9:00-9:45	Registration: Horizons in STEM Higher Education Wednesday 3rd July			
9:45-10:00	Welcome and Introduction: Dr Trish Reid PVC Learning and Teaching KUL Clattern Lecture Theatre			
10:00-11:00	Plenary Lecture: " Closing the attainment gap" Nona McDuff OBE Clattern Lecture Theatre			
11:00-11:30	Break (MB0063)			
	Technology Enhanced Learning (JG4007) Chair N.Gordan	**Assessment (JG4006) Chair S. Gretton**	**Equality Diversity and Inclusion (JG4008) Chair S. Smith**	**Active Learning- Laboratory work Sponsored by Learning Science (JG 4010) Chair N. Williams**
11:30-11:50	A Research-Led Masters Level Chemistry Course delivered through an Online Learning Environment	Evaluating assessment feedback in Higher Education: Principles of good practice	Sense of belonging in Science undergraduates	Evaluative Judgement in Chemistry Practical Projects
	3 Julia Sarju and Andrew Parsons- University of York	**17 Laura Grange- Bangor University**	**14 Rebecca Barnes- University of Sheffield**	**40 Anna Bertram- University of Nottingham**
11:50-12:10	Raising awareness about food security using a massive open online course	Implementing spaced practice with formative quizzes and daily questions	Exploring differential attainment by assessment type in mathematics, chemistry and life sciences	Hands-on Laboratories and On-line Assessment
	61 Carly Stevens- Lancaster University	**30 Mark Carew-KUL**	**26 James Denholm-Price, Nigel Page, Neil Williams and Luis Dourado KUL**	**20 Roy Lowry-University of Plymouth**
12:10-12:30	Redesigning online learning activities that make use of the Virtual Microscope: The students' and teachers' perspectives	Spaced Repetition in STEM Education	How to develop and embed a discipline-specific accessibility expertise in your teaching	Approaches to improve bioscience student engagement with virtual laboratory simulations
	7 Christothea Herodotou, Maria Aristeidou, Eileen Scanlon and Simon Kelley -Open University	**31 Alison Voice, Arran Stirton and Derek Raine- University of Leicester**	**35 Anne-Marie Gallen and Trevor Collins - Open University**	**59 Caroline L. Smith, Lorna Tinworth and Sarah K. Coleman- University of Westminster**
12:30-12:50	A Tool for Creating and Editing On-Line Resources for the Teaching and Learning of Calculus to Take Account of Students' Changing Approaches to Learning	Experiences on Designing and Presenting a Level 2 Information and Communication Technologies Open University Module	Breaking barriers, building community: Improving student engagement with preparation for studying online science by distance learning	Withdrawn
	27 Mastaneh Davis, Gordon Hunter, Vivien Tran Ba, Lynn Thalaal and Alice Wooding-Olajorin- KUL	**43 Soraya Kouadri Mostéfaoui and Patrick Wong - Open University**	**12 Christopher Hutton and Julie Robson- Open University**	
12:50-13:50	Lunch (MB0063)/ Posters			

	Horizons in STEM Higher Education Conference : Wednesday 3rd July Afternoon Session			
	Technology Enhanced Learning (JG4007) Chair H. Kew	**Employability skills. (JG4006) Chair M. Carew**	**Equality Diversity and Inclusion (JG4008) Chair N. Page**	**Active learning: Teamwork (JG4010) Chair J. Robson**
13:50-14:50	The Role of Virtual Learning Environments in Assessment and Feedback in STEM WS	Leadership activity implementation for Pharmacy Students (WS)	Exploring 'belonging' at university from the student perspective: what is it and how can we facilitate it? WS	Team Based Learning in Engineering WS
	62 Diogo Casanova and Graham Alsop- University of West London	**6 Ricarda Micallef and Dildar Kiwani- KUL**	**8 Daniela Dimitrova, Alison Kelly, Mehvish Mazahr, Nadine Milwood, Jeremy Prass and Hilda Mulrooney- KUL**	**60 Steve Cayzer - University of Bath**
