IEEE LWMOOCS 2023

October 11–13, 2023 || MIT, Cambridge, MA

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LWMOOCS 2023
CONFERENCE PROCEEDINGS

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2023 IEEE Learning with MOOCs (LWMOOCS) Proceedings

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Welcome Message

We would like to welcome you to MIT in Cambridge, MA for the 9th annual Learning with MOOCs Conference! Learning with MOOCs had its start at MIT in 2014 as a venue for members of both industry and academia to come together to share thoughts, ideas, research, and experiences about the then-nascent field of MOOCs. So much has changed in the field of open online courses since that first conference, yet LWMOOCs remains a space where those with a commitment to accessible online education can come together to learn from each other and explore the future of the field.

This year's conference will focus on three essential themes which will be reflected in panel discussions throughout the conference. The first, "Increasing Access" will consider how we can best use open online courses and resources to increase educational access. Open online courses have not yet reached their full potential in increasing educational access for the vast majority of learners across the globe. We will consider how open online courses can best interface with current and emerging educational models to successfully decrease this educational opportunity gap with data-driven or new approaches.

Next, we will turn our attention to the role that open online courses can play in addressing the climate crisis faced by our world today. Our "Impacting Sustainability Education" discussion will address the role that open online initiatives can play in supporting sustainability initiatives and making meaningful, scalable impacts on our climate and our planet.

Finally, we will take a step back to consider the future of MOOCs and the MOOC community, especially within the context of recent advances in generative AI technology. Together, panelists and the LWMOOCs community will reflect on the future of our community and its evolving relationship with industry partners, higher ed, and K-12 education. The role of open online courses in both formal and informal education continues to evolve, and together we aim to identify approaches our community can take to maximize our impact.

We are excited to host educators, industry professionals, academic researchers, and sponsors from around the globe for three days of workshops, invited talks, posters, panels, and paper presentations. In particular, we'd like to thank our invited speakers, including Dr. Stephanie Blackmon, Associate Professor William & Mary School of Education, for her keynote address; Venkat Srinivasan, Gyan Founder & Chair, for his industry keynote, Coursera CEO Jeff Maggioncalda, 2U Chief Platform Officer Anant Agarwal, and Class Central CEO Dhawal Shah for their fireside chats, and Carlos Delgado Kloos, Norman Bier, and Kelvin Bentley for their featured talks. We would also like to give special thanks to our Platinum Patron Gyan, our Gold Patrons Rapidmooc, Axim Collaborative, and JoVE, and our Media Patron Class Central for all of their support. We also have to recognize IEEE and IEEE Education Society for including this conference as one of their 5 education conferences. Finally, we have to highlight the support of the MIT

community including the Digital Learning Lab and MIT Open Learning to make all aspects of this conference possible.

We would like to give our heartfelt thanks to all of the panelists, presenters, and participants at LWMOOCs. We anticipate three days of discussion, learning, and exchange that simply would not be possible without all of your contributions.

Welcome to Massachusetts, and enjoy the conference!

Jessica Sandland
LWMOOCS 2023 Co-Chair
MIT, USA

Mary Ellen Wiltrout
LWMOOCS 2023 Co-Chair
MIT, USA

LWMOOCS 2023 Committees

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Alexander Shvonski (MIT, USA)

Pedro Muñoz -Merino (Univ Carlos III de Madrid, Spain)

General Information

Registration Hours

Wednesday, October 11   11:00 – 18:00
Thursday, October 12   8:00 – 16:00
Friday, October 13   8:30 – 14:00

MIT Campus Map & Conference Venues
Online MIT Campus Map available here: https://whereis.mit.edu/?selection=11&zoom=17

Wednesday, October 11th
Walker Memorial
142 Memorial Dr, Cambridge, MA 02139
(Building 50 on Campus Map)

Thursday and Friday, October 12th & 13th
Samberg Conference Center, 6th Floor
50 Memorial Dr, Cambridge, MA 02142
(Morris & Sophie Chang Building E52 on Campus Map)

Social Activities

MIT Campus Tours

Wednesday, October 11th
Location: Walker Memorial , MIT Campus
11:00 & 13:00

John Harrold will lead an engaging and informative 1-hour tour of the historic MIT Campus. Tour Groups will meet at the registration desk in Walker Memorial, with groups leaving at 11:10 and 13:00.

Welcome Reception

Wednesday, October 11th
Location: Walker Memorial
15:00 – 17:30

Welcome to the 9th Annual Learning with Massive Open Online Courses (LWMOOCS 2023)! The 2023 Organizing Committee invites attendees to join us for an entertaining and informative evening of networking, poster sessions, and demos to kick off the start of this year's conference! Light hors d'oeuvres and drinks will be served. Conference registration and badge are required.

2023 Patrons & Collaborators

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Workshops

Wednesday, October 11
13:00 – 15:00
Those wishing to attend will first need to meet by the registration table in Walker Memorial. At 12:45 the group will walk together to the different Workshop locations.

Generative AI for Boosting MOOC Production: Tools, Opportunities, and Challenges
Ignacio Despujol Zabala (Valencia University, Spain), Rocael Hernández Rizzardini and Miguel Morales-Chan (Galileo University, Guatemala)
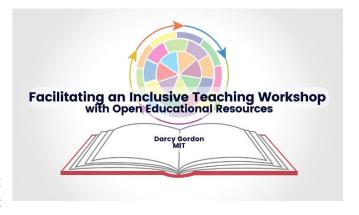

This workshop will explore the main topics, commencing with a comprehensive overview of Generative AI within the context of MOOCs, followed by an examination of advanced content generation tools and efficiency optimization strategies in MOOC production. Some academic integrity considerations surrounding Generative AI implementation and its implications are addressed, as are methodologies to foster student engagement. Furthermore, attendees will be given the opportunity to delve into innovative applications of Generative AI in assessment and feedback, thereby unlocking the potential for personalized learning experiences.

