

Yugo Hayashi (Ph. D)

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Citizenship: Japan

Affiliations

Ritsumeikan University (present)

College of Comprehensive Psychology, **Professor** (2021-)

College of Comprehensive Psychology, **Associate Professor** (2016-2021)

Department of Psychology, Faculty of Letters, **Associate Professor** (2014-2016)

Department of Information and Communication Science, College of Information Science and Engineering, **Assistant Researcher** (2010-2013)

University of Tsukuba

Faculty of Library, Information and Media Science. **Assistant Professor** (2013-2014)

Nagoya University

Graduate School of Information Science. **Researcher** (2009-2010)

Carnegie Mellon University

Faculty of Library, Human Computer Interaction Institute. **Visiting Faculty** (2017-2018)

Research interests

Cognitive Science

Problem Solving, Creativity, Emotion, Discourse, Collaboration.

Educational Technology

Intelligent Tutoring Systems, Pedagogical Conversational Agents, Computer-Supported Collaborative Learning.

Human-Computer Interaction

Conversational Agents, Human-Agent(Robot) Interaction, Computer-Mediated Communication.

Education

Nagoya University Nagoya, Japan

Ph.D. in Information Science, Graduate School of Information Science (April, 1, 2006-March, 31, 2009)

M.s. in Information Science, Graduate School of Information Science (April, 1, 2004-March, 31, 2006)

Awards

Telecommunications Advancement Foundation Prize, The Telecommunications Advancement Foundation (2022)

Best full paper award(ITS2018), International Conference on Intelligent Tutoring Systems (2018)

Outstanding paper award, International Congress on Advanced Applied Informatics (2017)

KDDI Foundation honorable mention jury's award, KDDI Foundation (2017)

Nojima prize, Japanese Cognitive Science Society (2015)
Honorable mention paper award, Society of Human Agent Interaction (HAI) (2013)
Award of excellence at research meeting, Japanese Society of Artificial Intelligence (2013)
Computational modeling prize (applied cognition) Paper award(CogSci2012), Cognitive Science SocietyU.S.A. (2012)

Grants

Hayashi, Y. "A Comprehensive Study on Mutual Teaching in a Hybrid Cooperative Learning Environment with Learners and AI", Grant-in-Aid for Scientific Research (KAKENHI) Scientific Research (B) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 23H03510 (18,720,000 yen) (April, 2023-March, 2028)

Marutschke, D, M., Hayashi, Y. (Co-Investigator), "Understanding E-Learning Features in Online Courses", Grant-in-Aid for Scientific Research (KAKENHI) Scientific Research (C) Challenging Exploratory Research from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 22K02874 (3,900,000 yen) (April, 2022-March, 2025)

Hayashi, Y. "Comprehensive study on fostering active learning using an intelligent tutoring System for collaborative learning", Grant-in-Aid for Scientific Research (KAKENHI) Scientific Research (B) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 20H04299 (18,200,000 yen) (April, 2020-March, 2024)

Hayashi, Y. "Envestigating interaction factors in small groups: Development of an experimental system based on cognitive science methods", Grant-in-Aid for Challenging Exploratory Research from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 20K20873 (6,370,000 yen) (April, 2020-March, 2023)

Hayashi, Y. "Comprehensive Study on the collective emotions and bias on the electronic network communication", Grant-in-Aid for Scientific Research (KAKENHI) Scientific Research (C) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 16KT0157 (4,810,000 yen) (July, 2016-March, 2020)

Hayashi, Y. "Comprehensive Study on the agent-based reflection in cooperative learning", Grant-in-Aid for Scientific Research (KAKENHI) Scientific Research (C) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 16K00219 (4,550,000 yen) (April, 2016-March, 2019)

Huang, H., Hayashi, Y. (Co-Investigator), "Study of response model using multi-modal information for active listening agent", Grant-in-Aid for Scientific Research (KAKENHI) Challenging Exploratory Research from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 16K00289 (4,420,000 yen) (April, 2016-March, 2019)

Takeuchi, Y., Hayashi, Y.(Co-Investigator), "Activation of learning interaction triggered by self-efficiency and approval desire", Grant-in-Aid for Scientific Research (KAKENHI) Challenging Exploratory Research from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 15K12410 (3,380,000 yen) (April, 2015-March, 2018)

Hayashi, Y. "Experiment and its application on pedagogical agent to promote the cooperative learning activities", Grant-in-Aid for Scientific Research (KAKENHI) Encouragement of Young Scientists (B) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 25870910 (3,510,000 yen) (April, 2013-March, 2016)

Hayashi, Y. "Conversational agent that supports collaborative learning", KDDI Foundation Research Grant Program (2,700,000 yen) (April, 2013-March, 2016)

