Christian Sebastian Loh

CURRICULUM VITAE

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Education

07/2004	**Ph.D. Instructional Technology.** The University of Georgia, U.S.A.
05/2000	**M.Ed. Learning Science.** Nanyang Technological University, Singapore.
03/1993	**Postgraduate Diploma in Education.** National Institute of Education, Singapore.
05/1988	**B.Sc. Biochemistry and Microbiology.** National University of Singapore, Singapore.

Professional Appointment

2023 – to date **Professor, Instructional Design & Technology**
Coordinator, Learning & Performance Technology concentration
  Organizational Learning, Innovation & Development, School of Education
  Southern Illinois University, Carbondale, IL

2020-2023 **Professor, Instructional Design & Technology**
  School of Education (Re-organized)
  Southern Illinois University, Carbondale, IL

2017-2019 **Director, Virtual Environment & Reality Lab (V-Lab)**
2009–2017 **Director, Virtual Environment Lab (V-Lab)**
  College of Education and Human Services
  Southern Illinois University, Carbondale, IL

2016–2019 **Professor, Learning Systems Design & Technology**
  Department of Curriculum & Instruction
  College of Education and Human Services
  Southern Illinois University, Carbondale, IL

2010–2016 **Associate Professor, Learning Systems Design & Technology**
  Department of Curriculum & Instruction
  College of Education and Human Services
  Southern Illinois University, Carbondale, IL

2004–2010 **Assistant Professor, Instructional Design & Technology**
  Department of Curriculum & Instruction
  College of Education and Human Services
  Southern Illinois University, Carbondale, IL

Specializations/Skills

Specializations/Skills:
- Serious Games Analytics, gen AI & LLM (Large Language Models) for Vibe Engineering, Training, Expertise Development, Instructional Design and Technology, Performance Assessment, Curriculum Development

Software Skills:
- Vibe Engineering, Video/Audio/Image Editing, LMS/CMS, Adobe Suite, MS Office

Analytics Skills:
- JMP, SPSS, Excel

Publications: Edited Volume

* Key Research   *Serious Games Analytics, Expertise/Talent Development, Performance Measurement*

* C. S. Loh, Y. Sheng, & D. Ifenthaler (Eds.). (in development) *Serious Games Analytics in the Age of AI.* Springer.

* C. S. Loh, Y. Sheng, & D. Ifenthaler (Eds.). (Jun, 2015) *Serious Games Analytics: Methodologies for Performance Measurement, Assessment, and Improvement.* Springer International Publishing Switzerland.

Publications: Refereed Articles & Book Chapters

* Rajasegeran, D. D., Liu, K., Sheng, Y., Loh, C. S., Choh, A. C. L., Teo, K.Y., Fan, P. E. M., Tan, M. Y., Aloweni, F., & Ang, S. Y. (2023). Potential of serious games as a competency assessment tool for acute care nurses on the blood transfusion procedure. *International Journal of Digital Health.* (Open Access). DOI: 10.1097/JH9.0000000000000006

Salameh, R. & Loh, C. S. (2022). Engagement and players' intended behaviors in a cybersecurity serious game. *International Journal of Gaming and Computer-Mediated Simulations, 14*(1): 1-21.

* Loh, C. S. (2021). Serious games and analytics for skill acquisition and assessment. In Silva Mangiante, E.M., & Peno, K. [Eds.] *Teaching and Learning for Adult Skill Acquisition: Applying the Dreyfus and Dreyfus Model in Different Fields.* (pp. 187-212). Information Age Publishing

* Zhou, T. & Loh, C. S. (2020). The effects of prior knowledge and in-game instruction on players' learning outcomes in serious games. *International Journal of Gaming and Computer-Mediated Simulations, 12*(4): 23-37.

* Loh, C. S. & Li, I. H. (2016). A comparison of similarity measures to differentiate players' behavioral and decision-making profiles in serious games. *Computers in Human Behavior. 64:* 562-574.

* Loh, C. S., & Sheng, Y. (2015). Measuring expert-performance for serious games analytics: From data to insights. In C. S. Loh, Y. Sheng & D. Ifenthaler [Eds.] *Serious Games Analytics: Methodologies for Performance Measurement, Assessment, and Improvement.* (pp. 101-134). Springer International Publishing Switzerland.