Facilitating an Inclusive Teaching Workshop with Open Educational Resources
Darcy Gordon (MIT, USA)

Training instructional staff in inclusive teaching practices offers meaningful change in higher education. Thus, we developed a blended workshop on Inclusive Teaching, combining the benefits of asynchronous computer-assisted learning through Open edX and synchronous in-person discussion. In this workshop, participants will explore the online module and learn more about using this open educational resource to host training at their institutions.

Discussion Panels

Thursday, October 12th
10:00 – 10:45
Location: Samberg Conference Center - Building E52

Increasing Access
With a plethora of open online courses and resources for learning, how do we reach more learners, especially those facing an opportunity gap? Hear the latest on increasing access efforts from these passionate representatives from Carnegie Mellon University, 2U, Coursera, Southern New Hampshire University, and Axim Collaborative.

Norman Bier will lead this discussion to highlight current initiatives from these different organizations, insights on what is working, and the challenges of tackling the barriers to access.

Kathy Pugh
2U,
USA

Ed Zarecor
Axim Collaborative,
USA

Alice Wong
Coursera,
USA

Anat Eshed
SNHU,
USA

Norman Bier
Carnegie Mellon University,
USA

Friday, October 13th
10:00 – 10:45
Location: Samberg Conference Center - Building E52

Impacting Sustainability Education
Universities are focusing on sustainability initiatives more today than ever before. Can open online initiatives play a crucial role in making a scalable change? Gain perspective on how open, online courses impact sustainability education with these fanatic representatives from Harvard University, Northeastern University, and TU Delft, as well as an MITx MOOC learner.

Colin Fredricks will facilitate a discussion to answer questions on how universities address these topics in their open online courses, how they reach those outside of campus, and what learners do with the skills they gain from these educational resources.

Willem van Valkenburg

Delft University,
The Netherlands

Alpha Arsano

Northeastern University,
USA

Nina Gal
Industrial Economics
Incorporated,
USA

Colin Fredericks
Harvard University,
USA

Friday, October 13th
16:30 – 17:15
Location: Samberg Conference Center - Building E52

The Future of the MOOC Community: AI's Role in Crafting Next-Generation MOOCs
Carlos Delgado Kloos will moderate a discussion between panelists and the audience to reflect on the future of the MOOC community and its evolving relationship with industry partners, higher ed, and K-12 as we close out this year's conference.

Carlos Delgado Kloos
UC3M,
Spain

David Joyner
Georgia Tech,
USA

Carina González
University of La Laguna,
Spain

Ana Bell
MIT,
USA

Keynote Speaker

Thursday, October 12ᵗʰ
9:15 – 10:00
Location: Samberg Conference Center - Building E52

Strategies and Opportunities for Implementing MOOCS
Dr. Stephanie J. Blackmon (William & Mary School of Education, USA)

Dr. Stephanie J. Blackmon is an Associate Professor of Higher Education at the William & Mary School of Education. Her early research focuses on teaching and learning, emphasizing technology integration in higher education. She has conducted several studies and written numerous papers about topics such as virtual worlds, instructors' and students' experiences with learning management systems, and massive open online courses (MOOCs). In addition to developing and teaching her own MOOCs, Dr. Blackmon also co-created and delivered a cMOOC with several colleagues from across Virginia as a part of a collaborative effort between the Association of American Colleges & Universities (AAC&U) and the State Council of Higher Education for Virginia (SCHEV). Most recently, she co-authored an article about MOOC learners, which appears in Computers & Education. Dr. Blackmon also co-authored an edited book on MOOCS titled *MOOCs and Higher Education: Implications for Institutional Research*. Dr. Blackmon has expanded her work to include a focus on the broader applications of technology integration because of their impact on higher education. Her research explores the qualitative experiences people have with the following: technology integration in higher education and professional development settings; experiential learning in technology-related settings; trust and privacy in learning and data analytics use; and trust, privacy, and security with the use of apps and also with internet-connected devices such as wearable, mobile, and in-home technologies. Dr. Blackmon has also co-developed a framework for interdisciplinary learning analytics use; she was the lead PI for a multidisciplinary grant that focused on the experiences people with disabilities have with trust and internet-connected devices, and she was the lead PI for an interdisciplinary grant that focused on experiential learning and technological development. She is currently a co-PI on a grant for artificial intelligence (AI), trust, and human interaction. Dr. Blackmon's work aims to move research to practice, particularly regarding ethical technology use and development.

Industry Keynote

Thursday, October 12th
11:15 – 11:30
Location: Samberg Conference Center - Building E52

Overcoming the Challenges of AI in Higher Ed
Venkat Srinivasan (Gyan, USA)

Venkat Srinivasan is a serial entrepreneur and investor with deep expertise in AI and computational algorithms to the firm, especially natural language understanding, combined with deep functional knowledge in multiple domains including operations research, finance and accounting. He has founded several successful AI-led startups, including eCredit, Corporate Fundamentals and Rage Frameworks. Venkat founded EnglishHelper to address literacy gaps with AI. EnglishHelper has achieved significant scale with 30m users and rigorously demonstrated impact through an independent RCT study. In 2018, Venkat founded Gyan, which is the only explainable language model today with none of the limitations of LLMs. Venkat has also founded Creda Health (Digital Health Assistant for continuum of care) and PrismX (natural language driven automated software development). Venkat was honored with a Lifetime Achievement Award by The Indus Entrepreneurs [TiE] in 2017 (http://bit.ly/2j5ElGG). He holds 9 patents, has published over 30 research papers in peer-reviewed journals, co-edited two books and is the author of The Intelligent Enterprise in the Era of Big Data (Wiley, 2017). Venkat has strongly advocated for and believes that successful AI-led transformation will be characterized by interpretability, traceability, context awareness and the ability to learn from sparse data environments. Venkat serves on the boards of the New Profit, American India Foundation and Safe Water Network.

