16th European Conference on Games Based Learning
ECGBL 2022
6-7 October 2022
Lusófona University, Campo Grande 376, 1749-024 Lisbon, Portugal
Conference runs to UK timings (GMT+1)

Wednesday 5 October 2022

18:00-19:00 Pre-conference Registration and Drinks Reception
Radisson Blu Hotel Lisbon, Av. Mal. Craveiro Lopes 390, Portugal

Thursday 6 October 2022

08:30 Registration at Lusófona University and Room 1 opens

09:00 Auditorium and Zoom Room 1
Welcome and Opening of the Conference

09:15 Keynote presentation: Petros Lameras, Coventry University, UK
Designing Serious Games through Research: A Relational Perspective

10:00 Conference splits into Separate Physical and Virtual streams

	Room A2.2 Stream A - Cybersecurity and Mathematics Chair : Micaela Fonseca PHYSICAL	Room A2.3 Stream B: Board Games and Lego Chair: Nashwa Ismail PHYSICAL	Room A2.4 Stream C - Literacy with Game Based Learning Chair: Thorkild Hanghøj PHYSICAL	Auditorium and Zoom Room 3 PhD Colloquium Chair: Conceição Costa PHYSICAL & VIRTUAL
10:20	Designing a Game to Promote Equity in Cybersecurity Anthony **Pellicone**, Diane **Ketelhut**, Ekta **Shokeen**, David **Weintrop,** Michel **Cukier** and Jandelyn Dawn **Plane**, University of Maryland, USA (P)	The Project Win Game™: A Serious Game for Project Management Simulation Gloria J. **Miller** and Victoria Vaca Núñez, Maxmetrics GmbH, Germany (P)	Automatic Calibration for a Mutual Insurance System in a Multi-Player Serious Game Mauro **Scanagatta** and Annapaola **Marconi**, Fondazione Bruno Kessler, Italy (P)	Climate Adaptation as an Economic Challenge: Finding Business Strategies by Game-based Learning Sophie **Fischer** University of Applied Sciences Würzburg-Schweinfurt (FHWS), Germany (P)
10:40	Using Game-based Learning Methods to Demystify Cyber Security Concepts for Adult Learners Chitra **Balakrishna** and Patricia **Charlton** Open University, Milton Keynes, UK	Is a Board Game Suitable for Teaching Complex Natural Systems? Yes Maris **Morel**, Triinu **Jesmin** and Jaanus **Terasmaa**, Tallinna Ülikool, Tallinn, Estonia (P)	Literacy Educators' Attitudes on Video Games and Learning Sam von **Gillern** and Hillary **Gould**, University of Missouri, Columbia, Brady **Nash**, Miami University and Carolyn	The Contribution of Game-based learning: Children with Autism Spectrum Disorder and Dyscalculia Vera **Pradiante**, Lusófona University/CICANT, Lisbon, Portugal (P)
11:00	From Graz to Lisbon: How far has the Creative Connections Learning Game Travelled and What has been its Impact? James **Leinster** and Michael **Coffey**, Nottingham Trent	Understanding the Elements of Challenge and Skills in Educational Games Madhuri **Sasupilli** and Prasad **Bokil**, Indian Institute of Technology, Bombay, India (P)	A Systematic Review of Video Game Research in Literacy Journals Sam **von Gillern** and Hillary **Gould**, University of Missouri, Columbia, USA (Presentation Only) (P)	Pedagogical Foundation to Promote Students' Engagement and Creativity While Co-creating a Music Learning Game Astrid Patricia Marin **Jimenez** and Francis **Dube**, University Laval, Canada (P)
11:20	Seven Spells and Peer Tutoring: a Collaborative Mathematics Game Experience André **Almo**, Mariana **Rocha** and Pierpaolo **Dondio**, Technological University Dublin, Attracta **Brennan**, National University of Ireland Galway (P)	A Custom-Made Board Game to Familiarise Primary School Children With Atoms Michael **Dumin** and Ilse **Smets**, KU Leuven, Belgium, Daniel **Cermak-Sassenrath**, IT University Copenhagen, Denmark, Carole **Haeusler**, University of Southern Queensland, Australia (P)	Inclusive AR-games for Education of Deaf Children - Challenges and Opportunities Thomas **Westin**, Stockholm University, Stockholm, José **Neves** and Carla **Sousa**, Lusofona University, Portugal, Peter **Mozelius**, Mid Sweden University, Sweden and Lara **Mantovan**, Ca' Foscari University of Venice, Italy (P)	Wealth Creation: Serious Game Development to Improve Financial Literacy for High School Students Kittiphan **Wiboonsin** and Wandee **Kasemsukpipat**, Kasetsart University, Thailand (P)
11:40	Using Mathematics Game-based Intervention on Children with Special Educational Needs: Preliminary Findings Lilia **Marcelino**, Conceição **Costa** and Carlos **Santos**, ISEL-IPL & CEMAPRE-University of Lisbon (P)	Dark Pattern: A Serious Game for Learning About the Dangers of Sharing Data Ingvar **Tjostheim**, Norwegian Computing Center, Oslo, Vanessa **Ayres-Pereira**, UiO, Norway, Angela **Manna** Chris **Wales**, University of Bergen, and Simon **Egenfeldt-Nielsen**, Serious Games Interactive, Denmark (P)	Investigating Social Media Potential for Supporting Teachers´ Digital Games Literacy Melinda **Mathe**, Harko **Verhagen** and Mats **Wiklund** Stockholm University, Sweden (P)	Modeling core Personality Traits Behaviors in a Serious Gamified Escape Room Environment Georgios **Liapis**, Katerina **Zacharia** and Ioannis **Vlahavas**, Aristotle University of Thessaloniki, Greece (V)
12:00	A Digital Learning Gaming for Mathematics that Leads to Better Learning Outcomes for Female Students: Further Evidence Bruce **McLaren**, Huy **Nguyen**, Michael **Mogessie**, Carnegie Mellon University, Pittsburgh, Elizabeth **Richey**, University of Pittsburgh, USA (P)	Training team Creativity with Lego Serious Play: Upside and Downside of team Diversity Frans **Stel** and Peter **Van den Berg**, University of Twente, Netherlands (P)	Pre-service Teachers' Player Types and Their Relation to Self-efficacy With Digital Media Nathalie **Barz**, Pauline **Arndt**, Laura **Dörrenbächer-Ulrich**, Manuela **Benick** and Franziska **Perels**, Saarland University, Saarbrücken, Germany (P)	NanoDoc: Designing an adaptive serious game for programming with working examples support Pavlos **Toukiloglou** and Stelios **Xinogalos**, University of Macedonia, Greece (V)
12:20	*Lunch Break*	*Lunch Break*	*Lunch Break*	*Lunch Break*