*   Loh, C. S., & Sheng, Y., & Ifenthaler, D. (2015). Serious games analytics: Theoretical framework. In C. S. Loh, Y. Sheng & D. Ifenthaler [Eds.] *Serious Games Analytics: Methodologies for Performance Measurement, Assessment, and Improvement.* (pp. 3-30). Springer International Publishing Switzerland.

*   Loh, C. S., Sheng, Y., & Li, I-H. (2015). Predicting expert-novice performance as serious games analytics with objective-oriented and navigational action sequences. *Computers in Human Behavior, 49:* 147-155

*   Byun, J. H., & Loh, C. S. (2015). Audial engagement: Effects of game sound on learner engagement in digital game-based learning environments. *Computers in Human Behavior. 46:* 129-138.

*   Loh, C. S., & Sheng, Y. (2015). Measuring the (dis-)similarity between expert and novice behaviors as serious games analytics. *Education and Information Technologies. 20*(1): 5-19 [Advanced Online Version since June 2013].

*   Loh, C. S., & Sheng, Y. (2014). Maximum Similarity Index (MSI): A metric to differentiate the performance of novices vs. multiple-experts in serious games. *Computers in Human Behavior. 39:* 322-330.

*   Loh, C. S. (2013). Improving the impact and return of investment of game-based learning. *International Journal of Virtual and Personal Learning Environments. 4*(1): 1-15.

*   Loh, C. S. (2012). Information Trails: In-process assessment for game-based learning. In D. Ifenthaler, D. Eseryel, & X. Ge (Eds). *Assessment in game-based learning: Foundations, innovations, and perspectives.* (pp. 123-144) NY: Springer.

Loh, C. S. (2011). Researching and developing serious games as interactive learning instructions. In R. E. Ferdig (Ed.), *Discoveries in gaming and computer-mediated simulations: New interdisciplinary applications.* (pp. 263-282). PA: IGI-Global.

Kaplan-Rakowski, R., & Loh, C. S. (2010). Modding and rezzing in games and virtual environments for education. In Y.K. Baek (Ed.), *Gaming for classroom-based learning: Digital role playing as a motivator of study.* (pp. 205-219). PA: IGI-Global.

Loh, C. S. (2009). Researching and developing serious games as interactive learning instructions. *International Journal of Gaming and Computer Mediated Simulations. 1*(4): 1-19.

Loh, C. S., & Byun, J. H. (2008). Modding Neverwinter Nights into serious games. In D. Gibson & Y. K. Baek (Eds.), *Digital simulations for improving education: Learning through artificial teaching environments* (pp. 408-426). PA: Information Science Reference.

Loh, C. S. (2008). Confronting the dark side of video games. In C. T. Miller (Ed.), *Games: Purpose and potential in education* (pp. 185-218). NY: Springer.

Botturi, L., & Loh, C. S. (2008). Once upon a game: Rediscovering the roots of games in education. In C. T. Miller (Ed.), *Games: Purpose and potential in education.* (pp. 1-22). NY: Springer.

Miller, C. T., Loh, C. S., Becker, K., Botturi, L., *et al.* (2008). Blogging the future from multiple perspectives: Current problems and future potentials for educational games. In C. T. Miller (Ed.), *Games: Purpose and potential in education* (pp. 219-250). NY: Springer.

Loh, C. S., & Schrader, P. G. (2007, Dec). E-learning: Is the field really too broad? Two reviewers begin the dialogue. *Educational Researcher. 36* (9): 573-578

Loh, C. S. (2007). Choice and effects of instrument sound in aural training. *Music Education Research, 9*(1): 129-143.

*   Loh, C. S. (2007). Designing online games assessment as "Information Trails." In V. Sugumaran (Ed.), *Intelligent information technologies: Concepts, methodologies, tools and applications* (pp. 553-574). PA: Idea Group, Inc.

*   Loh, C. S. (2006). Designing online games assessment as "Information Trails." In D. Gibson, C. Aldrich & M. Prensky (Eds.), *Games and simulation in online learning: Research and development frameworks* (pp. 323-348). PA: Idea Group, Inc.