Featured Speakers

Thursday, October 12th
14:00 – 14:30
Location: Samberg Conference Center - Building E52

Fireside Chat with Jeff Maggioncalda (Coursera, USA)
Moderated by Dhawal Shah (Class Central, USA)

Jeff Maggioncalda joined Coursera as CEO in June 2017 and has helped the company grow to over 100 million learners and 7,000+ institutions, served by high-quality learning content from 300+ of the world's top universities and industry educators. He served 18 years as the founding CEO at Financial Engines Inc., a company co-founded by economist and Nobel Prize winner William Sharpe. Financial Engines grew rapidly under Jeff's leadership, providing high-quality online investment advice that has helped millions of people save and prepare for retirement. Jeff has also worked as a consultant at McKinsey & Company and Cornerstone Research and serves as a director of SVB Financial Group. He holds an M.B.A. from the Stanford Graduate School of Business and a Bachelor's degree in Economics and English from Stanford University. In his free time, Jeff is a lifelong learner and proud dad and enjoys studying music theory and spending time with his wife and three daughters.

Dhawal Shah developed a passion for education while pursuing his Computer Science Masters at Georgia Tech. With the rise of free online courses from top universities, he created a one-page website to curate these offerings. This site, called Class Central, has since become the go-to destination for discovering and finding online courses. With a catalog of 150,000+ courses, Class Central has helped 60 million learners select the best online course for their needs.

Featured Speakers, Continued

Friday, October 13ᵗʰ
9:00 – 9:15
Location: Samberg Conference Center - Building E52

MOOCS: Past, Present, and Future
Christopher Capozzola (MIT, USA)

Christopher Capozzola is Professor of History at the Massachusetts Institute of Technology. In his role as Senior Associate Dean for Open Learning, he oversees MIT's open education offerings including OpenCourseWare, MITx, and MicroMasters, as well as the Digital Credentials Consortium, the Digital Learning Lab, Digital Learning in Residential Education, and MIT Video Productions.

Chris is the author of *Uncle Sam Wants You: World War I and the Making of the Modern American Citizen and Bound by War: How the United States and the Philippines Built America's First Pacific Century*, and at MIT teaches courses in political and legal history, war and the military, and the history of international migration. He began his career as a middle school social studies teacher.

Friday, October 13th
14:00 – 14:45
Location: Samberg Conference Center - Building E52

Fireside Chat with Anant Agarwal (CPO 2U & Founder edX, USA)
Moderated by Dhawal Shah (CEO & Founder, Class Central, USA)

Anant Agarwal is the chief platform officer of 2U, founder of edX, and professor of electrical engineering and computer science at MIT.
Since launching edX in 2012, Agarwal has guided the organization's vision to expand access to high-quality education everywhere. Today, he leverages his expertise in building powerful online learning platforms to drive edX's growth as one of the world's most comprehensive free-to-degree online learning marketplaces under parent company 2U. As MIT's first educator to teach an edX course on circuits and electronics, Agarwal drew 155,000 students from 162 countries. He remains a professor of electrical engineering and computer science at MIT today. Previously, he was the director of CSAIL, MIT's Computer Science and Artificial Intelligence Laboratory. Agarwal is a successful serial entrepreneur, having co-founded several companies, including Tilera Corporation, which created the Tile multicore processor, and Virtual Machine Works. He has received multiple accolades over the years for his pursuit of great educational innovation. He won the Maurice Wilkes prize for computer architecture and MIT's Smullin and Jamieson prizes for teaching. He is also the 2016 recipient of the Harold W. McGraw, Jr. Prize for Higher Education, recognizing his work in advancing the MOOC movement. Additionally, Agarwal received the Padma Shri Award from the President of India and was named the Yidan Prize Laureate for Education Development in 2018. A pioneer in computer architecture, Agarwal is a member of the National Academy of Engineering, a fellow of the American Academy of Arts and Sciences, and a fellow of the ACM. Scientific American selected his work on organic computing as one of 10 World-Changing Ideas in 2011, and he was named in Forbes' list of top 15 education innovators in 2012. Agarwal held a Guinness World Record for the largest microphone array, is an author of the textbook "Foundations of Analog and Digital Electronic Circuits." He hacks on WebSim, an online circuits laboratory in his spare time. He holds a Ph.D. from Stanford and a bachelor's from IIT Madras.

Featured Speakers, Continued

Friday, October 13th
16:05 – 16:20
Location: Samberg Conference Center - Building E52

Introduction to The Future of the MOOC Community Panel Discussion
Carlos Delgado Kloos (UC3M, Spain)

Carlos Delgado Kloos received his Ph.D. in Computer Science from the Technische Universität München and Telecommunications Engineering from the Universidad Politécnica de Madrid. He is a Full Professor of Telematics Engineering and Rector's Delegate for Digital Microcredentials at Universidad Carlos III de Madrid, where he is also the Director of the GAST research group and Director of the UNESCO Chair on "Scalable Digital Education for All". He has conducted research stays at several universities such as Harvard, MIT, Munich, and Passau. His main research interests are in Educational Technology. He has been involved in many research projects and has published around 500 articles. He has coordinated several MOOCs, mainly on edX, receiving over 600,000 registrations, and is presently promoting the adoption of digital micro-credentials in Spain through the project CertiDigital (certidigital.es).