14:50-15:10	The search for collaborative improvements: using learning networks and learning analytics to drive module improvements in STEM at the Open University	Student perceptions of Embedded Skills in a Natural Sciences Programme	Personal Tutoring- Is There One Size That Fits All?	The Implementation and Preliminary Evaluation of Project-Based Learning in a first year Environmental Chemistry module
	65 Lesley Boyd, Christine Leach, Rob Janes and Tom Olney - Open University	**5 Derek Raine and Sarah Gretton-University of Leicester**	**66 Baljit Thatti, Nicholas Freestone and Aysha Ranza- KUL**	**49 Neil Williams KUL**
15:10-15:30	Using Zoomable Online Outliners in STEM Education	Success in Employers' Numeracy Tests	Students as partners in scholarship in STEM open and distance learning	"Spectroscopy Unlocked": A Chemistry Escape Educational Activity
	68 Naomi Bailey, James Denholm-Price and Eckhard Pfluegel KUL	**2 Ruth Douglas and Shazia Ahmed - University of Glasgow**	**64 Diane Butler and Cath Brown - Open University**	**67 Barbara Villa Marcos, Dylan P Williams, Lakshmi Sisodia and Mariam Mahomed- University of Leicester**
15:30-16:00	Break/posters MB0063			

	Horizons in STEM Higher Education Conference: Wednesday 3rd July late afternoon session			
	TEL/Computer Science (JG4007) Chair G. Alsop	**Work based learning (JG4006) Chair R. Micallef**	**Assessment and feedback. (JG4010) G. Forster Wilkins**	**Active learning. (JG4008) Chair J. Denholm-Price**
16:00-16:20	Flexible Approaches to Teaching Programming	Exploring the work-study nexus experience of STEM degree apprentices	Development of an automated feedback and assessment platform	An active learning approach to statistics
	55 Neil Gordon, Mike Brayshaw, Simon Grey and Mike Cargill- University of Hull	**16 Khristin Fabian, Ella Taylor-Smith, Sally Smith, Debbie Meharg and Alison Varey Edinburgh Napier University**	**33 Craig Evans and Samuel Wilson- University of Leeds**	**15 Chris Brignell-University of Nottingham**
16:20-16:40	Layered online feedback on code quality	Work related learning: The challenges and benefits	Using peer-assessment to help students understand marking criteria	Strategies Promoting Active Learning: Case studies at Institute of Engineering, University of Algarve (Portugal)
	37 Anton Dil- Open University	**36 Claire Cornock, Jess Hargreaves and Ellen Marshall - Sheffield Hallam University**	**38 Tom Wicks and Chris Brignell University of Nottingham**	**24 Paulo Santos, Jaime Aníbal, Eduardo Esteves and Ana Baptista- University of Algarve**
16:40-17:00	withdrawn	Placement in PGT curriculum	Student expectations from on-line feedback: credibility, personalisation and exemplified feedback tools and techniques	A Study on use of Backward Design and Ipython Notebook in educating a CFD course
		50 Miroslav Novak KUL	**46 Suzan Orwell, Stuart Downward, Annie Hughes, Andrea Leiva Ponce De Leon and Aaliyah Jameela KUL**	**21 Mehdi Seddighi and David Allanson- Liverpool JM University**
17:00-17:20	Teaching interaction design teamwork at a distance	Cross-institutional study on placements in life sciences	Problems in the field: Using formative field based-training to improve student outcomes	GoFis(c)her: A Student-designed Card Game in introductory Organic Chemistry
	23 Chris Douce, Daniel Gooch, Simon Holland and Clara Mancini - Open University	**32 Vanessa Armstrong, Luciane V. Mello and Nigel Page KUL, Newcastle University and University of Liverpool**	**18 Laura Grange, Ian Harding, Xiaotong Zhu, Chris Chiorean and Carol Evans- Bangor University**	**58 Dylan Williams, Richard Blackburn, Georgia Battersby and Corey Beeley University of Leicester**
	Conference Photograph in JG Courtyard			