Hayashi, Y. "Collaborative problem solving in the presence of minority perspectives", Grant-in-Aid for Scientific Research (KAKENHI) Encouragement of Young Scientists (B) from the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXTGrant), Grant No. 23700325 (2,600,000 yen) (April, 2011-March, 2013)

Publications

Journals

(Selected Articles)

Hayashi, Y. (in press). Modeling synchronization for detecting collaborative learning process using a pedagogical conversational agent: Investigation using recurrent indicators of gaze, language, and facial expression, **International Journal of Artificial Intelligence in Education**. IF=4.98(2022)

Hayashi, Y. (in press). Newcomers and the Innovative Group Process: An Experimental Investigation of Convergence in Collaborative Problem Solving, **Journal of Experimental Psychology: Learning, Memory, and Cognition**. IF=3.14(2023.4)

Hayashi, Y. (2020). Gaze awareness and metacognitive suggestions by a pedagogical conversational agent: An experimental investigation on interventions to support collaborative learning process and performance, **International Journal of Computer-Supported Collaborative Learning**, 15(4), 469-498. IF=5.61(2021)

Hayashi, Y. (2019). Multiple Pedagogical Conversational Agents to Support Learner-Learner Collaborative Learning: Effects of Splitting Suggestion Types, **Cognitive Systems Research**, 54, 249-257. IF=4.45(2023.4)

Hayashi, Y. (2018). The power of a "Maverick" in collaborative problem solving: An experimental investigation of individual perspective taking within a group, **Cognitive Science**, 42(S1), 69-104. **IF=2.61**(2021)

Journals
(Including Japanese
Articles)

Kiuchi, K., Otsu, K., & Hayashi, Y. (in press), "Psychological Insights into the Research and Practice of Embodied Conversational Agents, Chatbots and Social Assistive Robots: A Systematic Meta-Review", **Behaviour & Information Technology**. **IF=3.7**(2022)

Shimojo, S., Ohmoto, Y., Morita, J., & Hayashi, Y. (in press). "Prompting awareness about differences between self-others' externalized knowledge: Experimental study on supporting explanation activity for collaborative learning", **The IEICE Transactions on Information and Systems (Japanese Edition)**.

Otsu, K., Kiuchi, K., & Hayashi, Y. (in press), "Interactive Mental Health Support with a Chatbot Based on the Solution-Focused Approach: a Validation with Elderly People", **The Transactions of Information Processing Society of Japan**, 25(1).

Otsu, K., Nishida, Y., Kiuchi, K., & Hayashi, Y. (2022), "Introducing Conversation Tasks Based on the Solution Focused Approach to a Chatbot for Personalized Mental Health Care Support", **The Transactions of Human Interface Society**, 24(4), 285-300.

Marutschke, D. M., & Hayashi, Y. (2022), "AI-Supported Evaluation of KANO Model Features for Online Courses", **ICIC Express Letters**, 16(5), 505-512.

Hayashi, Y., Tamura, M., & Matsumuro, M. (2022) "Lexical alignment at the word level in Japanese and the influence of top-down processing: An online experiment of the Japanese version of a picture matching task", **The Japanese Journal of Psychonomic Science**, 40(2), 98-109.

Shimojo, S., & Hayashi, Y. (2021). Facilitating explanation activities using a concept map in collaborative learning: Focusing on coordination and argumentation process. **Cognitive Studies**, 26(3), 343-356.

Hayashi, Y. (2020). "Supporting Explanation Activities Using WESPA: An Investigation on Learning Effect by Posing Conversational Log Scripts Generated by Online Group Members", **The IEICE Transactions on Information and Systems (Japanese Edition)**, J103-D(10), 676-684.

Hayashi, Y. (2020). "Predicting self-confidence in a web-based explanation activity with a pedagogical conversational agent: Investigation on individual characteristics and task work activity", **The Transactions of Human Interface Society**, 22(3), 263-270.

Hayashi, Y. (2019). Towards supporting collaborative learning with an intelligent tutoring system: Predicting learning process by using gaze and verbal information. **Cognitive Studies**, 26(3), 343-356.

Rienovita, E. Taniguchi, M. Kawahara, M. Hayashi, Y. & Takeuchi, Y.(2018) "Implementation of Interactive Peer Learning Environment Enhances Learners' Self-Esteem and Self-Efficacy", **International Journal of Learning Technologies and Learning Environments**, 1(1), 1-24.

Hayashi, Y. (2018). Using embodied pedagogical agents in collaborative learning by knowledge integration: An experimental investigation on instruction and gaze gestures using eye movement analysis, **The Transactions of Human Interface Society**,20(1), 79-88.

Hayashi, Y. (2017). Effects of Trust Building Process on Perspective Taking in Collaborative Problem Solving: An Experimental Investigation Using Agents, **Transactions of the Japanese Society for Artificial Intelligence : AI**, 32(4), 1-9(E-G91).