Lightning Talks

Thursday, October 12ᵗʰ
14:30 – 14:45
Location: Samberg Conference Center - Building E52

Empowering Tomorrow's Workforce: Harnessing Industry-Recognized Credentials to Enhance the Career Readiness of Undergraduate Students
Kelvin Bentley (University of Texas System, USA)

Kelvin Bentley is the founding program manager of the Texas Credentials for the Future, an initiative within the University of Texas System designed to provide students access to employer-initiated and validated micro-credential programs to gain technical skills they combine with their college degrees to further their ability to be successful in the world of work. Kelvin has over 22 years of experience leading online learning initiatives as an administrator and consultant for two- and four-year colleges, universities, and K-12 and for-profit organizations. Kelvin has received various honors, including Blackboard's 2017 Catalyst Award for Inclusive Education and his selection as a Fulbright Specialist in 2010.

Lightning Talks, Continued

Friday, October 13th
11:00 – 11:15
Location: Samberg Conference Center - Building E52

Lessons from the Digital Learning XPRIZE: improving outcomes while experimenting at scale
Norman Bier (Carnegie Mellon University, USA)

Norman Bier is the Director of the Open Learning Initiative (OLI) at Carnegie Mellon University. His work intersects CMU's internal educational practice, ongoing learning science research, and external collaboration.

Norman has spent his career at the intersection of learning and technology, working to expand access to and improve the quality of education. His experience spans the higher educational sector, including 2-year and 4-year, public and private, domestic and international, and commercial institutions. Before joining OLI, he was Director of Training and Development at iCarnegie Inc., a CMU subsidiary chartered to deliver software development education through international partner institutions. Using technology and faculty support, iCarnegie reaches thousands of students who would otherwise not have access to a CMU-level education. He has taught computer science courses as an adjunct faculty member at the Community College of Allegheny County, philosophy courses at Carnegie Mellon University, and as a founding committee member of the Cook Honors College at Indiana University of Pennsylvania. He is a board member for the Kaleidoscope Project and the Shady Lane School.

2023 Best Paper Nominations

The Technical Program Committee made nominations for the 2023 Best Paper Awards based on all submissions. Now is your chance to vote! Take special note of each of the following talks on Thursday and Friday. After all talks in the list are complete, the organizers will share a link and make an announcement to vote for the 2023 LWMOOCS Best Paper Awards!

Student Engagement in Optional Self-Assessment in a Blended Introductory Physics Course
Presented By: Aidan MacDonagh (MIT, USA)

Increasing the Reusability of MOOCs via Competence-Oriented Development
Presented by: Claudia Steinberger (University of Klagenfurt, Austria)

Incorporating Learner Perspectives into Course Design
Presented By: Meghan Perdue (MIT, USA)

The Influence of Teacher Interactions on General Sentiment Development in Discussion Forums
Presented By: Thomas Staubitz (Hasso Plattner Institute, University of Potsdam, Germany)

Strategies for Designing Cognitively Demanding Assessments Within Math and Physics MOOCs
Presented By: Michelle Tomasik (MIT, USA)

What is a Successful MOOC? Lessons From Global Learner Narratives
Presented By: Nathaniel W Cradit (University of Michigan, USA)

Meta-LAD: Developing a Learning Analytics Dashboard with Theoretically Grounded and Context-Specific Approaches
Presented By: Heeryung Choi (MIT, USA)

Analyzing Social Networks and Learning Content on a Discussion Forum in an Introductory Programming MOOC in Higher Education
Presented By: Alexander Steinmaurer (Graz University of Technology, Austria)

PROGRAM AT A GLANCE

DAY 1: WEDNESDAY, OCTOBER 11
WALKER MEMORIAL – BUILDING 50

Time	Event
11:00 – 17:30	**REGISTRATION OPENS**
13:00 – 15:00	**WORKSHOPS & MIT CAMPUS TOURS** **WORKSHOP: GENERATIVE AI FOR BOOSTING MOOC PRODUCTION: TOOLS, OPPORTUNITIES, AND CHALLENGES** Location: Meet at Walker Memorial – Building 50 at 12:45 **WORKSHOP: FACILITATING AN INCLUSIVE TEACHING WORKSHOP WITH OPEN EDUCATION RESOURCES** Location: Meet at Walker Memorial – Building 50 at 12:45
15:00 – 17:30	**WELCOME RECEPTION, POSTER SESSIONS, EXHIBITORS AND DEMOS**
15:00 – 16:10	**POSTER SESSION 1** 1. Identifying Techniques Used by Teachers to Assess Student Understanding in an Online Teaching Environment: A Focused Group Discussion and Individual Interview Study 2. Advancing Climate Change and Health Learning in Maldives: A MOOC With Augmented Reality Integration 3. edX-LIMS: A Learning Analytics System for Enhancing Teaching-Learning Practices in MOOCs 4. Effects of Hyper-Personalized "Nudge Emails" on Student Participation, Activity, and Completion 5. How to Design a Faculty Development Program Through Coursera: The Case of UNITEC in Honduras 6. Cross-Platform Learning Data Analytics at Scale 7. 'Revolutionizing MOOC Delivery: Addressing High Attrition Rates Through Hub and Spoke Model
16:25 – 17:30	**POSTER SESSION 2** 1. Connecting with MITx: How Educators Are Using Online Courses to Improve Their Teaching 2. Enhancing Engagement and Personal Development Through MOOC Integration in Community Transit Volunteer Online Training Platform 3. Teachers + Tools + Training = Innovation 4. Toward a Science of Adult Learning 5. Platform-to-Platform Conversions 6. Micromasters in Statistics and Data Science 7. Open, interdisciplinary, and collaborative innovation to train in energy sustainability through MOOCs. 8. Resolving Renewable Energy Siting Disputes: A MOOC for the Energy Transition