17:40-18:00	**Organising Committee Meeting**			
19:30	**Conference Dinner at Ravens Ait (Drinks from 7pm)**			

	Horizons in STEM Higher Education Registration Thursday 4th July			
	Technology Enhanced Learning Sponsored by Wolfram (JG 4010) Chair B. Thatti	**Graduate attributes and skills (JG4006) Chair N. Freestone**	**Equality Diversity and Inclusion (JG 4007) Chair D. Butler**	**Active learning: Audience participation Sponsored by Turning Technologies (JG 3001) Chair M. McManus**
09:20-9:40	The Role of Interactive Web Broadcasts to Develop Online Learning Communities in STEM	Learning to be a scientist: students' views of experimental summer placements at the University of Leicester	Come on in to our research labs; promoting interactions of early-year undergraduates with researchers to gain insights into the research community of practice	Adapting tutorial teaching to larger group sizes - Alternative formats and the use of e-learning software
	39 Venetia Brown, Trevor Collins and Nicholas Braithwaite Open University	**22 Catherine Vial, Caroline Smith and Nicola Suter-Giorgini- University of Leicester**	**19 Cristina De Matteis, Snow Stolnik, Giuseppe Mantovani, Cristina Tufarelli, Xiaoyin Yang and Sharon North University of Nottingham**	**56 Volko Straub, University of Leicester**
9;40-100	LIVE demonstration! Wolfram technology for STEM teaching	Withdrawn	How does a vocational qualification (BTEC) prepare students for a degree in Biomedical Sciences?	Staff and student perceptions of clickers from three years of faculty-wide deployment
	M. Braithwaite - Wolfram		**63 Elizabeth Hurrell, Emma Shawcross and Edward Keeling- University of Central Lancashire**	**25 James Denholm-Price and Suzan Orwell, Kingston University**
10:00-11:00	Withdrawn	Embedding Critical Thinking Skills in the Scientific Curricula. How Good Are We? WS	What does an inclusive timetable look like in STEM? WS	Question-Driven Instruction: a demo, good practice discussions, and hands-on questioning of fellow attendees! (WS)
		41 Francesca Arrigoni, Ricarda Micallef and Hilary Wason- KUL	**42 Nigel Page, Gary Forster-Wilkins, Annie Hughes and Mark Bonetzky- KUL**	**28 David Hodge, Nottingham University**
11:00-11:30	**Break (MB0063)**			

		Horizons in STEM Higher Education Registration Thursday 4th July		
	Pedagogy (JG4010) Chair E. Pfluegel	**Embedding Skills (JG4006) Chair C. De Matteis**	**EDI: Outreach. (MB0062) Chair B. Thatti**	**Professional practice (JG4008) Chair M. Carew**
11:30-11:50	A Quantitative Approach to Problem-based Learning: a model for measuring student learning outcomes (a Kingston case study)	Exploring self-assessment in university students	STEM outreach at KU	Pedagogy Through Civic Engagement: Three Case Studies from Geography
	4 Siva Muppala and Balasubramanyam Chandramohan -KUL	**51 Hilda Mulrooney KUL**	**69 Lucy Jones**	**45 Mary Kelly, Debbie Humphry, Pete Garside, Sonia Kumari and Harry Hodges- KUL**
11:50-12:50	False assumptions about students' knowledge in Numeracy/Mathematics WS	Interdisciplinary approaches to learning and teaching in STEM are necessary to develop the graduate attributes required by students, employers and society. WS	Robotics:	How should teaching observation schemes adapt to meet students' demands of what high quality teaching is expected to be in the STEM subjects? WS
	54 Lovkush Agarwal University of Leicester	**52 Hilda Mulrooney and Alison Kelly KUL**	**57 Robert Rayner and Kristina Kerwin KUL**	**29 Penny Burden and Nigel Page-KUL**
12:50-13:50	**Lunch (MB0063)**			
13:50-14:50	**Plenary: "reimagining assessment in Higher Education" Dr Sam Pugh NTF Clattern Lecture Theatre**			
14:50-15:00	**Briefing on submission to conference proceedings & Closing Remarks -**			