

PERSONAL DATA



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EDUCATION

Ph.D. Degree	2015	Ph.D. in Technology University of Girona, Spain
Master Degree	2001	MS. Computer Engineering Management (MsCEM) Assumption University
Bachelor Degree	1999	Bachelor of Science King Mongkut University

RESEARCH INTERESTS

Dr. Voravika Wattanasoontorn's research interests span across multiple interdisciplinary areas in digital media technology, with a primary focus on serious games, virtual reality (VR), and augmented reality (AR). She is particularly engaged in developing interactive applications aimed at educational, training, and healthcare purposes, leveraging game-based elements to enhance user engagement and learning outcomes. Her expertise also extends to human-computer interaction (HCI), visualization and interactive technologies, and computational aesthetics, where she explores how design and technology intersect to create immersive and effective user experiences. Additionally, her work includes multimedia and digital media technology development, including interactive media and package design, contributing to both academic research and practical applications in industry.

Game design principles, mechanics, and player experience optimization



Serious games and their applications



Virtual Reality (VR) and Augmented Reality (AR) for interactive experiences



Computational aesthetics and design in multimedia and digital content creation



TEACHING

Graphic Design
Digital Media
Game Design and Development

INTERNATIONAL JOURNAL ARTICLES

P. Boonrat, V. Wattanasoontorn, K. Ruktaengam, K. Boonmeeprakob, and N. Roswhan, "AI and Big Data for Assessing Carbon Emission in Tourism Areas: A Pilot Study in Phuket City" *Engineering Proceedings*, vol. 108, no. 1, p. 23, 2025, doi: 10.3390/engproc2025108023.

🔗 https://id.elsevier.com/as/authorization.oauth2?state=814a58a1-837d-4c8b-9895-6e7cd9c7b2b8&ui_locales=en-US&redirect_uri=https://www.scopus.com/pages/callback/url&client_id=SCOPUS&platSite=SC/scopus&response_type=code&scope=openid+profile+email+els_auth_info+els_analytics_info+um:com:elsevier:idp:policy:product:indv_identity&els_policy=idp_policy_indv_identity_plus&prompt=none&authType=SINGLE_SIGN_IN

📅 10/2025 📄 Journal

A. Bernik, D. Vusic, and V. Wattanasoontorn, "Computer Game Elements and its Impact on Higher Education," **Tehnički Glasnik**, vol. 16, no. 3, pp. 566–571, Sep. 2022, doi: 10.31803/tg-20220126221837.

🔗 https://www.researchgate.net/publication/363881037_Computer_Game_Elements_and_its_Impact_on_Higher_Education

📅 9/2022 📄 Journal

V. Wattanasoontorn, I. Boada, M. Sbert, J. Olivet and D. Juvinyà. LISSA a serious game to teach CPR and use of AED, *Resuscitation Journal*, Elsevier, Volume 85, Supplement 1, Page S72, May 2014.

📅 7/2014 📄 Journal

V. Wattanasoontorn, M. Sbert, and R. Garcia. Book Section: Serious Games for e-Health Care, *Springer Book of Simulations, Serious Games and Their Applications. Series: Gaming Media and Social Effects*, pages 127-146, January 2014.

📅 7/2014 📄 Journal

V. Wattanasoontorn, I. Boada, R. García, and M. Sbert. Serious games for health, *Entertainment Computing*, Elsevier, 4(4): Pages 231-247, December 2013.

📅 7/2013 📄 Journal

M. Magdics, R. Jesus Garcia, V. Wattanasoontorn, M. Sbert. Test Installation of a Marker-Based Framework for Structural Health Monitoring of Bridges, *Applied Mechanics and Materials*, Vol 477-478: Pages 813-816, 2013.

📅 7/2013 📄 Journal

V. Wattanasoontorn, I. Boada, and M. Sbert. The Framework of a Life Support Simulation Application. *The journal of Procedia Computer Science*, Elsevier, Volume 15: Pages 293-294, 2012.