	Room: A2.2 **Stream A - Mini Track on Games Promoting Critical Thinking, Scientific Communication and Literacy in STEM** **Chair : Lars Elbæk**	Room: A2.3 **Stream B: Teaching, Learning and Design** **Chair: Frans Stel**	Room: A2.4 & Zoom Room 4 **International Educational Games Competition** **Finished Games** **Judges: Ton Spil and Guido Bruinsma**	Room: A2.5 & Zoom Room 3 **International Educational Games Competition** **Games in Development** **Judges: Rajiv Basaiawmoit and Nuno Fachada**	Room: A2.8 & Zoom Room 5 **International Educational Games Competition** **Student Games** **Judges: Luuk Collou and Benadette Spieler**
13:20	Missions with Monty: A Game-Based Learning Environment to Promote Comprehension Monitoring and Science Achievement Rayne **Sperling**, Taylor **Young** Pennsylvania State University, John **Nietfeld**, Samira **Syal**, North Carolina State University, Raleigh, USA (P)	Games for Teaching and Learning History: A Systematic Literature Review Jorge **Oceja** and David **Abián**, Universidad de Cantabria, Spain and Marina Torres **Trimállez**, Katholieke Universiteit Leuven, Belgium (P)			
13:40	A Game-based Approach for Open Data in Education: A Systematic Mapping Review Alejandra Celis **Vargas** and Rikke **Magnussen**, Aalborg University, Denmark (P)	Game-based Education Promotes Sustainable Water Use Roberto **Di Paolo**, Ennio **Bilancini**, IMT School for Advanced Studies Lucca and Leonardo **Boncinelli**, University of Florence, Italy (Presentation Only) (P)			
14:00	Treasure Hunt as a Method of Learning Mathematics Vedrana Mikulić **Crnković**, Ivona **Traunkar** and Bojan **Crnković**, University of Rijeka, Croatia (P)	Why are you Making us Play this Scary Game? Ingrid Elise **Hamm**, Nordahl Grieg Upper Secondary School, Bergen, Norway (Presentation Only) (P)			
14:20	Cultural and Philosophical Understandings of GBL in STEM Subjects Julio **Garay**, University of New York, USA (Presentation Only) (P)	Player Perceptions of Informal Learning in Non-educational Games Tanja **Välisalo**, Jukka **Vahlo** and Kai **Tuuri**, University of Jyvaskyla, Finland (P)	*Please see separate programme*		
14:40	Gamification for the Development of Competencies in Tec21 Based on Mixed Reality Claudia Lizbeth Salas **Rivas**, Hugo Kenji Fukumura **Perez**, Luis Javier Morales **Rivas** and Carlos Alberto González **Almaguer**, Tecnológico de Monterrey, México (P)	The Challenges of Designing Learning Games: Interviewing Professional Learning game Designers Thorkild **Hanghøj** and Stine **Ejsing-Duun** Aalborg University, Copenhagen, Denmark, Sara **Hajslund**, Serious Games Interactive, Denmark (P)			
15:00	Narrative Games in BioAnalytic Forensics Michael **Cosgrave**, Eric **Moore** and Athene **Storey-Cosgrave**, University College Cork, Ireland (P)	Learning music through play: a pedagogical approach to foster learners' creativity' Francis **Dubé** and Astrid Patricia Marin **Jimenez**, Université Laval, Canada (Presentation Only) (P)			