Loh, C. S., & Williams, M. D. (2002). "What's in a web site?" – Students' perception. *Journal of Research on Technology in Education. 34*(3): 351-363.

Loh, C. S. (2001). Learning tools for knowledge nomads: Using personal digital assistants (PDAs) in web-based learning environment. *Educational Technology. 41*(6): 5-14.

Wong, P., & Loh, C. S. (2000). Evaluating computer-based educational resources. In M. D. Williams (Ed.), *Integrating technology into teaching and learning.* (pp. 93-117). Pearson Education Asia Pte. Ltd., Singapore.

Publications: Conference Proceedings

*   Loh, C. S., Sheng, Y., Rajasegeran, D. D., Liu, K., Choh, A. C. L., & Ang, S. Y. (August 2023). *Serious games assessment: Analytics, measurement, and visualization of nursing competencies.* In proceedings of the 2023 IEEE 11th International Conference on Serious Games and Applications for Health (SeGAH 2023). Athens, Greece. Aug 28-30, 2023. (IEEE).

*   Wallner, G., Kriglstein, S., Gabriel, S., Loh, C. S., Sheng, Y., & Li, I.H. (August 2018). *Lost My Way: An educational Geometry game for young children.* In proceedings of the International Conference on the Foundations of Digital Games (FDG 2018). Malmo, Sweden. Aug 7-10, 2018. (ACM Digital Library).

*   Loh, C. S., & Li, I.H. (October 2016). *Using players' gameplay action-decision profiles to prescribing training: Reducing training cost with serious games analytics.* In proceedings of the 3rd IEEE International Conference on Data Science and Advanced Analytics (DSAA), Game Data Science (GDS) special session. Montreal, Canada. Oct 17-19, 2016. (IEEE).

* Loh, C. S., & Ekstrand, A. (March 2015). *Audialization in Serious Games Analytics: Visualizing player performance improvement by sound or music.* In proceedings of the 3rd International Workshop on Intelligent Digital Games for Empowerment and Inclusion (IDGEI 2015), satellite of International Conference on Intelligent User Interfaces. Atlanta, GA. (IEEE).

* Loh, C. S., & Sheng, Y. (July 2013). *Performance metrics for serious games – Will the (real) expert please step forward?* In proceedings of the 18th International Conference on Computer Games: AI, Animation, Mobile, Interactive Multimedia, Educational & Serious Games. Louisville, KY. (IEEE).

* Loh, C. S. (Sep 2011). *Using* in situ *data collection to improve the impact and return of investment of game-based learning.* In proceedings of ICEM-SIIE 2011, the 61st International Council for Educational Media (ICEM) and the XIII International Symposium on Computers in Education (SIIE) Joint Conference. Aveiro, Portugal: (ICEM-SIIE)

* Loh, C. S. (Oct 2010). *A real-time approach to performance assessment for Multi-User Virtual Environments.* Proceedings of E-Learn 2010 – World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education. Orlando, FL. (AACE).

* Loh, C. S., & Li, I.H. (Oct 2010). *Reducing re-training cost through on-demand,* ad hoc *assessment.* Proceedings of MODSIM World Conference and Expo 2010 – 21st Century Decision-Making: The Art of Modeling & Simulation. Hampton, VA: MODSIM World Conference & Exposition.

Younis, B. & Loh, C. S. (Jul 2010). *Integrating serious games in higher education programs.* Proceedings of 4th Academic Colloquium 2010: Building Partnership in Teaching Excellence. Ramallah, Palestine: AMIDEAST.

* Loh, C. S., Anantachai, A., Byun, J., & Lenox, J. (2007). Assessing what players learned in serious games: *in situ* data collection, information trails, and quantitative analysis. In Q. Mehdi (Ed.), *Computer Games: AI, Animation, Mobile, Educational & Serious Games.* Wolverhampton, UK: Univ. of Wolverhampton.