Huang, H., Shibusawa, S., Hayashi, Y., Kawagoe, K.(2016). Proposal of the Numeric Evaluation Model between the Participants in Active Listening Conversation for Developing a Listener Agent, **The Transactions of Human Interface Society**,18(4), 373-384.

Hayashi, Y. (2016). Lexical Network Analysis on an Online Explanation Task: Effects of Affect and Embodiment of a Pedagogical Agent, **IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences**, E99-D(6), 1455-1461. **IF=0.42(2023.4)**

Hayashi, Y. & Inoue, T.(2015). Designing collaborative learning by multiple pedagogical conversational agents. **The IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences (Japanese Edition)**,J98-A (1), 76-84.

Hayashi, Y. (2014). An agent-based experimental study on collaboration. **Cognitive Studies**, 21(3), 382-395.

Hayashi, Y. (2014). Facilitating creative thinking by interacting with interface agents: An investigation on the factor of multiplicity and media type. **The IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences (Japanese Edition)**,J97-A(6), 443-452.

Hayashi, Y. (2014). Facilitating explanation activities using conversational agents based on dual-channel model during collaborative explanation activities. **The IEICE Transactions on Information and Systems(Japanese Edition)**,J97-D(1), 17-27.

Hayashi, Y. & Kryssanov, V.(2013). An empirical investigation of similarity-driven trust dynamics in social networks. **Procedia - Social and Behavioral Sciences**,79(6), 27-37.

Hayashi, Y. (2013). Facilitating Perspective Taking in Groups: An Analysis Using Multiple Conversational Agents. **International Journal of Software Science and Computational Intelligence (IJSSCI)**,5(1), 1-14.

Hayashi, Y. & Urao, A.(2013). Influence of agent and learners' self-other characteristics on a web-based learning environment. **The Transactions of Human Interface Society**,15(3), 209-218.

Hayashi, Y. & Ogawa, H.(2013). Using a Pedagogical Conversational Agent to facilitate collaborative learning: an analysis on emotional expressions. **The IEICE Transactions on Information and Systems(Japanese Edition)**,J96-D(1), 70-80.

Hayashi, Y. & Ogawa, H.(2012). Development of a platform for experimental studies on collaborative problem solving based on large numbers. **Journal of the Japan Society for Fuzzy Theory and Intelligent Informatics**,24(4), 848-856.

Hayashi, Y., Cooper, E., Kryssanov, V., Urao, A. & Ogawa, H.(2012). Psychological characteristics on communication with a conversational agent:A study on schema and embodiment. **Transactions of Japan Society of Kansei Engineering** ,11(3), 459-467.

Hayashi, Y., Kryssanov, V., & Ogawa, H.(2012). An experimental study on multiple conversational agents for facilitating creative interpretations. **Computer Human Interaction of ICIC Express Letters**, 6(12), 3009-3014.

Hayashi, Y. & Miwa, K. (2011). Understanding Other's Perspectives in Conflict Communication. **Cognitive Studies**, 18(4), 569-584.

Hayashi, Y. & Miwa, K. (2008). Cognitive and emotional characteristics in Human-Human/Human-Agent Interaction. **The Transactions of Human Interface Society**, 10(4), 445-456.

Hayashi, Y. & Miwa, K. & Morita, J. (2007). A Laboratory Study on Collaborative Problem Solving by Taking Different Perspectives. **Cognitive Studies**, 14(4), 604-619.

Conference Papers
(All in English)

Meza, X. V., Shimojo, S., Hayashi, Y. (2023) Semantic Network Analysis of a Learning Task Among Japanese Students of Psychology. Proceedings of 29th International Conference on Collaboration Technologies and Social Computing (**CollabTech 2023**) 168-175.37.5%(12/32)

Watanabe, E., Shimojo, S., Hayashi, Y. (2023) Influence of olfactory stimulation on problem-solving work performance: Experimental study on the effect of coffee aroma. Proceedings of the 20th International Conference on Collaboration Technologies and Social Computing (**CollabTech 2023**) 43-48.

Abe, L., Hattori, M., & Hayashi, Y.(2023)Differences between human and robot experimenters in creative problem solving: An experimental investigation focusing on fear of negative evaluation Proceedings of the 13th International Conference on Cognitive Science 24. (**ICCS2023**).