15:20	*Break*	*Break*	*Break*	*Break*	*Break*
	Room: A2.2 **Stream A - GBL Issues** **Chair : Chitra Balakrishna**	Room: A2.3 **Stream B: Mini track on Educational Escape Rooms** **Chair Panagiotis Fotaris**	Room: A2.4 and Zoom Room 4 **International Educational Games Competition** **Finished Games** **Judges: Ton Spil and Guido Bruinsma**	Room: A2.5 and Zoom Room 3 **International Educational Games Competition** **Games in Development** **Judges: Rajiv Basaiawmoit and Nuno Fachada**	Room: A2.8 and Zoom Room 5 **International Educational Games Competition** **Student Games** **Judges: Luuk Collou and Benadette Spieler**
15:40	How to Welcome First-year Students: Best Practice of a Gamified Orientation Day Lize **Vanderstraeten**, Fanny **Buysschaert**, Viktor **De Mulder**, Delphine **François**, Laure **Janssens**, Ann **Maes**, Grégory **Maes**, Elke **Minnaert** and Evelien **Opdecam** Ghent University, Belgium (P)	Conquer Business Administration: An escape Room Concept for Volatile Times Sandra **Mühlböck**, FH OÖ Studienbetriebs GmbH, Wels, Austria (Presentation Only) (P)			
16:00	Developing an Evaluation Framework for Analysing Educational Simulation Games Souad **Slyman**, University of Roehampton, Marco **Gillies** and Vally **Lytra**, Goldsmiths, University of London, UK (P)	Let's Jazz: A Case Study on Teaching Music with Educational Escape Rooms Masiar **Babazadeh**, Luca **Botturi** and Giacomo **Reggiani**, SUPSI, Switzerland (P)			
16:20	Exploring the Combination of Point-of-view and Tenses in Movement-based Design Processes Søren **Lekbo** and Lars **Elbæk**, University of Southern Denmark, Denmark (P)	Digital Escape Games in Educational Programs for Financial Literacy Matteo **Bisanti**, Roberto **Di Paolo,** Sebastiano **Accardi,** Emiliano **Ricciardi,** Ennio **Bilancini** and Veronica **Pizziol**, IMT School for Advanced Studies Lucca, Francesca **Maggi**, Giovanna **Paladino** Intesa Sanpaolo, Turin, Italy (P)	*Please see separate programme*		
16:40	Climate4Kids: A Gamified App Teaching about Climate Change Sonja **Gabriel**, KPH Vienna/Krems and Bernhard **Schmölzer**, PH Kärnten, Austria (P/V)	Room2Educ8: A Conceptual Framework for Designing Educational Escape Rooms Panagiotis **Fotaris**, University of Brighton, UK and Theodoros **Mastoras**, University of Macedonia, Greece (P)			
17:00	Systems Mapping to Support Interdisciplinary Understanding in Serious Game Design Lorena **Müller**, Ulrike **Spierling**, , Angela **Merkle** and Regina-Maria **Dackweiler**, Hochschule RheinMain, Germany (P/V)	Adapting Educational Activities to Individual Students' Needs Through an Educational Escape Rooms Customization Diana **Sousa**, António **Coelho**, Manuel Firmino **Torres** and Ana Rita **Garcia**, FEUP/INESC TEC, Portugal (P)			
17:20	*Close of Conference Day*	*Close of Conference Day*	*Close of Conference Day*	*Close of Conference Day*	*Close of Conference Day*
19:30	**Conference Dinner - Casa do Alentejo (Portas de Santo Antão Street, 58 1150-268 Lisbon)**				