📅 7/2012 📄 Journal

NATIONAL JOURNAL ARTICLES

Voravika Wattanasoontorn and Pumwit Sudachan "Factors Influencing Game Level Design Regarding Player Enjoyment :A Casual Endless Run Game Case Study" *Information Technology Journal* (Accepted)

📅 8/2020 📄 TC11

Jakraphan Chaopreecha Voravika Wattanasoontorn and Nicha Tovankasame "Dialogic Pedagogy through Creating Street Art" *Journal of Fine Arts*, Volume 15(2), July-December 2019

📅 12/2019 📄 TC11

V. Wattanasoontorn, C. Rakna. A visualization design and development of a traffic light control simulation, *APHEIT journal (Science and Technology)*, ISSN 2286-9514, Volumn 12, July-December 2017

📅 7/2017 📄 Journal

A. Prasitsupparote, V. Wattanasoontorn, and A. Bunkhongmak, Machine Learning–Based Player Performance Prediction and Adaptive Difficulty Control, in Proc. 11th Int. Conf. Digital Arts, Media and Technology (DAMT), Chiang Mai, Thailand, Feb. 4–7, 2026, ISBN: 979-8-3315-7635-6, Online ISSN: 2768-4644.

📅 2/2026 🖱️ machine learning, Games

P. Kasetsoomboon and V. Wattanasoontorn, “A Comprehensive Analysis of Sound Design in Modern Video Games,” in Proc. 9th Int. Conf. Inf. Technol. (InCIT), Phuket, Thailand, Nov. 2025.

📅 11/2025 🖱️ Games

V. Wattanasoontorn and M. Theppaitoon, “Balancing Learning Efficiency and Production Cost: A Comparative Study of 3D Visual Styles in Educational Games for Children,” in Proc. 9th Int. Conf. Inf. Technol. (InCIT), Phuket, Thailand, Nov. 2025.

📅 11/2025 🖱️ 3D Visual

P. Boonrat, V. Wattanasoontorn, K. Ruktaengam, K. Boonmeeprakob, and N. Roswhan, “AI and Big Data for Assessing Carbon Emission in Tourism Areas: A Pilot Study in Phuket City,” in *Proc. 2025 5th Int. Conf. on Electronic Communications, Internet of Things and Big Data (ICEIB 2025)*, New Taipei, Taiwan, Apr. 2025.

🌐 <https://www.iceib.asia/proceedings>

📅 4/2025 🖱️ AI and Big Data

Voravika Wattanasoontorn, Mathus Theppaitoon and Nattawut Boonsri "A features determination of an Augmented Reality Application with regards to Commercial Perspective" The 17th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON 2020), Phuket, Thailand. 2020, pp. 33-36.

📅 6/2020 🖱️ IEEE

V. Wattanasoontorn, M. Theppaitoon and A. Bernik, "A Classification of Visual Style for 3D Games," 2019 23rd International Computer Science and Engineering Conference (ICSEC), Phuket, Thailand, 2019, pp. 12-17.

📅 9/2019 🖱️ IEEE

A. Bernik, D. Radošević and V. Wattanasoontorn, "Influence, principles and good practice of computer game elements: Mechanics and Dynamics," 2019 23rd International Computer Science and Engineering Conference (ICSEC), Phuket, Thailand, 2019, pp. 241-245.

📅 9/2019 🖱️ IEEE

Boada, V. Wattanasoontorn, J. Manuel García-González, A. Rodríguez-Benítez, and M. Sbert. LISSA, a serious game to learn CPR and AED use (Best Paper Award), In the Global Conference on Teaching and Learning with Technology (CTLT 2014), Pages 130-150, Singapore, 9-10 July 2014.

📅 7/2014 🖱️ Proceeding

V. Wattanasoontorn, R. Garcia and M. Sbert. Optimal textures for 3D real time architectural visualization, In the 29th International Technical Conference on Circuit/Systems Computers and Communications (ITC-CSCC 2014), Pages 659-660 Phuket, Thailand, 1-4 July 2014.

