

Curriculum Vitae

Yugo Havashi, Ph.D.

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Affiliation: Associate Professor, Ritsumeikan University
College of Comprehensive Psychology (main)
Graduate School of Letters, Major in Informatics of Behavior and Culture
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Positions and Affiliations

Ritsumeikan University

Associate Professor, College of Comprehensive Psychology (April, 1, 2016-Present)

Associate Professor, Department of Psychology, Faculty of Letters (April, 1, 2014-March, 31, 2016)

Assistant Researcher, Department of Information and Communication Science, College of Information Science and Engineering (April, 1, 2010-March, 31, 2013)

University of Tsukuba

Assistant Professor, Faculty of Library, Information and Media Science (April, 1, 2013-March, 31, 2014)

Nagoya University

Assistant Researcher, Graduate School of Information Science (April, 1, 2009-March, 31, 2010)

Carnegie Mellon University ¹

Visiting Faculty, Faculty of Library, Human Computer Interaction Institute (September, 1, 2017-August, 31, 2018)

Education

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

M.S. in Information Science, Major of Media Science, Graduate School of Information Science, Nagoya University (April, 1, 2004-March, 31, 2006)

Research Interests, Topics

Cognitive Science : Problem Solving, Creativity, Emotion, Collaboration, Communication, Social Interaction.

Educational Technology : Tutoring Systems, Pedagogical Conversational Agents.

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

Honors and Awards

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

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

Nojima prize, Japanese Cognitive Science Society (September, 2015)

Honorable mention paper award, Society of Human Agent Interaction (HAI) (August, 2013)

Award of excellence at research meeting, Japanese Society of Artificial Intelligence (June, 2013)

Computational modeling prize (applied cognition): CogSci2012, Cognitive Science Society (U.S.A.) (August, 2012)

Grants

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)

Refereed Journal Publications

- Hayashi, Y. (2018). The power of a ”Maverick” in collaborative problem solving: An experimental investigation of individual perspective taking within a group, *Cognitive Science*, inpress.
- 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). (in Japanese)
- 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. (in Japanese)
- 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=0.4**
- 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. (in Japanese)
- Hayashi, Y. (2014). An agent-based experimental study on collaboration. Cognitive Studies, 21(3), 382-395. (in Japanese)
- 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.(in Japanese)
- 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.(in Japanese)
- 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. (in Japanese)
- 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. & 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. (in Japanese)
- 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. & 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.(in Japanese)
- 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. (in Japanese)
- Hayashi, Y. & Miwa, K. (2011). Understanding Other's Perspectives in Conflict Communication. Cognitive Studies, 18(4), 569-584.(in Japanese)
- 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.(in Japanese)

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

Refereed International Conference Papers

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(**CSCW 2017**), 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, HCI 2013, 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 Break-through 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 Confer-

- ence 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
Institute of Electronics, Information and Communication Engineers(IEICE)
Japanese Cognitive Science Society
Japanese Artificial Intelligence Society
Japanese Human Interface Society

Journal Editor

Japanese Human Interface Society, (Editorial Board Member, 2016-2019)
Institute of Electronics, Information and Communication Engineers(IEICE), Special Issue(2016, January)

Conference Organization

35th Annual Meeting of the Japanese Cognitive Science Society(JCSS2018), Program Chair
International Conference on Collaboration Technologies(CollabTech2016), Publicity
International Conference on Human-Agent Interaction(HAI2014-2017), Local Chair(2014), Publication Chair(2015,2016), Program Committee(2017)
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 Human-Agent Interaction(HAI2016), Program member
International Conference on Computers in Education(ICCE2014), Program member

Reviewer

International Conferences reviewer

ACM CSCW:2016

ACM C&C(Creativity and Cognition): 2011

CogSci:2013

AIED:2011, 2013, 2015, 2017

ITS:2012, 2014

ICCE:2010, 2014

HAI:2014, 2015, 2016, 2017

Journal reviewer

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

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

Teaching & Lectures

Cognitive Science

“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 (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)