Loh, C. S., Branch, R. M., Shewanown, S., & Ali, R. (2003). The effect of text spacing after the period on time for on-screen reading tasks. In R. E. Griffin (Ed.), *2002 International Visual Literacy Association Selected Readings.* Blacksburg, VA: International Visual Literacy Association.

Conference Presentations

* Loh, C. S., Sheng, Y., Rajasegeran, D. D., Liu, K., Choh, A. C. L., & Ang, S. Y. (August 2023). *Serious games assessment: Analytics, measurement, and visualization of nursing competencies.* Paper presented at the 2023 IEEE 11th International Conference on Serious Games and Applications for Health (SeGAH 2023). Athens, Greece. Aug 28-30, 2023.

* Loh, C. S. (August 2019). *Expert Similarity Index (ESI): A Serious Games Analytics Performance Index for Organizational Training Outcomes.* Invited presentation at the 1st National Science Foundation (NSF) funded "Game-Based Assessment Workshop." Minneapolis, MN. Aug 22-23, 2019.

* Wallner, G., Kriglstein, S., Gabriel, S., Loh, C. S., Sheng, Y., & Li, I.H. (August 2018). *Lost My Way: An educational Geometry game for young children.* In proceedings of the International Conference on the Foundations of Digital Games (FDG 2018). Malmo, Sweden. Aug 7-10, 2018. (ACM Digital Library).

* Loh, C. S. & Li, I-H. (2015). *Predicting the competency improvement in Serious Games using tile-based action-sequences and JMP.* Paper presented at the Discovery Summit 2015, San Diego, CA.

  Zhou, T. & Loh, C. S. (2015). *The effects of previous gaming experiences, prior knowledge, and in-game guidance on the players' learning retention.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Indianapolis, IN.

* Li, I-H. & Loh, C. S. (2015). *Serious Games Analytics Using Unity3D and Information Trails.* Design & Development (D&D) Showcase. Presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Indianapolis, IN.

* Byun, J. H., Loh, C. S., & Zhou, T. (Nov 2014). *Assessing play-learners' performance in serious game environments by using* in situ *data: Using eye tracking for Serious Game Analytics.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Jacksonville, FL.

* Loh, C. S. (Oct 2012). In situ *data collection: A new method of collecting user-generated data in virtual and physical interactive environments.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Louisville, KY.

  Loh, C. S., & Younis, B. K. (Oct 2012). *Game Modding for Non-Professionals (GNMP): Can teachers modify games for instruction?* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Louisville, KY.

  Byun, J. H., & Loh, C. S. (Oct 2012). *Effects of game characters' voice-over on players' engagement in game-based learning environments.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Louisville, KY.

* Loh, C. S. (Sep 28-30, 2011). *Using* in situ *data collection to improve the impact and return of investment of game-based learning.* Paper presented at the 61st International Council for Educational Media and the XIII International Symposium on Computers in Education Joint Conference (ICEM-SIIE). Aveiro, Portugal.

* Loh, C. S. (Oct 2010). *A real-time approach to performance assessment for Multi-User Virtual Environments.* Paper presented at E-Learn 2010 – World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education. Orlando, FL.

* Loh, C. S., & Li, I. H. (Oct 2010). *Reducing re-training cost through on-demand,* ad hoc *assessment.* Paper presented at the MODSIM World Conference and Expo – 21st Century Decision-Making: The Art of Modeling & Simulation. Hampton, VA.

Younis, B. K. & Loh, C. S. (Jul 2010). *Integrating serious games in higher education programs.* Paper presented at Academic Colloquium 2010: Building Partnership in Teaching Excellence. Ramallah, Palestine.

Loh, C. S. (Oct 2009). *Impact of Web 2.0 in Education.* Invited presentation at the 5th Conference for Professionals in Foreign Language Teaching. San Salvador, El Salvador.

Loh, C. S., Van Eck, R., Adcock, A. B. (Nov 2008). *Creating a serious game world together: A multi-site effort.* Paper presented at the Annual Conference of the Association for Educational Communications & Technology (AECT), Orlando, FL.

Loh, C. S., Reese, D., Warren, S. (Nov 2008). *Consortium for Instructional Design, Evaluation and Assessment Standards in Serious Games.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Orlando, FL.