Meza, X. V., Shimojo, S., & Hayashi, Y.(2023)Online Cognition Networks in Collaborative Learning among Japanese Youngsters and Elders Proceedings of the 13th International Conference on Cognitive Science 23. (**ICCS2023**)

Hamada, T., Otsu, K., & Hayashi, Y.(2023) Behavioral characteristics in general trust: an exploratory laboratory -based analysis using the ultimatum game Proceedings of the 44th Annual Meeting of the Cognitive Science Society (**CogSci 2023**) 1845-1822, 43.4%(380/875)

Hayashi, Y. (2023) Using Real-Time Gaze Feedback and Interventions to Facilitate Coordinative Behavior: An Investigation with Recurrent Analysis Proceedings of the 3rd Annual Meeting of the International Society of Learning Sciences(**ISLS2023**), 177-180. 32%(19/59)

Morita, J. Kano, X, Shimojo, S. Ohmoto, Y. & Hayashi, Y. (2023) Model-based Support for Collaborative Concept Mapping in an Open-ended Domain Proceedings of the 19th International Conference on Intelligent Tutoring Systems (**ITS2023**) in press

Hayashi, Y. Wakabayashi, K. & Nishida, Y. (2023) How sequential suggestions from a robot and human jury influence decision making: A large scale investigation using a court sentencing judgment task Proceedings of the 18th Annual ACM/IEEE International Conference on Human Robot Interaction (**HRI2023**) 338-341 75%

Shimojo, S. Hayashi, Y. (2022) The Influence of Awareness of a Difference between Concept Mapson Transfer: Experimental Investigation on the Efficacy in Collaborative Learning Proceedings of the 30th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education (**ICCE2022**) 176-181 39%(60/153)

Marutschke, D, M. Hayashi, Y. (2022) Comparing Short-Term and Long-Term Online Courses Using the Kano Model and Neural Network Language Models Proceedings of the 30th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education (**ICCE2022**) 352-357 39%(60/153)

Hayashi, Y. Shimojo, S. (2022) Relevant Knowledge Use During Collaborative Explanation Activities: Investigation by Laboratory Experiment and Computer Simulation Using ACT-R Proceedings of 28th International Conference on Collaboration Technologies and Social Computing (**CollabTech 2022**) 52-66 47%(18/38)

Marutschke, D, M. Hayashi, Y. (2022) Kano Model-Based Macro and Micro Shift in Feature Perception of Short-Term Online Courses. Proceedings of the 28th International Conference on Collaboration Technologies and Social Computing (**CollabTech 2022**) 112-125 47%(18/38) Santiago (Chile)

Hayashi, Y. Shimojo, S. (2022) Modeling perspective taking and knowledge use in collaborative explanation: Investigation by laboratory experiment and computer simulation using ACT-R Proceedings of the 23rd International Conference on Artificial Intelligence in Education (**AIED2022**) 647-652 39%(77/197)

Ohmoto, Y. Shimojo, S. Morita, J. & Hayashi, Y. (2022) Investigating Clues for Estimating Near-Future Collaborative Work Execution State based on Learners' Behavioural Data during Collaborative Learning Proceedings of the 18th International Conference on Intelligent Tutoring Systems (**ITS2022**) 343-349

Shimojo, S. Hayashi, Y. (2021) Laboratory Study on ICAP Interventions for Interactive activity Investigation Based on Learning Performance Proceedings of the 29th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education (**ICCE2021**) 132-141 25.9%(30/116)

Marutschke, D, M. Hayashi, Y.(2021).Ex-Ante and Ex-Post Feature Evaluation of Online Courses Using the Kano Model. Proceedings of the 17th International Conference on Intelligent Tutoring Systems (**ITS2021**) 298-309. [FULL Paper]

Ohmoto, Y.Shimojo, S.Morita, J. & Hayashi, Y.(2021) Investigating Clues for Estimating ICAP States based on Learners' Behavioural Data during Collaborative Learning. Proceedings of the 17th International Conference on Intelligent Tutoring Systems (**ITS2021**)217-223.

Morita, J.Ohmoto, Y. & Hayashi, Y.(2021)Integrating Knowledge in Collaborative Concept Mapping: Cases in an Online Class Setting Proceedings of the 17th International Conference on Intelligent Tutoring Systems (**ITS2021**) 97-103.

Hayashi, Y.Shimojo, S.(2021)Investigating gaze behavior of dyads in a collaborative explanation task using a concept map: Influence of facilitation prompts on perspective taking. Proceedings of the 1st Annual Meeting of the International Society of Learning Sciences(**ISLS2021**) 149-152.

Shimojo, S. Hayashi, Y. (2020) Prompting Learner-Learner Collaborative Learning for Deeper Interaction: Conversational Analysis Based on the ICAP Framework Proceedings of the 28th International Conference on Computers in Education(**ICCE2020**)177-182.

CAI, Y. Shimojo, S.& Hayashi, Y. Observing Facial Muscles to Estimate the Learning State During Collaborative Learning: A Focus on the ICAP Framework., Proceedings of the 28th International Conference on Computers in Education(**ICCE2020**) 119-126. [FULL PAPER]

Hayashi, Y.Wakabayashi, K.(2020). Experimental investigation on the influence of prior knowledge of a decision-support robot for court juries, Proceedings of the 15th Annual ACM/IEEE International Conference on Human Robot Interaction (**HRI2020**)companion, 236-238.