	Friday 7 October 2022		
09:00	**Auditorium and Zoom Room 1** **Opening Messages**		
09:05	**Keynote Address: Patrícia Gouveia, Lisbon University Fine Arts Faculty - ITI/LARSyS * FBAUL, Portugal** **Eco-Gaming: How Feminism and Play are Key to Changing the World**		
09:50	*Introduction to ECGBL 2023*		
10:00	**Refreshments, poster presentations and presentation of games to participants in Lisbon** **Break for Virtual Participants**		
11:00	**Conference splits into streams**		
	Room: A2.2 **Stream A - Simulation** **Chair: Mauro Scanagatta**	**Room: A2.3** **Stream B: Gamification** **Chair: Tone Vold**	**Room: A2.4** **Stream C - Mini Track on GBL to Support Well-being and Physical and Mental Health** **Chair: Carla Sousa**
11:10	Evaluation of Empirically Collected Feedback from a Simulation Game for Digitalised Production Ozan **Yesilyurt**, Henry **Himmelstoß** and Andreas **Bildstein**, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany (P)	Designing a Mobile Game for Introducing Learners to a Soap Making process Jessica Dominguez **Alfaro**, Serkan **Solmaz**, KU Leuven, Belgium, Chioma **Udeozor**, Newcastle University, Newcastle upon Tyne, UK and Daniel **Cermak-Sassenrath**, IT University, Denmark (P)	Playing with Play Moods in Movement-based Design Rasmus Vestergaard **Andersen** and Lars **Elbaek**, University of Southern Denmark, Denmark (P)
11:30	Playing for Privacy Awareness: Learning from a "Wow-Moment" with iBuddy Felipe **Cardoso**, Davide **Andreoletti**, Alessandro **Ferrari**, Silvia **Giordano**, DTI, Scuola universitaria professionale della Svizzera italiana, Lugano, Luca **Botturi**, Tiffany **Fioroni**, Chiara **Beretta**, DFA, Scuola universitaria professionale della Svizzera italiana, Locarno, Anna **Picco-Schwendener**, Suzanna **Marazza**, Università della Svizzera italiana, Lugano, Switzerland (P)	Is it Worth it? Possibilities of Interactive Gamification Platforms Within a Learning Setting Zaryab **Chaudhry**, Larissa **Barth** and Sophie **Foster**, Bauhaus Universität, Weimar, Germany (Presentation Only) (P)	Structuring Movement-based Creativity in Designing for Sport and Physical Activity Lars **Elbæk**, Søren **Lekbo** and Rasmus Vestergaard **Andersen**, University of Southern Denmark, Denmark (P)
11:50	Marie's ChemLab: A Mobile Augmented Reality Game to Teach Basic Chemistry to Children Michaela **Arztmann** and Johan **Jeuring**, Utrecht University, Netherlands, Jessica Lizeth **Domínguez Alfaro**, Peter **van Puyvelde**, KU Leuven, Belgium, Jonas **Blattgerste**, University of Applied Sciences Emden/Leer, Germany (P)	Diversifying the Uses of Games to Engage Young Musicians in their Learning Francis **Dubé** and Astrid Patricia Marin **Jimenez**, Université Laval, Canada (Presentation Only) (P)	Recent Developments Regarding Exergames and Individuals with Disabilities Charikleia **Patsi** and Christina **Evaggelinou**, Aristotle University of Thessaloniki, Greece (P)
12:10	Game-Based Learning to Engage Students with Applied Statistics Using a Simulation Role-Play Game Souad **Slyman**, University of Roehampton, London, UK (Presentation Only) (P)	Pure Gamification: An Energy Case Ton **Spil**, Laura van der **Neut** and Robby van **Delden**, University of **Twente**, Netherlands	Students' Experience in learning Sex Education Through Digital Games-Based Learning in Thai Secondary Schools Nashwa **Ismail**, Durham University, UK On-Anong **Thammajinda** and Chaeye **Kanyapat**, Payap Univeristy, Thailand (P)
12:30	*Lunch Break*	*Lunch Break*	*Lunch Break*
	Room: A2.2 **Stream A - Business games** **Chair:**	**Room: A2.3** **Stream B: Machine Learning, AR & STEM** **Chair: Michael Cosgrave**	
13:30	Design Considerations for a Serious Game on using HR to Shape Employee Behavior for the Digital Transformation Luuk **Collou**, University of Applied Sciences, Enschede and Guido **Bruinsma**, University Twente, Enschede, The Netherlands (P)	Can We Detect Non-playable Characters' Personalities Using Machine and Deep Learning Approaches? Jérôme **Hernandez**, Mathieu **Muratet** and Thibault **Carron**, Sorbonne Université, Matthis Pierotti, Origamix-RH, Paris, France (P)	
13:50	Gameful Experience in Short: A Short Scale for Business Simulation Games Angelika **Lau**, University of Duisburg-Essen, Duisburg, Germany (Presentation Only) (P)	ARtales: AR mobile application using transformative learning through aesthetic experience: First Evaluation Sissy **Barakari**, Ionian University, Athens, Greece and Aristotelis **Skamagkis**, AKTO Art & Design College, Greece (P)	
14:10	Unlock Financial Knowledge in Managers Through Games Jéssica **Reuter**, Marta **Ferreira Dias**, Universidade de Aveiro, Portugal, Maria Jose **Sousa**, Instituto Universitário de Lisboa, Portugal and Ryad **Soobhany**, Amjed **Hendi** Heriot-Watt University, UAE (P)	Digital Games in Schools: A Qualitative Study on Teacher's Beliefs Benadette **Spieler** and Adrian **Degonda**, Zurich University of Teacher Education, Switzerland (P)	
14:30	*Auditorium and Zoom Room 1* *Top games of The 10th International Educational Games Competition present their games to the participants*		
15:00	*Winners of The 10th International Educational Games Competition, Best Poster and PhD Paper are Awarded*		
15:15	**Summary and Close of the Conference**		