Loh, C. S. (Oct 2007) Modding for Serious Play (3rd Instructional gaming Symposium). Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Botturi, L. and Loh, C. S. (Oct 2007) *Why you cannot afford to be a videogame illiterate.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Byun, J. H. and Loh, C. S. (Oct 2007) *Modding videogames for use in the classroom.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Loh, C. S., Anantachai, A., Byun, J., & Lenox, J. (2007). *Assessing what players learned in serious games:* in situ *data collection, information trails, and quantitative analysis.* Paper presented at the 10th International Conference for Computer Games: AI, Animation, Mobile, Educational & Serious Games (CGAMES). Louisville, KY.

Byun, J. H., Jones, D., & Loh, C. S. (Mar 2007) *Modding "Neverwinter Nights" for video game-based learning in the classroom.* Paper presented at the 4th Closing the Gap Conference, Carbondale, IL.

Loh, C. S. (Oct 2006) *Tracking an Avatar: Designing Data Collection into Online Games.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Dallas, TX.

Loh, C. S. (Nov/Dec 2005). *Psychoacoustics and the effect of instrument sound in music instruction.* Paper presented at the 13th International Conference on Computers in Education (ICCE 2005), Singapore.

Loh, C. S. (Oct 2005) *An analysis of tools used by independent (Indie) game developers.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Orlando, FL.

Loh, C. S., & Botturi, L. (Oct 2005) *"What's in a name?" A discussion of what Game means to the field.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Orlando, FL.

Sing, K. M., Peh, J., & Loh, C. S. (Oct, 2005) *Mobile Learning: Experiencing History with Text Messaging.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Orlando, FL.

Loh, C. S. (Apr 2005). *Guitar vs. piano: The effects of instrument sound in Web-based ear training.* Paper presented at the Annual Conference of American Educational Research Association (AERA), Montreal, Canada.

Loh, C. S. (Nov 2004). *Mona Listen: A Web-based ear training module for musical pitch discrimination of melodic intervals.* Paper presented at E-Learn 2004, Washington, D.C.

Loh, C. S., Rieber, L. P., Wiley, D., van Eck, R., Holschuh, D., & Smith, D. A. (Oct, 2004). *Let's make R.O.O.M. for games.* Panel discussion. Annual Conference of the Association for Educational Communications and Technology, Chicago, IL.

Loh, C. S. (Oct 2004). *Macromedia Flash as a data collection tool for research work.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Chicago, IL.

Loh, C. S., Amiel, T., & McClendon, J. (Oct 2003). *FlashGLO: A Flash-based Gaming Learning Object.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Loh, C. S., & Branch, R.M. (Oct 2003). *A new global warming: The rise of wireless hotspots.* Paper presented at the Annual Conference of the Association for Educational Communications and Technology (AECT), Anaheim, CA.

Branch, R. M., Loh, C. S., Shewanown, S., & Ali, R. (Oct 2002). *The effect of text spacing after the period on time for on-screen reading tasks.* Paper presented at the Annual Conference of the International Visual Literacy Association (IVLA), Breckenridge, CO.

Reeves, T. C., Benson, L., Elliott, D., Grant, M., Holschuh, D., Kim, B., Kim, H., Lauber, E., & Loh, C. S. (Jun 2002). *Usability and instructional design heuristics for e-Learning evaluation.* Paper presented at the meeting of Ed-Media 2002: World Conference on Educational Multimedia, Hypermedia and Telecommunications, Denver, CO.

Loh, C. S. (Apr 2001). *Learning tools for knowledge nomads*. Paper presented at the DESIGN: Connect, Create, Collaborate Conference, In honor of Dr. Kent L. Gustafson. Athens, GA.

Loh, C. S., & Williams, M. D. (May 2000). *Motivational design of Web sites: Children's perceptions*. Paper presented at the 4th Global Chinese Conference on Computers in Education (GCCCE): Teaching and Learning in the New Millennium. Singapore.

International Collaboration

* 2022–24   External consultant (with Dr. Simone Kriglstein, Masaryk University, Brno, Czechia): FWF Project Vis4School: Visual analytics and visualization literacy for students.