📅 7/2014 🖱️ Proceeding

M. Sbert, I. Boada, V. Wattanasoontorn, A. Rodríguez-Benítez, J. Manuel García-González and E. Soto. A game to relive Don Quixote’s adventures, 1er Congreso de la Sociedad Española para las Ciencias del Videojuego, Barcelona, 24 juny de 2014.

📅 1/2014 🖱️ Proceeding

Boada, V. Wattanasoontorn, J. Olivet, D. Juvinyà, and M. Sbert. LISSA a serious game to teach CPR and use of AED. The poster presentation in the Congress of the European Resuscitation Council, Bilbao, Spain, 15-17 May 2014.

📅 1/2014 🖱️ Poster

V. Wattanasoontorn and M. Sbert. Interactive design of new-media for learning for children in preoperational stage. In the Asian Conference on Technology in the Classroom (ATCT2014), Pages 279-285, Osaka, Japan, 17-20 April 2014.

📅 1/2014 🖱️ Proceeding

V. Wattanasoontorn, M. Magdics, M. Sbert. A Kinect-based System for Cardiopulmonary Resuscitation

Simulation: A pilot study, Springer Lecture Notes in Computer Science (LNCS) series LNCS 8101, Serious Games Development and Applications, Pages 51-63, January 2013.

 1/2013  Proceeding

V. Wattanasoontorn, M. Magdics, and M. Sbert. A Kinect-based System for Cardiopulmonary Resuscitation Simulation: A pilot study. In the 4th International Conference on Serious Games Developments and Applications (SGDA 2013), Trondheim, Norway, 25-27 September 2013.

 1/2013  Proceeding

V. Wattanasoontorn, M. Magdics, I. Boada, and M. Sbert. Visual realism in 3D serious games for learning: A case study. In the Workshop on Interaction Design in Educational Environments, 15th International Conference on Enterprise Information Systems (ICEIS 2013), Angers, France, 5-7 July 2013.

 1/2013  Proceeding, SCOPUS

V. Wattanasoontorn, I. Boada, and M. Sbert. LISSA: A Serious Game to learn Cardiopulmonary Resuscitation. In the Games for Learning Workshop, 8th international conference on Foundations of Digital Games (FDG 2013), Crete, Greece, 14-17 May 2013.

 1/2013  Proceeding

V. Wattanasoontorn, I. Boada, and M. Sbert. The Framework of a Life Support Simulation Application. In the 4th International Conference on Games and Virtual Worlds for Serious Applications (VS GAMES12), Genoa, Italy, 29October-1November, 2012.

 1/2012  Proceeding

V. Wattanasoontorn, R. García, I. Boada, and M. Sbert. Serious games for e-healthcare. In the Asian-European Workshop on Serious Game and Simulation, 25th Annual Conference on Computer Animation and Social Agents (CASA 2012), Singapore, 9-11 May 2012.



 1/2012  Proceeding

NATIONAL PROCEEDINGS

Pumwit Sudachan, Voravika Wattanasoontorn "Factors Influencing Game Level Design Regarding Player Enjoyment, Casual-endless Runner Game as a Case Study" The Fifteen National Conference on Computing and Information Technology (NCCIT2019), July 4-5, 2019, Bangkok, 2019. p480-485

 7/2019

Mathus Theppaitoon, Voravika Wattanasoontorn "A Classification of Visual Style for 3D Games" The Fourteen National Conference on Computing and Information Technology (NCCIT2018). Chiangmai

 7/2018  NCCIT

Rakna C. and Wattanasoontorn V. "The Simulation of a GPS Based Traffic Control System, iTraffic." The Twelfth National Conference on Computing and Information Technology (NCCIT2016). Khonkaen, 2016. 182-187.

 7/2016  Proceeding

Nanon, Kantida, Voravika Wattanasoontorn and Rattana Wetprasit. "A conceptual framework of a serious game for learning enhancement in museum." The Twelfth National Conference on Computing and Information Technology (NCCIT2016). Khonkaen, 2016. 176-181

 7/2016  Proceeding

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