DAY 2: THURSDAY, OCTOBER 12
SAMBERG CONFERENCE CENTER, 6TH FLOOR

Time	Event
8:00 – 16:00	**REGISTRATION OPEN**
9:00 – 9:15	**WELCOME ADDRESS**
9:15 – 10:00	**KEYNOTE: STRATEGIES AND OPPORTUNITIES FOR IMPLEMENTING MOOCS** Speaker: Dr. Stephanie Blackmon (William & Mary, USA)
10:00 – 10:45	**DISCUSSION PANEL: INCREASING ACCESS**
10:45 – 11:15	**BREAK & EXHIBIT NETWORKING**
11:15 – 11:35	**INDUSTRY KEYNOTE: OVERCOMING THE CHALLENGES OF AI IN HIGHER ED** Speaker: Venkat Srinivasan (Gyan, USA)
11:35 – 13:00	**SESSION 1** Session Chair: Zofia Gaydos
11:35	**Analyzing Social Networks and Learning Content on a Discussion Forum in an Introductory Programming MOOC in Higher Education**
11:45	**Designing a Unique Revision Loop Updating Courses Simultaneously on Different MOOC Platforms**
11:55	**Strategies for Designing Cognitively Demanding Assessments Within Math and Physics MOOCs**
12:05	**Using MOOC Camps to Scale Up Professional Development Programs in the Philippines During Changing Times**
12:25	**Post-Pandemic Use of edX MOOCs by the Universitat Politecnica de Valencia Community**
12:35	**Transforming Education in the 21st Century: The Role of PROF-XXI in Developing Teacher's Digital Competence**
13:00 – 14:00	**LUNCH**

DAY 2: THURSDAY, OCTOBER 12 (CONT.)
SAMBERG CONFERENCE CENTER, 6TH FLOOR

Time	Session
14:00 – 14:30	FIRESIDE CHAT WITH JEFF MAGGIONCALDA, CEO OF COURSERA
14:30 – 14:50	Lightning Talk: Empowering Tomorrow's Workforce: Harnessing Industry-Recognized Credentials to Enhance the Career Readiness of Undergraduate Students
14:50 – 15:30	SESSION 2 Session Chair: María Soledad Ramírez Montoya
14:50	Meta-LAD: Developing a Learning Analytics Dashboard With Theoretically Grounded and Context-Specific Approaches
15:00	What is a Successful MOOC? Lessons From Global Learner Narratives
15:10	Traditional Vs Non-Traditional Assessment Activities as Learning Indicators of Student Learning: Teachers' Perceptions
15:20	Analyzing Learner Trends in a Series of Online Courses
15:40 – 16:00	BREAK & EXHIBIT NETWORKING
16:00 – 17:30	SESSION 3 Session Chair: Claudia Steinberge
16:00	Student Engagement in Optional Self-Assessment in a Blended Introductory Physics Course
16:10	Laboratories for Massive Open Online Course in Electrical Microgrids Using Machine Learning Techniques
16:20	Expanding Learning Analytics in MOOCs to Track Learners' Engagement With Interactive Content
16:40	Experiences With the Integration of MOOCs Into Online Courses Through E-Tivity
16:50	Professional On-Line Courses Inside the ECoVEM Project Following Tasks Oriented MOOCs Alike Methodology
17:00	Competencies Critical to Create and Implement Construction Projects' Health and Safety Plan: Perception of the Global Academia

DAY 3: FRIDAY, OCTOBER 13
SAMBERG CONFERENCE CENTER, 6TH FLOOR

Time	Session
8:00 – 14:00	REGISTRATION OPEN
9:00 – 9:15	WELCOME ADDRESS
9:15 – 10:00	SESSION 4 PART 1 Session Chair: John Swope
9:15	Exploring the Effectiveness of Web-Based Programming Environments for MOOCs: A Comparative Study of CodeOcean and OpenJupyter
9:25	Combining Human Creativity and AI-Based Tools in the Instructional Design of MOOCs: Benefits and Limitations
9:35	How Virtual Reality (VR) Impacts Learner Engagement in Online Courses
10:00 – 10:45	DISCUSSION PANEL: IMPACTING SUSTAINABILITY EDUCATION
10:45 – 11:15	BREAK & EXHIBIT NETWORKING
11:15 – 11:35	Lightning Talk: Lessons from the Digital Learning XPRIZE: improving outcomes while experimenting at scale
11:35 – 13:00	SESSION 4 PART 2 Session Chair: John Swope
11:35	The Influence of Teacher Interactions on General Sentiment Development in Discussion Forums
11:45	Application and Evaluation of a Revision Framework to the Formative Assessments in a MOOC
11:55	Incorporating Learner Perspectives Into Course Design
12:15	Increasing the Reusability of MOOCs via Competence-Oriented Development
12:35	Making the Grade: Assessments at Scale in a Large Online Graduate Program

13:00 – 14:00	LUNCH
14:00 – 14:45	FIRESIDE CHAT / ANANT AGARWAL (EDX/2U, USA)
14:45 – 16:00	SESSION 5 Session Chair: Dana Doyle
14:45	Students as Open Educational Resources Co-Creators in the TalkTech Project
14:55	Assessing Cheating in MOOCs, a Systematic Literature Review
15:05	Modularizing MOOCs for Professional Learning: Prospects and Challenges for Instructional Design
15:15	CrowdLearn: Open Sourcing Learner Feedback to Enable Open-Ended Assessments for MOOOCs
15:35 – 16:05	BREAK & EXHIBIT NETWORKING
16:05 – 17:00	DISCUSSION PANEL: THE FUTURE OF THE MOOC COMMUNITY DISCUSSION
17:00 – 17:15	AWARDS & CLOSING CEREMONY

Technical Program

Wednesday, October 11th, 2023

13:00 – 15:00
Workshop: Generative AI For Boosting MOOC Production: Tools, Opportunities, and Challenges
Location: Meet at Walker Memorial – Building 50 at 12:45

13:00 – 15:00
Workshop: Facilitating an Inclusive Teaching Workshop with Open Education Resources
Location: Meet at Walker Memorial – Building 50 at 12:45

