theatre**

16:20-16:50	**Plenary 3 - Professor Louise Archer, Institute of Education, University College London** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Professor Shannon Chance**

16:50-17:00	**Wrap-up and end of conference, prizes** **Room: SB31 Denys Holland Lecture Theatre** **Chair: Dr Elinor Jones**