Hayashi, Y.Wakabayashi, K.(2020). Experimental investigation on the influence of prior knowledge of a decision-support robot for court juries, Proceedings of the 15th Annual ACM/IEEE International Conference on Human Robot Interaction (**HRI2020**)companion, 236-238.

Shimojo, S. Hayashi, Y.(2019). How shared concept mapping facilitates explanation activities in collaborative learning: An experimental investigation into learning performance in the context of different perspectives, Proceedings of the 27th International Conference on Computers in Education (**ICCE2019**), 172-177.

Hayashi, Y. Koedinger, K.(2019). What are you talking about?: A Cognitive Task Analysis of how specificity in communication facilitates shared perspective in a confusing collaboration task, Proceedings of the 41st Annual Conference of the Cognitive Science Society(**CogSci2019**),1887-1893.

Maehigashi, A. Hayashi, Y.(2019). Effect of Suggestions from a Physically Present Robot on Creative Generation, Proceedings of the 41st Annual Conference of the Cognitive Science Society(**CogSci2019**), 2242-2247.

Hayashi, Y.(2019). Detecting Collaborative Learning through Emotions: An Investigation using Facial Expression Recognition, Proceeding of the 15th International Conference on Intelligent Tutoring Systems(**ITS2019**), 89-98

Hayashi, Y.(2019). A preliminary study on the use of emotional recurrence analysis to identify coordination in collaborative learning, Proceedings of the 24th Annual ACM International Conference on Intelligent User Interfaces (**IUI2019**)companion, 5-6

Hayashi, Y., Wakabayashi, K. Shimojyo, S. Kida, Y.(2019). Using decision support systems for juries in court: Comparing the use of real and CG robots, Proceedings of the 14th Annual ACM/IEEE International Conference on Human Robot Interaction (**HRI2019**)companion, 556-557.

Hayashi, Y.(2018). Towards a Pedagogical Conversational Agent for Collaborative Learning: A Model Based on Gaze Recurrence and Information Overlap, Proceedings of the 40th Annual Conference of the Cognitive Science Society(**CogSci2018**), 471-476.

Hayashi, Y., Takeuchi, Y.(2018). The influence of task activity and the learner's personal characteristics on self-confidence during an online explanation activity with a conversational agent, Proceedings of the 11th International Conference on Educational Data Mining(**EDM2018**), 286-291.

Hayashi, Y.(2018). Gaze Feedback and Pedagogical Suggestions in Collaborative Learning: Investigation of Explanation Performance on Self's Concept in a Knowledge Integration Task, Proceeding of the 14th International Conference on Intelligent Tutoring Systems(**ITS2018**), 78-87.

Hayashi, Y., Wakabayashi, K.(2018). Influence of robophobia on decision making in a court scenario: A preliminary experimental investigation using a simple jury task, Proceedings of the 13th Annual ACM/IEEE International Conference on Human Robot Interaction (**HRI2018**)companion, 121-122.

Hayashi, Y.(2017). An Experimental Investigation on Using Pedagogical Conversational Agents: Effects of Posing Facilitation Prompts in Oral-Based Peer Learning, Workshop Proceedings of the 25th International Conference on Computers in Education (**ICCE2017**), 454-460.

Hoshida, M., Tamura, M. & Hayashi, Y.(2017). Lexical Entrainment Toward Conversational Agents: An Experimental Study on Top-down Processing and Bottom-up Processing, Proceedings of the 4th international conference on Human-Agent Interaction (**HAI2017**), 189-194.

Rienovita, E., Taniguchi, M., Kawahara, M., Hayashi, Y. & Takeuchi, Y.(2017). Effect of Human Agent Interaction Improves Self-esteem and Students' Motivation, Proceedings of the 6th International Congress on Advanced Applied Informatics (**AAI-2017**), 1-7.

Hayashi, Y. & Okada, R. (2017). Compound effects of expectations and actual behaviors in human-agent interaction: Experimental investigation using the Ultimatum Game, Proceedings of the 39th Annual Conference of the Cognitive Science Society(**CogSci2017**), 2168-2173.

Hayashi, Y. & Wakabayashi, K. (2017). Can AI become reliable source to support human decision making in a court scene?, Proceedings of the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing(**CSCW 2017**), 195-198.

Hayashi, Y., Orita, R. & Kajiwara, S.(2017). Negative electronic word-of-mouth can support product recommendation: experimental investigation, Proceedings of the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing(**CSCW2017**), 191-194.

Kitamura, A. & Hayashi, Y.(2016). Effects of Deformed Embodied Agent during Collaborative Interaction Tasks: Investigation on Subjective Feelings and Emotion, Proceedings of the 4th international conference on Human-Agent Interaction (**HAI2016**), 235-237.

Miwa, K., Hayashi, Y. & Terai, H.(2016). Unifying Conflicting Perspectives in Group Activities: Roles of Minority Individuals Proceedings of the 38th Annual Conference of the Cognitive Science Society(**CogSci2016**), 247-252.

Hayashi, Y.(2016). The effect of “mood”: Group based collaborative problem solving by taking different perspectives, Proceedings of the 38th Annual Conference of the Cognitive Science Society(**CogSci2016**), 818-823.

Hayashi, Y.(2016). Coordinating knowledge integration with pedagogical agents: Effects of agent gaze gestures and dyad synchronization, Proceeding of the 13th International Conference on Intelligent Tutoring Systems(**ITS2016**), Lecture Notes in Computer Science, Springer-Verlag, Vol. 9684, 254-259.

Hayashi, Y.(2016). Analyzing Lexical Expressions in a Human-Agent Online Explanation Task: Influence of Affect and Characteristics Proceedings of the 19th ACM Conference on Computer Supported Cooperative Work and Social Computing(**CSCW2016**) Companion, 285-288.

Hayashi, Y.(2015). Influence of Social Communication Skills on Collaborative Learning with a Pedagogical Agent: Investigation Based on the Autism-spectrum Quotient, Proceedings of the 3rd international conference on Human-Agent Interaction (**HAI2015**),135-138.

Hayashi, Y., & Marutschke, M, D. (2015). Designing Pedagogical Agents to Evoke Emotional States in Online Tutoring. Investigating the Influence of Animated Characters Proceeding of the 15th International Conference on Human-Computer Interaction(**HCI2015**), (P. Zaphiris and A. Ioannou (Ed.): Learning and Collaboration Technologies, LNCS 9192, Springer), 372-383.

Hayashi, Y. (2015).Psychological Effects of In-Group Activity Feedback in an Online Explanation Task: Lexical Network Analysis. Proceedings of the 8th International Conference on Educational Data Mining(**EDM2015**), 484-487.

Hayashi, Y. (2015).Explanation Activities with a Pedagogical Agent in an Online Task: Lexical Network Analysis. Proceedings of ACM Conference on Human Factors in Computing Systems(**CHI2015**) WIP, 1457-1460.

Hayashi, Y., & Kojima, K. (2014). The use of a maverick in collaborative problem solving: Investigating the implicit and explicit process. Proceeding of the 7th International Conference on Collaboration Technologies(**CollabTech2014**), 16-28.

Hayashi, Y. (2014). Togetherness: Multiple Pedagogical Conversational Agents as Companions in Collaborative Learning. Proceeding of the 12th International Conference on Intelligent Tutoring Systems(**ITS2014**), (In S. Trausan-Matu et al.(Eds.)Lecture Notes in Computer Science, Springer-Verlag, Vol 8474), 114-123.

Hayashi, Y. (2013). Facilitating Creative Cognition by Embodied Conversational Agents. Workshop Proceedings of the 21st International Conference on Computers in Education(**ICCE2013**), 175-182.

Hayashi, Y. (2013). The effect of "Trust dynamics": Perspective taking during collaborative problem solving. Proceedings of the 35th Annual Conference of the Cognitive Science Society(**CogSci2013**), 2500-2505

Hayashi, Y., & Ono, K. (2013). Embodied Conversational Agents as Peer Collaborators: Effects of Multiplicity and Modality. Proceedings of the 22nd IEEE International symposium on robot and human interactive communication(**RO-MAN2013**), 120-126.

Huang, H., Shibusawa, S., Hayashi, Y., Kawagoe, K.(2013). Toward a Virtual Companion for the Elderly: an Investigation on the Interaction between the Attitude and Mood of the Participants during Active Listening. Proceedings of the 1st international conference on Human-Agent Interaction (**iHAI 2013**), 112. ¡Honorable Mention Paper Award¡

Hayashi, Y., Kryssanov, V., & Huang, H.(2013). Influence of pedagogical agents' and learners' social status on an online tutoring task: Investigation on affective state. Proceedings of the 1st international conference on Human-Agent Interaction (**iHAI 2013**), 132.

Shibusawa, S. Huang, H. Hayashi, Y., & Kawagoe, K.(2013). Toward a Virtual Companion for the Elderly: Exploring the Behaviors that Potentially Achieve Rapport in Human Communication. Proceeding of the 15th International Conference on Human-Computer Interaction(**HCI2013**), 21-26.

Hayashi, Y., Kryssanov, V., Ogawa, H.(2013). An empirical investigation of similarity-driven trust dynamics in a social network. Proceeding of the 15th International Conference on Human-Computer Interaction(**HCI2013**), (M. Kurosu (Ed.): Human-Computer Interaction, Part III, HCI2013, LNCS 8006, Springer), 20-28.