* 2022–23   External consultant for Serious Games Asia, Ltd., Singapore. Using *Expert Similarity Index* as Serious Games Analytics for game-based training and performance assessment of nurses and healthcare providers in Singapore: Nationwide game-based training initiatives spearheaded by SingHealth.

* 2022–23   External consultant (with Dr. Yanyan Sheng) for Serious Games Asia, Ltd., Singapore. Investigating the reliability and validity of healthcare serious games as viable online training and assessment of nurses and healthcare providers: Nation-wide game-based training initiatives spearheaded by SingHealth.

* 2016–17   *The Path of the Doctor* (医道) – a STEM serious game for Biomedical Sciences & Traditional Chinese Medicine education, with C.T. Goh & M.K. Lee. School of Biomedical Sciences, Nanyang Technological University, Singapore.

Editorship (Peer-Reviewed Journal)

Nov 2013–   **Board of Editors**, Technology, Knowledge, and Learning (TKL). NY: Springer.

Sep 2008–   **Associate Editor (member)**, International Journal of Gaming and Computer-Mediated Simulations (IJGCMS). Hershey, PA: IGI-Global.

2010–18   **Associate Editor (member)**, International Journal of Game-Based Learning (IJGBL). Hershey, PA: IGI-Global.

Grants Applied/Submitted

* 2017 International   Goh, C. T., Loh, C. S., & Lee, M. K. *The Path of the Doctor* (医道)*: Tracing Students' Learning Path in situ a Chinese Medicine Serious Game*. Singapore Millennium Foundation Grant.

* 2013 External   Loh, C. S. and Furby, L. *Using computer-based simulation to improve Firefighter Company Officers' and Incident Commanders' decision process*. Department of Homeland Security: #DHS-12-GPD-044-000-98

2009 External ($71,000)   Loh, C. S. *Tracking Learner Actions in Multi-User Virtual Environments (MUVE) for Performance Assessment*. Defense University Research Instrumentation Program (DURIP). Awarded by the U.S. Army Research Office (ARO).

2006 ($25,000)   Loh, C.S. *Information Trails: Tracking Avatars for Assessment*. Faculty Seed Grant Competition. Awarded by Southern Illinois University.

Awards & Honors

* 2015   Li, I-H., & Loh, C. S. *Design & Development (D&D) Showcase Award.* Association for Educational Communications and Technology, Indianapolis, IN.

* 2007   Finalist. 2nd Annual Serious Games Challenge & Showcase. (Independent Developers). *Interservice/Industry Training, Simulation & Education Conference (I/ITSEC)*, Orlando, FL.

2004   Doctoral Student of the Year. Department of Instructional Technology, College of Education, University of Georgia, Athens, GA.

Invited Talks

* Aug 2019   1st National Science Foundation (NSF) funded "Game-Based Assessment Workshop." *Expert Similarity Index (ESI): A Serious Games Analytics Performance Index for Organizational Training Outcomes.* Minneapolis, MN.

* May 2014   Methodist Institute for Technology, Innovation, and Education (MITIE), Houston Methodist Research Institute. *Using Serious Games for medical training, and measurement & assessment of performance.* Houston, TX.

* Nov 2012   Panel Discussion on Game-Based Learning Assessment. *Information Trails: In-process assessment for game-based learning.* Annual Conference of the Association for Educational Communications and Technology.

* Oct 2011   University of Mannheim, Mannheim, Germany. In situ *data collection and assessment methodology for game-based learning.*

* Oct 2011   Albert-Ludwigs-University Freiburg, Freiburg, Germany. In situ *data collection and assessment methodology for game-based learning.*

2009   Conference for Professionals in Foreign Language Teaching. *Impact of Web 2.0 in Education.* San Salvador, El Salvador.

Professional Office Held

2009–10   **Past President, Multimedia Production Division**
Association for Educational Communications and Technology (AECT)

2008–09   **President, Multimedia Production Division**
Association for Educational Communications and Technology (AECT)

2007–08   **President Elect, Multimedia Production Division**
Association for Educational Communications and Technology (AECT)

2006–07   **Communication Officer, Multimedia Production Division**
Association for Educational Communications and Technology (AECT)

Professional Workshops

Oct 2007   *Introduction to Making Video Games and Machinima.* International Student Media Festival (ISMF), Anaheim, CA.