15:00 – 17:30
Welcome Address, Poster Sessions, Demos, and Welcome Reception
Location: Walker Memorial – Building 50
Session Chairs: Jessica Sandland (MIT, USA), Mary Ellen Wiltrout (MIT, USA)

15:00 – 16:10
Poster Session 1
Location: Walker Memorial – Building 50

Identifying Techniques Used by Teachers to Assess Student Understanding in an Online Teaching Environment: A Focused Group Discussion and Individual Interview Study
>   Maha Said Al-Anqoudi (University of Glasgow, UK)

Advancing Climate Change and Health Learning in Maldives: A MOOC With Augmented Reality Integration
>   Zeeniya Kamil (Maldives National University, Maldives), Roza Ibrahim, Rainer Sauerborn, Sandra Barteit (University of Heidelberg, Germany)

edX-LIMS: A Learning Analytics System for Enhancing Teaching-Learning Practices in MOOCs
>   Ruth Cobos (Universidad Autonoma de Madrid, Spain)

Effects of Hyper-Personalized "Nudge Emails" on Student Participation, Activity, and Completion
>   John Swope (Curricu.me, USA), Alexandria Hsun Yen (Boston University, USA)

How to Design a Faculty Development Program Through Coursera: The Case of UNITEC in Honduras
>   Kevin Mejía Rivera (UNITEC, Honduras)

Cross-Platform Learning Data Analytics at Scale
>   Andrés González (Aulasneo, Argentina)

'Revolutionizing MOOC Delivery: Addressing High Attrition Rates Through Hub and Spoke Model
>   Dr. Lalita Mutreja (University of Mumbai, India)

16:25 – 17:30
Poster Session 2
Location: Walker Memorial – Building 50

Connecting with MITx: How Educators Are Using Online Courses to Improve Their Teaching
>   John W. Harrold (MIT)

Enhancing Engagement and Personal Development Through MOOC Integration in Community Transit Volunteer Online Training Platform
>   Chu Wang (New York Institute of Technology - Vancouver, Canada), Genliang Zhu

Teachers + Tools + Training = Innovation
>   Dwayne Cowles (Rapidmooc, USA), Christophe Le Bourhis (Rapidmooc, USA)

Toward a Science of Adult Learning
>   Anne Fensie (University of Maine, USA)

Platform-to-Platform Conversions
>   Colin Fredericks (Harvard, USA), Ellen Popko (Harvard, USA)

Micromasters in Statistics and Data Science
>   Karene Chu (MIT IDSS, USA)

Open, interdisciplinary, and collaborative innovation to train in energy sustainability through MOOCs.
>   Silvia Farias-Gaytan (Tecnologico de Monterrey, Mexico), María-Soledad Ramirez-Montoya (Tecnologico de Monterrey, Mexico)

Resolving Renewable Energy Siting Disputes: A MOOC for the Energy Transition
>   Sanjana Paul (MIT, USA), Lawrence E Susskind (MIT, USA), Jungwoo Chun (MIT, USA), David Beron (MIT, USA), Ildi Morris (MIT, USA), Tom Adams (MIT, USA)

Thursday, October 12th, 2023

9:00 – 9:15
Day 2: Welcome Address & Keynote Introduction
Session Chairs: Russ Meier (MSoE, USA), Jessica Sandland (MIT, USA), and Mary Ellen Wiltrout (MIT, USA)
Location: Samberg Conference Center - Building E52

9:15 – 10:00
Keynote: Strategies and Opportunities for Implementing MOOCS
Speaker: Dr. Stephanie Blackmon (William & Mary, USA)

10:00 – 10:45
Discussion Panel: Increasing Access
Moderator: Norman Bier (CMU, USA)
Location: Samberg Conference Center - Building E52

10:45 – 11:15
Break
Location: Samberg Conference Center - Building E52

11:15 – 11:35
Industry Keynote: Overcoming the Challenges of AI in Higher Ed
Speaker: Venkat Srinivasan (Gyan, USA)
Location: Samberg Conference Center - Building E52

11:35 – 13:00
Session 1
Session Chair: Zofia Gaydos (Darthmouth, USA)
Location: Samberg Conference Center - Building E52

11:35
🎖 *Best Paper Nominee*
Analyzing Social Networks and Learning Content on a Discussion Forum in an Introductory Programming MOOC in Higher Education
Alexander Steinmaurer (Graz University of Technology, Austria), Ratko Savic (Graz University of Technology, Austria); Johannes Krugel (Leibniz University Hannover, Germany); Christian Gütl (Graz University of Technology, Austria)

11:45

Designing a Unique Revision Loop Updating Courses Simultaneously on Different MOOC Platforms

Ella Hamonic (Telecom Paris & Le Monde Après, France); Rémi Sharrock (Télécom Paris, France); Petra Bonfert-Taylor (Dartmouth College, USA); Michael Goudzwaard (Dartmouth College, USA); Gérard Memmi (Télécom Paris, France); Josh Meise (Dartmouth College, USA); Catherine Chow (Dartmouth College, USA)

11:55

🏅 *Best Paper Nominee*

Strategies for Designing Cognitively Demanding Assessments Within Math and Physics MOOCs

Michelle Tomasik (Massachusetts Institute of Technology, USA); Jennifer French (Massachusetts Institute of Technology, USA); Aidan MacDonagh (Massachusetts Institute of Technology, USA)

12:05

Using MOOC Camps to Scale Up Professional Development Programs in the Philippines During Changing Times

Romualdo A. Mabuan (Far Eastern University, Philippines)

12:15

Session 1 Part 1 Q & A

12:25

Post-Pandemic Use of edX MOOCs by the Universitat Politecnica de Valencia Community

Ignacio Despujol (Universitat Politecnica de Valencia, Spain); Carlos Turro (Universidad Politécnica de Valencia, Spain); Jaime Busquets (Universitat Politecnica de Valenica, Spain)