Hayashi, Y.(2013). Learner-Support Agents for Collaborative Interaction: A Study on Affect and Communication Channels. Proceedings of the 10th International Conference on Computer Supported Collaborative Learning(**CSCL2013**), 232-239.

Hayashi, Y.(2013). Pedagogical conversational agents for supporting collaborative learning: Effects of communication channels. Proceedings of ACM Conference on Human Factors in Computing Systems(**CHI2013**) WIP, 655-660.

Yukawa, M., Hayashi, Y., Ogawa, H., Kryssanov, V.(2012). A Group Recommendation System with a Multi-modal User Interface. Proceedings of the 6th International Conference on Soft Computing and Intelligent Systems(**SCIS2012**), 2158-2163.

Hayashi, Y.(2012). Designing Affective Pedagogical Agents: How learners' and agents' gender and age influence emotion in an online tutoring. Proceedings of the 20th International Conference on Computers in Education(**ICCE2012**), 46-50.

Yukawa, M., Hayashi, Y., Ogawa, H.(2012). Recommender systems to support collaborative problem solving. Proceedings of the 2nd postgraduate consortium of Innovation in Information and Communication Science and Technology(**IICST2012**), 227-234.

Hayashi, Y., Matsumoto, M., & Ogawa, H.(2012). Pedagogical agents that support learning by explaining: Effects of affective feedback. Proceedings of the 34th Annual Conference of the Cognitive Science Society(**CogSci2012**), 1650-1655.

Hayashi, Y.(2012). The effect of "Maverick":A study of Group Dynamics on Breakthrough in Collaborative Problem solving. Proceedings of the 34th Annual Conference of the Cognitive Science Society(**CogSci2012**), 444-449. ;Computational Modeling Prize;

Hayashi, Y., Nakae, R., Takii, S.,& Ogawa, H.(2012). Exploring egocentric biases in human cognition: An analysis using multiple conversational agents. Proceedings of the 11th IEEE International Conference on Cognitive Informatics & Cognitive Computing(**ICCI*CC2012**), 289-294.

Hayashi, Y.,& Ogawa, H.(2012). Facilitating creative interpretations on collaboration with multiple conversational agents. Proceedings of the 10th Asia Pacific Conference on Computer Human Interaction(**APCHI2012**), 443-449.

Hayashi, Y., Kryssanov, V., Ogawa, H.(2012). From similar preferences to trust: An empirical investigation of similarity-driven trust dynamics in a social network. Proceedings of 9th conference on Applications of Social Network Analysis(**ASNA2012**), 1-20.

Hayashi, Y.(2012). On pedagogical effects of learner-support agents in collaborative interaction. Proceeding of the 11th International Conference on Intelligent Tutoring Systems(**ITS2012**), (In S.A. Cerri and B. Clancey (Eds.)Lecture Notes in Computer Science, Springer-Verlag, Vol 7315), 22-32.

Hayashi, Y.(2011). Emergence of ideas during collaboration: An experimental study using conversational agents. Proceedings of the 1st postgraduate consortium of Innovation in Information and Communication Science and Technology(**IICST2011**), 117-126.

Hayashi, Y., Huang, H., Kryssanov, V., Miwa, K., Urao, A., & Ogawa, H. (2011). Source orientation in communication with a conversational agent. Proceeding of the 11th International Conference on Intelligent Virtual Agents(**IVA2011**), (In H. H. Vilhjalmsson, S. Kopp, S. Marsella, and K. R. Thorisson (Eds.)(Lecture Notes in Computer Science, Vol 6851), 451-452.

Hayashi, Y., Cooper, E., Kryssanov, V., & Ogawa, H.(2011). Semantic Parameterization of Basic Surface Models Rendered with Phantom Omni. Proceeding of the 6th International Workshop on Haptic and Audio Interaction Design(**HAID2011**), (In E.W. Cooper, V. V. Kryssanov, H. Ogawa, S. Brewster (Eds.)Lecture Notes in Computer Science, Vol 6851), 11-21.

Hayashi, Y., Kryssanov, V., Miwa, K., & Ogawa, H.(2011). Influence of prior knowledge and embodiment on Human-Agent Integration. Proceeding of the 14th International Conference on Human-Computer Interaction(**HCI2011**), (In J.A. Jacko (Ed.)Lecture Notes in Computer Science, Vol 6762, Springer-Verlag), 513-522.

Maehigashi, A., Miwa, K., Terai, H., Kojima, K., Morita, J., & Hayashi, Y. (2011).Experimental investigation about misuse and disuse in human automation system interaction. Proceeding of the 14th International Conference on Human-Computer Interaction(**HCI2011**), (In J.A. Jacko (Ed.)Lecture Notes in Computer Science, Vol 6764, Springer-Verlag), 384-393.

Hayashi, Y., & Miwa, K.(2009).Cognitive and Emotional Characteristics of Communication in Human-Human/Human-Agent Interaction. Proceeding of the 13th International Conference on Human-Computer Interaction(**HCI2009**), (In J.A. Jacko (Ed.)Lecture Notes in Computer Science, Vol 5612, Springer-Verlag),526-531.

Hayashi, Y., & Miwa, K.(2009).Prior experience and communication media in establishing common ground during collaboration. Proceedings of the 31th Annual Conference of the Cognitive Science Society(**CogSci2009**), 526-531.

Hayashi, Y., & Miwa, K.(2008). Schema-based and Evidence-based communication in Human-Human and Human-Agent Interaction. Proceedings of 6th International Conference of Cognitive Science(**ICCS2008**), 285-288.

Hayashi, Y., Miwa, K., & Morita, J.(2006). A laboratory study on distributed problem solving by taking different perspectives. Proceedings of the 28th Annual Conference of the Cognitive Science Society(**CogSci2006**), 333-338.

Professional
Activities
Conference
Members

Association for Computing Machinery(ACM)

Cognitive Science Society

Japanese Psychological Association

Japanese Cognitive Science Society

Japanese Artificial Intelligence Society

Japanese Human Interface Society

Japan Society for Educational Technology

Institute of Electronics, Information and Communication Engineers(IEICE)

Journal Editor

Japanese Cognitive Science Society, (Guest Editor, Special Issue on Cognitive Modeling, 2019, September)

Japanese Cognitive Science Society, (Editorial Board Member, 2017-2020)

Japanese Human Interface Society, (Editorial Board Member, 2016-2019)

Institute of Electronics, Information and Communication Engineers(IEICE), Special Issue(2016, January)

Conference

Organization

International Conference on Collaboration Technologies and Social Computing(Collab Tech2023), General Chair

International Conference on Intelligent Tutoring Systems(ITS2019), Program Chair

Japanese Conference on Cognitive Science(JCSS2018), Program Chair

International Conference on Collaboration Technologies(Collab Tech2016), Publicity

International Conference on Human-Agent Interaction(HAI2014-2017), Local Chair(2014), Publication Chair(2015,2016)

International Conference on Human-Agent Interaction(HAI2014), Local Chair

IEEE International Conference on Cognitive Informatics & Cognitive Computing(ICCI*CC2012), Local Chair

Haptic and Audio Interaction Design (HAID2011), Posters and Demos Chair

International

Conference Program

Committee

International Conference on Educational Data Mining(EDM2018), Program committee member

International Conference on Human-Agent Interaction(HAI2016-2017), Program member

International Conference on Computers in Education(ICCE2014), Program member

Reviewer

Journal reviewer

Japanese Cognitive Science Society: 2010, 2013, 2014, 2015, 2016, 2017, 2018

Japanese Human Interface Society: 2013, 2015, 2016, 2017

Japanese Information Processing Society: 2013, 2014, 2016, 2017

Institute of Electronics, Information and Communication Engineers(IEICE): 2014, 2015, 2016

International

Conferences

ACM HRI:2018,2019
ACM CSCW:2016
ACM C&C(Creativity and Cognition): 2011
CogSci:2013, 2019, 2020
AIED:2011, 2013, 2015, 2017
ITS:2012, 2014, 2018, 2019, 2020
EDM:2019
ICCE:2010, 2014
HAI:2014, 2015, 2016, 2017

Teaching & Lectures Cognitive Science

“Cognitive Science” (Ritsumeikan University: April, 1, 2017-March, 31, 2020)
“Human Science” (Ritsumeikan University(Graduate School): April, 1, 2019-July, 31, 2019)
“Information Processing Psychology” (Ritsumeikan University: April, 1, 2014-March, 31, 2017)
“Thinking and Learning in Cognitive Science” (Waseda University e-school: April, 1, 2009-March, 31, 2014)

Human Computer Interaction

“Creative Knowledge Design” (Graduate School of Nagoya University: April, 1, 2014-August, 30, 2014)
“Interactive Design” (University of Tsukuba: April, 1, 2013-March, 31, 2014)
“Human Interface” (Suzuka University: April, 1, 2008-March, 31, 2011)

Programming

“Programming (Java language)” (Ritsumeikan University: April, 1, 2017-July, 31, 2020)
“Programming (C language)” (University of Tsukuba: April, 1, 2013-March, 31, 2014)
“Programming (C language)” (Ritsumeikan University: April, 1, 2010-March, 31, 2013)
“Communicative Informatics”, Network Programming (Java language) (Ritsumeikan University: April, 1, 2010-March, 31, 2013)

Statistics

“Statistics for psychology” (Ritsumeikan University: April, 1, 2016-March, 31, 2017)

Other interests

hobbies: Playing tennis, hiking to mountains, DIY etc.