Oct 2004   *Creating a Personal Portal in 60 minutes.* Annual Conference of the Association for Educational Communications & Technology, Chicago, IL.

Professional Affiliations

2016–	University Intellectual Properties & Tech Transfer Committee (UIPC), SIU
2006–	Digital Games Research Association (DiGRA)
2003–	Association for Educational Communications and Technology (AECT)
2008–18	Simulation Interoperability Standards Organization (SISO)
2003–18	IEEE Technical Committee on Learning Technology (LTTC)

Services

On-going since 2008 — **Academic Judges**. Annual *Serious Games Showcase & Challenge.* Interservice/Industry Training, Simulation & Education Conference (I/ITSEC), Orlando, FL.

2019 — **Academic Program External Reviewer.** Academic Program (8-year) review of the School of Information System Technology of the Southern Illinois University, with Ronald Berry, Dean of Business School of the University of Louisiana Monroe, LA.

2016 — **International Grant Reviewer:** Ministry of Education (Singapore). Cheong, K.H., & Boo, I. *An interactive simulation built in a multi-agent system for developing knowledge/skills through adaptive learning.*

2005–07 — **Chair and Organizer.** *Instructional Gaming Symposium*, Annual Conference for the Association for Educational Communications & Technology (AECT).

2004 –07 — **Founder.** *Instructional Gaming Forum* (SIG). Association for Educational Communications and Technology (AECT).

Serious Games (Project Designer/Manager)

2017 — Project Manager – VR Maze with HTC Vive (VR Performance Analytics research)

2017 — Project Manager – Virtual Reality (VR) [HTC Vive] for student recruitment

2016-18 — Consultant: International Collaboration STEM Serious Game (Mathematics). Institute of Arts & Technology, Vienna, Austria.
- Data mining & Serious Games Analytics
- Analysis and implementation strategy for performance assessment
- Prototype evaluation & beta testing (usability)

2016-17 — Consultant: International Collaboration STEM Serious Game (Biomedical Sciences and Traditional Chinese Medicine). Nanyang Technological University, Singapore.
- Level Designed and Storyboarding
- Co-developed game document

2015 — Project Manager – Unity3D Maze

2014 — Project Manager – Departmental student recruitment game

2013 — Developer/Level Design – *Guardian 2.2.* Decision Making Inventory.

2013 — Developer/Level Design – *Guardian 2.0.* Expert-Novice differences.

2012 — Developer/Level Design – *Escape from The Maze.* Learning/growth curves.

2010 — Developer/Level Design – *Guardian.* Role-playing and Storytelling.

2007   Co-developer – *Saving Adryanee.* STEM game for Science & Health Education.

Graduate-Level Courses Developed

2025   Implementing three new graduate certificates and AI learning initiatives:
- **Graduate Certificate: "AI for Learning and Training"**
- **Graduate Certificate: "Instructional Technology"**
- **Graduate Certificate: "Online Learning"**

2024
- **Foundations of Instructional Design & Performance Technology** (AI-Assisted)
- **Design Studio with AI** (Content & Media Development)
- **Usability & Problem Solving with AI** (Curriculum Development)
- **Instructional Design Methods** (Learning Theories and AI Applications)

2023
- Learning Theories and Models for Instructional Design
- Story-based Learning & Gamification