12:35

Transforming Education in the 21st Century: The Role of PROF-XXI in Developing Teacher's Digital Competence

Miguel Morales Chan (Galileo University, Guatemala); Carlos Alario Hoyos (Universidad Carlos III de Madrid, Spain); Hector R. Amado-Salvatierra (Universidad Galileo, Guatemala); Mar Pérez-Sanagustín (Université de Toulouse, France); António Moreira Teixeira (Universidade Aberta, Portugal); Carlos Delgado Kloos (Universidad Carlos III de Madrid, Spain); Rocael Hernandez-Rizzardini (Galileo University, Guatemala)

12:45

Session 1 Part 2 Q & A

13:00 – 14:00
Lunch
Location: Samberg Conference Center - Building E52

14:00 – 14:30
Fireside Chat with Jeff Maggioncalda, CEO of Coursera
Moderator: Dhawal Shah (Class Central, USA)
Location: Samberg Conference Center - Building E52

14:30 – 14:50
Lightning Talk: Empowering Tomorrow's Workforce: Harnessing Industry-Recognized Credentials to Enhance the Career Readiness of Undergraduate Students
Speaker: Kelvin Bentley (University of Texas System, USA)
Location: Samberg Conference Center - Building E52

14:50 – 15:30
Session 2
Session Chair: María Soledad Ramírez Montoya (Tecnológico de Monterrey, Mexico)
Location: Samberg Conference Center - Building E52

14:50

Experiences With the Integration of MOOCs Into Online Courses Through E-Tivity
> Natasa Hoic-Bozic (University of Rijeka, Croatia); Martina Holenko Dlab (University of Rijeka, Croatia)

15:00

🏅 *Best Paper Nominee*

What is a Successful MOOC? Lessons From Global Learner Narratives
> Nathaniel W Cradit (University of Michigan, USA); Caitlin Hayward (University of Michigan, USA)

15:10

Traditional Vs Non-Traditional Assessment Activities as Learning Indicators of Student Learning: Teachers' Perceptions
> Maha Al-Anqoudi (University of Glasgow, United Kingdom (Great Britain)); Mireilla Bikanga Ada (University of Glasgow, United Kingdom (Great Britain)); Stephen McQuistin (University of St Andrews, United Kingdom (Great Britain)); Nikos Ntarmos (University of Glasgow, United Kingdom (Great Britain)); Jack actionParkinson (University of Glasgow, United Kingdom (Great Britain)); Yashar Moshfeghi (University of Strathclyde, United Kingdom (Great Britain)))

15:20
Analyzing Learner Trends in a Series of Online Courses
> Megan MC Thompson (MathWorks, Inc., USA); Brandon Armstrong (MathWorks, USA); John Kotwicki (MathWorks, USA)

15:30
Session 2 Q & A

15:40 – 16:00
Break
Location: Samberg Conference Center - Building E52

16:00 – 17:30
Session 3
Session Chair: Claudia Steinberger (University of Klagenfurt, Austria)
Location: Samberg Conference Center - Building E52

16:00
🏅 *Best Paper Nominee*
Student Engagement in Optional Self-Assessment in a Blended Introductory Physics Course
> Aidan MacDonagh (Massachusetts Institute of Technology, USA)

16:10
Laboratories for Massive Open Online Course in Electrical Microgrids Using Machine Learning Techniques
> Roxana Melendez-Norona (Florida Atlantic University, USA); Maria M. Larrondo-Petrie (Florida Atlantic University, USA)

16:20
Expanding Learning Analytics in MOOCs to Track Learners' Engagement With Interactive Content
> Zuhra Sofyan (Hasso-Plattner Institute & University of Potsdam, Germany); Thomas Staubitz (Hasso Plattner Institute, Digital Engineering Faculty, University of Potsdam, Germany); Christoph Meinel (Hasso-Plattner-Institute, Germany)

16:30
Session 3 Part 1 Q & A

16:40

🏅 *Best Paper Nominee*

Meta-LAD: Developing a Learning Analytics Dashboard With Theoretically Grounded and Context-Specific Approaches

> Heeryung Choi (Massachusetts Institute of Technology, USA); Inma Borella (Massachusetts Institute of Technology, USA); Eva Ponce-Cueto (Massachusetts Institute of Technology, USA)

16:50

Professional On-Line Courses Inside the ECoVEM Project Following Tasks Oriented MOOCs Alike Methodology

> Felix Garcia Loro (Spanish University for Distance Education (UNED), Spain); Rosario Gil (Spanish University for Distance Education - UNED, Spain); Elio Sancristobal (Spanish University for Distance Education - UNED, Spain); Pedro Plaza Merino (UNED & Plaza Robotica, Spain); Blanca Quintana (Universidad Nacional de Educación a Distancia, Spain); Sergio Martin (Spanish University for Distance Education - UNED, Spain); Oscar Casanova Carvajal (ANCCP & Centro de Tecnología Biomédica (CTB), Campus Montegancedo, Universidad Politécnica de Madrid (UPM), Spain); Inma Miralles (ANCCP, Spain); Dimitar Tokmakov (ROMIT - University of Plovdiv, Bulgaria); Slava Malenkova Tzanova (Technical University of Sofia, Bulgaria); Slavka Tzanova (Technical University of Sofia, Bulgaria); Russ Meier (Milwaukee School of Engineering, USA); Manuel Castro (Spanish University for Distance Education - UNED, Spain)

17:00

Competencies Critical to Create and Implement Construction Projects' Health and Safety Plan: Perception of the Global Academia

> Fatemeh Pariafsai (Texas A&M University, USA); Manish Kumar Dixit (Texas A&M University, USA); Sadjad Pariafsai (Islamic Azad University, Iran); Stephen Mark Caffey (Texas A and M University, USA); Edelmiro F. Escamilla (Texas A and M University, USA); Sherecce Fields (Texas A&M University, USA)

