STELA HANBYEOL SEO
KYOTO UNIVERSITY (京都大学)
stela.seo@i.kyoto-u.ac.jp
stelaseo.ca

AFFILIATIONS

Assistant Professor
Human-Robot Interaction Lab
Department of Social Informatics
Graduate School of Informatics
Kyoto University, Japan

PUBLICATIONS

Peer Reviewed Journal Publications

Daniel J. Rea, **Stela H. Seo**. **"**Still Not Solved: A Call for Renewed Focus on User-Centered Teleoperation Interfaces," *Frontiers in robotics and AI*, vol.9, 2022. Frontiers Media S.A.

Stela H. Seo, James E. Young, Pourang Irani. "How are your robot friends doing? A design exploration of graphical techniques supporting awareness of robot team members in teleoperation," *International Journal of Social Robotics*, vol.13, no.4, pp.725-749, 2021. Springer.

Daniel J. Rea, **Stela H. Seo**, James E. Young. "Social robotics for nonsocial teleoperation: leveraging social techniques to impact teleoperator performance and experience," *Current Robotics Reports*, 2020. Springer.

Stela H. Seo, Keelin Griffin, James E. Young, Andrea Bunt, Susan Prentice, Veronica Loureiro-Rodríguez. "Investigating people's rapport building and hindering behaviors when working with a collaborative robot," *International Journal of Social Robotics*, vol.10, no.1, pp.147-161, 2018. Springer.

Denise Y. Geiskkovitch, **Stela H. Seo**, Derek Cormier, James E. Young. "Please continue, we need more data: an exploration of obedience to robots," *ACM Transactions on Human-Robot Interaction*, vol.5, no.1, pp.82-99, 2016.

Pak Ching Li, G. H. John van Rees, **Stela H. Seo**, Navin M. Singhi. "Friendship 3-hypergraphs," *Discrete Mathematics*, vol.312, no.11, pp.1892-1899, 2012. Elsevier.

Peer Reviewed Conference Full Papers

Xinyue Gui, Koki Toda, **Stela H. Seo**, Chia-Ming Chang, Takeo Igarashi. ""I am going this way": Gazing eyes on self-driving car show multiple moving directions," *ACM International Conference on Automotive User Interfaces*, September 2022. Seoul, Republic of Korea.

Chia-Ming Chang, Koki Toda, Xinyue Gui, **Stela H. Seo**, Takeo Igarashi. "Can eyes on a car reduce traffic accidents?," ACM International Conference on Automotive User Interfaces, September 2022. Seoul, Republic of Korea.

Stela H. Seo, James E. Young. "What happened while I was away? Leveraging visual transition techniques to convey robot states in multi-robot teleoperation," *International Conference on Social Robotics*, November 2021. Springer. Singapore.
[oral presentation by **Stela H. Seo**]

Chris Vattheuer, Annalena Nora Baecker, Denise Y. Geiskkovitch, **Stela H. Seo**, Daniel J. Rea, James E. Young. "Blind Trust: How making a device humanoid reduces the impact of functional errors on trust," *International Conference on Social Robotics*, November 2020. Springer. Golden, Colorado, USA.

Denise Y. Geiskkovitch, Daniel J. Rea, Agape Y. Seo, **Stela H. Seo**, Brittany Postnikoff, James E. Young. "Where should I sit? Exploring the impact of seating arrangement in a human-robot collaborative task," *ACM In-Cooperation International Conference on Human-Agent Interaction,* November 2020. Sydney, Australia.

Elaheh Sanoubari, **Stela H. Seo**, Diljot S. Garcha, James E. Young, Verónica Loureiro-Rodríguez. "Good robot design or Machiavellian? An in-the-wild robot leveraging minimal knowledge of passersby's culture," *ACM/IEEE International Conference on Human-Robot Interaction, alt.HRI track*, March 2019. Daegu, Republic of Korea.

Stela H. Seo, James E. Young, Pourang Irani. "Where are the robots? In-feed embedded techniques for visualizing robot team member locations," *IEEE International Symposium on Robot and Human Interactive Communication, RO-MAN*, August 2017. Lisbon, Portugal.
[oral presentation by **Stela H. Seo**]

Stela H. Seo, Daniel J. Rea, Joel Wiebe, James E. Young. "Monocle: interactive detail-in-context using two pan-and-tilt cameras to improve teleoperation effectiveness," *IEEE International Symposium on Robot and Human Interactive Communication, RO-MAN*, August 2017. Lisbon, Portugal.
[oral presentation by **Stela H. Seo**]

Daniel J. Rea, **Stela H. Seo**, Neil Bruce, James E. Young. "Movers, shakers, and those who stand still: visual attention-grabbing techniques in robot teleoperation," *ACM/IEEE International Conference on Human-Robot Interaction*, March 2017. Vienna, Austria.

Stela H. Seo, Jihyang Gu, Seongmi Jeong, Keelin Griffin, James E. Young, Andrea Bunt, Susan Prentice. "Women and men collaborating with robots on assembly lines: designing a novel evaluation scenario for collocated human-robot teamwork," *ACM In-Cooperation International Conference on Human-Agent Interaction*, October 2015. Daegu, Republic of Korea. [oral presentation by **Stela H. Seo**]

Stela H. Seo, Denise Geiskkovitch, Masayuki Nakane, Corey King, James E. Young. "Poor thing! Would you feel sorry for a simulated robot? A comparison of empathy toward a physical and a simulated robot," *ACM/IEEE International Conference on Human-Robot Interaction*, March 2015. Portland, Oregon, USA.
[oral presentation by **Stela H. Seo**]

Stela H. Seo, Kazuki Takashima, Jim Young, Yoshifumi Kitamura. "Alerting users by animating content on a transforming tabletop interface," *Human Interface Symposium, HIS*, September 2014. Kyoto, Japan.
[oral presentation by **Stela H. Seo**]

Ashish Singh, **Stela H. Seo**, Yasmeen Hashish, Masayuki Nakane, James E. Young, Andrea Bunt. "An interface for remote robotic manipulator control that reduces task load and fatigue," *IEEE International Symposium on Robot and Human Interactive Communication, RO-MAN*, August 2013. Gyeongju, Republic of Korea.
[oral presentation by **Stela H. Seo**]

Jacky Baltes, **Stela Seo**, Chi Tai Cheng, M.C. Lau, John Anderson. "Learning of facial gestures using SVMs," *Next Wave in Robotics: Communications in Computer and Information Science*, vol. 212, pp. 147-154, 2011. Springer.

Peer Reviewed Conference Extended Abstracts, Posters, Videos, Workshops

Stela H. Seo, James E. Young. "Picassnake: robot performance art," *ACM/IEEE International Conference on Human-Robot Interaction, Video Presentations*, March 2017. Vienna, Austria.

Denise Geiskkovitch, **Stela H. Seo**, James E. Young. "Autonomy, embodiment, and obedience to robots," *ACM/IEEE International Conference on Human-Robot Interaction, HRI Pioneers Workshop*, March 2015. Portland, Oregon, USA.

Stela H. Seo, James E. Young, Andrea Bunt. "Exploring the role of affect recognition in web-capable applications," *Graphics Interface Conference, