

Emmanuel Sylvestre Olayinka AYEDOUN

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ACADEMIC POSITIONS

Associate Professor,
Faculty of Engineering Science, Kansai University, Osaka, JAPAN

Apr. 2025 –

Assistant Professor,
Faculty of Engineering Science, Kansai University, Osaka, JAPAN

Apr. 2020 – Mar. 2025

Doctoral Research Fellow (DC1),
Japan Society for the Promotion of Science (JSPS)

Apr. 2018 – Mar. 2020

EDUCATION

Ph.D. in Informatics,
Graduate School of Humanities and Sustainable System Sciences
Osaka Prefecture University, Osaka, Japan
Thesis: Embodied Conversational Agent to Enhance Second Language
Learners' Willingness to Communicate.

Apr. 2018 – Mar. 2020

Master of Science in Informatics,
Graduate School of Humanities and Sustainable System Sciences
Osaka Prefecture University, Osaka, Japan

Apr. 2016 – Mar. 2018

Bachelor of Science in Informatics,
College of Sustainable System Sciences / School of Knowledge
and Information Systems
Osaka Prefecture University, Osaka, Japan

Apr. 2012 – Mar. 2016

RESEARCH INTERESTS

I am a researcher specializing in the development of emotionally intelligent educational systems to enhance learning experiences. My research centers on embodied conversational agents, particularly their application in second language (L2) acquisition. Through my research, I explore the convergence of artificial intelligence and human learning, developing interactive systems that aim to achieve more personalized and engaging educational experiences. At the core of my work is the goal of understanding how AI-driven systems can adapt to and support individual learning needs while maintaining meaningful human-computer interaction.

HONORS & AWARDS

Best Student Paper Award, International Conference on Computers in Education (ICCE), Manila, Philippines, 2024
Best Paper Nomination, International Conference on Computers in Education (ICCE), Manila, Philippines, 2024
Best Conference Paper Award, International Conference on Kansei Engineering and Emotion Research (KEER), Taichung, Taiwan, 2024
Research Excellence Award, Japanese Society for Artificial Intelligence (JSAI), 2020
Young Scientist Encouragement Award, SIG on Advanced Learning Science and Technology of the Japanese Society of Artificial Intelligence (SIG-ALST), 2018
Learning Innovation Excellence Award, Learning Innovation Grand Prix (LIGP), Tokyo, Japan, 2018
Young Scientist Encouragement Award, SIG on Advanced Learning Science and Technology of the Japanese Society of Artificial Intelligence (SIG-ALST), 2017
Best Student Paper Nomination, International Conference on Computers in Education (ICCE), Christchurch, New-Zealand, 2017
Best Poster Presentation Award, International Conference on Artificial Intelligence in Education (AIED), Wuhan, China, 2017
Audience Award, Learning Innovation Grand Prix (LIGP), Tokyo, Japan, 2016

Encouragement Award, Learning Innovation Grand Prix (LIGP), Tokyo, Japan, 2016
 Best Poster Presentation Award, International Conference on Knowledge Management (ICKM), Osaka, Japan, 2015
 Best Presentation Award, Young Researchers Forum on Educational and Learning Support Systems, Chiba, Japan, 2015
 Best Presentation Award, Young Scientists Research Contest, Kansai Section of Japanese Society for Information and Systems in Education (JSiSE), Osaka, Japan, 2014.
 Osaka Prefecture University President Excellence Awards (2016, 2017, 2018, 2019)

SELECTED JOURNAL PAPERS

- J01** Sakaguchi, S., **Ayedoun, E.**, & Tokumaru, M., "A System for Enhancing Exercise Motivation through Peer Learning with Agents", *Journal of the Japanese Society for Fuzzy Theory and Intelligent Informatics*, Vol. 36, No. 2 (2025), *Accepted*.
- J02** Inoue, S., **Ayedoun, E.**, Takenouchi, H., & Tokumaru, M., "Leveraging Interactive Evolutionary Computation to Induce Serendipity in Informal Learning", *Multimodal Technologies and Interaction Journal*, Vol. 8, No. 11: 103, (2024). <https://doi.org/10.3390/mti8110103>
- J03** Sakabe, Y., **Ayedoun, E.**, & Tokumaru, M., "Leveraging IEC and Others' Viewpoints Presentation to Support Creative Thinking", *International Journal of Affective Engineering*, Vol.23, No.2, pp.157-168, (2024).
- J04** **Ayedoun, E.**, Goto, M., & Tokumaru, M., "Swarm Intelligence Inspired Approach for Dynamic Tracking of Members' Interests in Online Discussion Groups", *International Journal of Affective Engineering*, Vol. 22, No. 3, pp. 209-220, (2023). <https://doi.org/10.5057/ijae.IJAE-D-22-00012>.
- J05** **Ayedoun, E.**, Hayashi, Y., & Seta, K., "An Authoring Tool for Task-Oriented Dialogue Scenarios Design in EFL Context", *Research and Practice in Technology Enhanced Learning*, Vol. 18, Article 27 (2023). <https://doi.org/10.58459/rptel.2023.18027>
- J06** **Ayedoun, E.**, & Tokumaru, M., "Towards Emotionally Expressive Virtual Human Agents to Foster L2 Production: insights from a preliminary Woz experiment", *Multimodal Technologies Interaction Journal*, Special Issue on Multimodal Conversational Interaction and Interfaces, Volume II, Vol. 6, pp.77-91 (2022). <https://doi.org/10.3390/mti6090077>
- J07** **Ayedoun, E.**, Hayashi, Y., & Seta, K., "Towards Personalized Scaffolding and Fading of Motivational Support in L2 Learner-Dialogue Agent Interactions: An Exploratory Study", *IEEE Transactions on Learning Technologies*, Vol. 13, No. 3, pp. 604-616 (2020). <https://doi.org/10.1109/TLT.2020.2989776>
- J08** **Ayedoun, E.**, Hayashi, Y., & Seta, K., "Dialogue Agents and Learning Support", *Transactions of Japanese Society for Information and Systems in Education*, Vol.36, No.4, pp. 221-232 (2019).
- J09** **Ayedoun, E.**, Hayashi, Y., & Seta, K., "Adding Communicative and Affective Strategies to an Embodied Conversational Agent to Enhance Second Language Learners' Willingness to Communicate", *International Journal of Artificial Intelligence in Education*, Vol.29, No.1, pp. 29-57, Springer (2019).
- J10** **Ayedoun, E.**, Hayashi, Y., & Seta, K., "Web-services Based Conversational Agent to Encourage Willingness to Communicate in EFL Context", *The Journal of Information and Systems in Education*, Vol.14, No.1, pp. 15-27 (2016).

COMPETITIVE RESEARCH GRANTS

Integrating Multimodal AI and Augmented Reality for Immersive Second Language Acquisition: Development and Empirical Validation,
 (マルチモーダル AI と AR 技術を統合した没入型第二言語学習環境の開発と効果検証),
 Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for Early-Career Scientists (#25K21363),
 JPY 4,980,000; PI

Apr. 2025 - Mar. 2028

Practical Evaluation of Effects of an Emotion-aware Conversational Agent in L2 Learning,
 Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for Early-

Apr. 2022 - Mar. 2025

Career Scientists (#22K18011),
JPY 4,550,000; PI

Exploring Emotional Communication to Enhance Learning Motivation
(学習意欲を高める情動コミュニケーションの探求),

Jun. 2022 - Mar. 2024

Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for
Challenging Research (#22K18595)

JPY 6,370,000; Co-PI with PI Kazuhisa Seta

**Semi-automatic Generation of English Dialogue Scenarios Based on
Service Process Model,**

Apr. 2020 - Mar. 2022

Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for
Research Activity Start-up (#20K23353),

JPY 2,860,000; PI

**A Model for Classroom Practice and Motivation with Dialogue Agents to
Motivate Second Language Conversation,**

Apr. 2018 - Mar. 2021

Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for
Scientific Research (B) (#18H03345),

JPY 17,290,000; Co-PI with PI Kazuhisa Seta

**Developing a Conversational Agent to Enhance Willingness to
Communicate in a Second Language,**

Apr. 2018 - Mar. 2020

Japan Society for the Promotion of Science (JSPS) Grant-in-Aid for JSPS
Fellows (#18J22445),

JPY 2,200,000; PI

TEACHING EXPERIENCE

Instructor, Special Topics on Human Interface, 2025- Current

Instructor, Problem-Based-Learning (3D Interfaces Design), 2025- Current

Instructor, Global Problem-Based-Learning (Arduino Circuits), 2021- Current

Instructor, Applied Programming (C language), 2020- Current

Instructor, Programming Project (Java language), 2020- Current

Instructor, Electrical Systems and Circuit (Operational Amplifiers), 2020- Current

Teaching Assistant, Introduction to Information Systems, 2017, 2018 (Osaka Prefecture University)

Teaching Assistant, Knowledge Modeling, 2016 (Osaka Prefecture University)

EXTERNAL ACADEMIC SERVICE

Extended Summary (ES) track Chair, Intl. Conf. on Computers in Educ. (ICCE 2025)

Extended Summary (ES) track Co-Chair, Intl. Conf. on Computers in Educ. (ICCE 2024)

Local Organizing Committee Member, ICCE 2023

Program Co-Chair, 2023 Annual Meeting of the Japanese Society for Information and Systems in
Education

Local Chair, Japan Young Researchers Forum on Educ. and Learning Support Systems, 2023

Program Co-Chair, Japan Young Researchers Forum on Educ. and Learning Support Systems, 2022

Student Volunteer, International Semantic Web Conference (ISWC 2016)

Student Volunteer, International Conference on Knowledge Management (ICKM 2015)

Student Volunteer, ICCE 2014

Reviewer: International Journal of Artificial Intelligence in Education (IJAIED), Research and Practice in
Technology enhanced Education (RPTEL), IEEE-Transactions on Learning Technologies (IEEE-TLT),
International Journal of Human-Computer Interaction (IJHCI), IEICE (Japan Institute of Electronics,
Information and Communication Engineers) Transactions, International Conference on Computers in

	Education (ICCE), Australasian Journal of Educational Technology (AJET), etc.
INTERNAL ACADEMIC SERVICE	Curriculum Review Committee , Department of EEIE, Kansai University, 2024 - Present International Research & Collaboration Promotion Committee , Kansai University (KU), 2024 - Present Bachelor/Master's Project Presentation Planning Committee , Department of EEIE, KU, 2021 – Present Internationalization and Outreach Programs Committee , Department of EEIE, KU, 2021 - Present Newly Enrolled Students Orientation Committee , Department of EEIE, KU, 2020 – Present Website Administrator , Department of EEIE, KU, 2020 – Present Students Career Advisor , Department of EEIE, Kansai University, 2023 – 2024 Executive Committee Member , Academic Staff Union of KU, 2022 – 2023 Organizing Committee , International Symposium on Science and Technology, (ISST2021)
LANGUAGE PROFICIENCY	French: Native Japanese: Professional working proficiency English: Professional working proficiency