17:10 – 17:20
Session 3 Part 2 Q & A

Friday, October 13th, 2023

9:00 – 9:15
MOOCs: Past, Present, and Future
Speaker: Chris Capozzola (MIT, USA)
Location: Samberg Conference Center - Building E52

9:15 – 10:00
Session 4 Part 1
Session Chair: John Swope (MIT, USA)
Location: Samberg Conference Center - Building E52

9:15

Exploring the Effectiveness of Web-Based Programming Environments for MOOCs: A Comparative Study of CodeOcean and OpenJupyter

> Mohamed Elhayany (Hasso-Plattner-Institut (HPI), Germany); Sebastian Serth (Hasso Plattner Institute, University of Potsdam, Germany); Christoph Meinel (Hasso-Plattner-Institute, Germany)

9:25

Combining Human Creativity and AI-Based Tools in the Instructional Design of MOOCs: Benefits and Limitations

> Hector R. Amado-Salvatierra (Universidad Galileo, Guatemala); Miguel Morales Chan (Galileo University, Guatemala); Rocael Hernandez-Rizzardini (Galileo University, Guatemala)

9:35

How Virtual Reality (VR) Impacts Learner Engagement in Online Courses

> Alexandra D Urban (Coursera, USA); Polina Varela (Coursera, USA); Jessica Pingel (Coursera, USA); Yuxi Liu (Coursera, USA); Laura Wandres (Coursera, USA); Marcus Duvoisin (Coursera, USA)

9:45
Session 4 Part 1 Q & A

10:00 – 10:45
Discussion Panel: Impacting Sustainability Education
Moderator: Colin Fredericks (Harvard, USA)
Location: Samberg Conference Center - Building E52

10:45 – 11:15
Break
Location: Samberg Conference Center - Building E52

11:15 – 11:35
Lightning Talk: Lessons from the Digital Learning XPRIZE: improving outcomes while experimenting at scale
Speaker: Norman Bier (Carnegie Mellon, USA)
Location: Samberg Conference Center - Building E52

11:35 – 13:00
Session 4 Part 2
Session Chair: John Swope (MIT, USA)
Location: Samberg Conference Center - Building E52

11:35
🏅 *Best Paper Nominee*
The Influence of Teacher Interactions on General Sentiment Development in Discussion Forums
> Ranjiraj Rajendran Nair (Otto Von Guericke, Germany); Thomas Staubitz (Hasso Plattner Institute, Digital Engineering Faculty, University of Potsdam, Germany); Christoph Meinel (Hasso Plattner Institute, Germany)

11:45
Application and Evaluation of a Revision Framework to the Formative Assessments in a MOOC
> Caitlin M. Friend (MIT, USA); Darcy G Gordon (MIT, USA); Mary Ellen Wiltrout (MIT, USA)

11:55
🏅 *Best Paper Nominee*
Incorporating Learner Perspectives Into Course Design
> Meghan Perdue (MIT, USA)

12:05
Session 4 Part 2 Q & A

12:15
🏅 *Best Paper Nominee*
Increasing the Reusability of MOOCs via Competence-Oriented Development
> Claudia Steinberger (University of Klagenfurt, Austria); Nina Angela Lobnig (University of Klagenfurt, Austria); Michael Morak (University of Klagenfurt, Austria)

12:25

Towards Inclusive Education: A Review of and Guide to Accessible Features in Chatbots for MOOCs

> Theresa Elfriede Isa Zobel (Hasso-Plattner-Institute, Germany); Hendrik Steinbeck (Hasso-Plattner-Institute, Germany); Christoph Meinel (Hasso-Plattner-Institute, Germany)

12:35

Making the Grade: Assessments at Scale in a Large Online Graduate Program

> Bobbie Eicher (Georgia Institute of Technology, USA); David Joyner (Georgia Institute of Technology, USA)

12:45

Session 4 Part 3 Q & A

13:00 – 14:00
Lunch
Location: Samberg Conference Center - Building E52

14:00 – 14:45
Fireside Chat / Anant Agarwal (edX/2U, USA)
Moderator: Dhawal Shah (Class Central, USA)
Location: Samberg Conference Center - Building E52

14:45 – 15:35
Session 5
Session Chair: Dana Doyle (MITx/MicroMasters Program, USA)
Location: Samberg Conference Center - Building E52

14:45

Students as Open Educational Resources Co-Creators in the TalkTech Project

> Mark Frydenberg (Bentley University, USA); Diana Andone (Politehnica University Timisoara, Romania)

14:55

Assessing Cheating in MOOCs, a Systematic Literature Review

> Cristina Dreifuss-Serrano (Universidad Privada del Norte, Peru); Pablo C Herrera (Universidad Peruana de Ciencias Aplicadas, Peru); Frederico Braida (Universidad Federal de Juiz de Fora, Peru); Jose Luis Reategui (Universidad Peruana de Ciencias Aplicadas, Peru)

15:05

Modularizing MOOCs for Professional Learning: Prospects and Challenges for Instructional Design

      Marc Egloffstein (University of Mannheim, Germany)

15:15

CrowdLearn: Open Sourcing Learner Feedback to Enable Open-Ended Assessments for MOOOCs

      John Liu (Massachusetts Institute of Technology, USA); Ewoud de Kok (Feedback Fruits, USA)

15:25
Session 5 Q & A

15:35 – 16:05
Break
Location: Samberg Conference Center - Building E52

16:05 – 17:00
Discussion Panel: The Future of the MOOC Community Discussion
Moderator: Carlos Delgado Kloos (UC3M, Spain)
Location: Samberg Conference Center - Building E52

17:00 – 17:15
Awards & Closing Ceremony

Author Index