Posters will be Presented at the Coffee Break at 10:00 on Friday **A prize will be awarded to the conference participants' favourite poster**	
Posters with a WIP Paper	
The Design of a Gamified App for Supporting Undergraduates' Resilience Iolie **Nicolaidou** and Loizos **Aristeidis**, Cyprus University of Technology, Cyprus (WIP) (P)	War Game as a Method of Training - As a Method of Analysis Ondřej **Pekař**, Ladislav **Potužák**, Vlastimil **Šlouf** and Tomáš **Havlík**, University of Defence, Czech republic (WIP) (P)
Wargaming Simulator MASA SWORD for Training and Education of Czech Army Officers Tomáš **Havlík**, Martin **Blaha**, Ladislav **Potužák** and Ondřej **Pekař**, University of Defence, Czech republic (P)	
Posters only	
The Effect of Digital Game-based Learning on Different Learning Outcomes: A Meta-analysis Nathalie **Barz**, Laura **Dörrenbächer-Ulrich**, Manuela **Benick** and Franziska **Perels**, Saarland University, Germany (Poster Only) (P)	From In-person to In-game: Turning Informal Learning Experiences into Game-based Learning Anthony **Pellicone**, Diane **Ketelhut**, Jandelyn **Plane** and Michel **Cukier**, University of Maryland, USA (Poster Only) (P)
Playtesting in the Classroom: A Case Study on Combining UX Principles with Ethnographic Video Research Methods Matilda **Ståhl** and Joachim **Majors**, Experience Lab, Åbo Akademi University, Finland (Poster Only) (P)	Teacher Views on Game Jamming in General Formal Education Riikka **Aurava**, Tampere University, Finland (Poster Only) (P)
eSports: The new "white boys" Club? Problematizing the Norms Limiting Diversity and Inclusion in an Educational Gaming Context Fredrik **Rusk** and Matilda **Ståhl**, Åbo Akademi University, Finland (Poster Only) (P)	Assessment of Mathematical Subcompetences of CBC/ABN Students Through Educational Gamification José Carlos **Piñero Charlo**, Rocío Noriega **Bustelo**, María del Carmen **Canto Lopez** and José Ignacio Navarro **Guzmán**, University of Cadiz, Spain (Poster Only) (P)
Using an Outdoor Quiz Game to Support Student Socialization and Learning Tone **Vold**, Inland Norway University of Applied Sciences, Rena, Norge (poster only) (P)	Learning Energy Efficient Games Development with Award Winning Energy Efficient Assembly Code Philip **Bourke**, South East Technology University, Carlow, Ireland (P)