2012–2022
- **Content & Learning Management Systems for e-Learning** – Creation of professional e-portfolio for job seekers (using CMS) and/or development of e-learning content by instructional designers (using LMS). [Capstone course]
- Open-Source CMS/LMS used: Dokuwiki, Mediwiki, Wordpress, Drupal, Chamilo, Moodle, D2L, etc.
- Also covers the creation of an Open-Source Media server (using NAS).
- **Interactive Narrative Design** – using interactive storytelling and narrations with a game-like interface to create emotional 'buy-ins' in the learners. Innovative instructional method suitable for subjects requiring behavioral modification: e.g., cybersecurity, active shooting, policy change, decision-making, etc.
- **Foundations of Learning Systems Design & Technology** – epistemology and learning theories (covering perspectives from instructional systems design, learning science, and human performance technology)
- **Instructional Development Studios I & II** – design and development of e-Learning modules with Adobe Captivate, Photoshop, Audition, Premiere, Dreamweaver, Firework, Audacity, and Articulate Storyline.
- Also include some User Experience and usability testing.
- **Task Analysis and Usability** (Blended Learning) – Task analysis and need analysis for instructional design and performance improvement
- Usability for interaction design
- **Assessment and Learning using Virtual Environments** – learning assessment involving virtual environments such as serious games, virtual reality. Students design game documents and/or game mods with performance assessment.
- **Systematic Design of Instruction** – systematic and procedural learning analysis methods for instructional design and development.

2004–2012   Courses taught in old specialty area (Instructional Design/Technology)
- Assessment and Learning Using Virtual Environments
- Advanced Research in Games and Simulations
- Designing Digital Games and Simulations
- Advanced Development of Interactive Learning System
- Instructional Authoring Tools I (Dreamweaver/Firework/Flash)
- Online Database Design

Working Experience

2004–to date   **Professor (Assistant → Associate → Full)** of Instructional Design & Technology, School of Education, Southern Illinois University
- review and create new AI-enhanced course materials, AI graduate certificate program, and conceptualize new AI Lab
- review and improve master's program for merger (reorganization in 2023) and reboot
- review and evaluate faculty teaching contents and job performance for the recommendation of Promotion & Tenure in a Research II University
- teach, review, and improve graduate courses in Instructional Design Technology
- teach online-hybrid (Zoom) and face-to-face courses as assigned
- mentor and lead graduate research towards completion of theses and dissertations
- conduct innovative research work both individually and collaboratively
- identify and apply for grants from national research agencies
- prepare and publish research reports in international research journals
- present research findings at international conference
- consult with administration on classroom technology integration and upgrades
- serve on the Board of Editors of international, high-ranking journals
- review and recommend articles for publication as Associate Editor

2009–2019   **Director** of Virtual Environment & Reality Lab (V-Lab), Southern Illinois University
- review, evaluate, and purchase technology and equipment for adoption and integration in the research lab
- supervise work of independent research scholar and graduate assistants
- interview and hire graduate research assistants
- manage research budget, and multiple projects/assignments
- seek opportunities for research collaboration with researchers (inter)nationally
- research Serious Games analytics, tracking of user-generated data in online game environment, and visualization of data and analytics

2002–2004   **Webmaster,** Department of Instructional Technology College of Education, University of Georgia
- created and administered online database and Web service for the department
- set up student database for faculty use
- set up and managed wireless network for the department

2000–2002 **E-Learning Developer,** Department of Human Resources, state of Georgia.
- developed the curriculum and designed the Preventing Workplace Violence
  e-Training course for the State of Georgia's Dept. of Human Resources (DHR)

1999–2000 **Webmaster,** Academic group of Learning Science
National Institute of Education, Nanyang Technological University, Singapore

1998–1999 **Education Officer,** Ministry of Education, Singapore
Department Head, Information Technology, Pasir Ris Primary School
- implemented educational technology in the school
- provided educational technology training to all teachers and students in the school

1996–1998 **Software Analyst,** Computer Services, Ministry of Education, Singapore
- approved Information Technology courses for teachers in Singapore
- developed training curriculum for education technology for Director, Principals,
  and all school teachers in Singapore

1993–1996 **Education Officer,** Ministry of Education, Singapore
- taught 3rd-4th grade at Pasir Ris Primary School

1991–1992 **Executive Officer,** Scholarships & Special Project, Ministry of Education, Singapore
- administered Scholarship (Countries: India, Hong Kong, and Singapore)

1990–1991 **Product Specialist,** Borneo Marketing, Inchcape Bhd, Singapore
- provided product training and pharmaceutical sales to gynecologists & surgeons

1989–1990 **Product Specialist & Clinical Trial Assistant,** CILAG Singapore
- assisted in clinical trial between CILAG and Singapore hospitals
- provided product training and pharmaceutical sales to nephrologists & surgeons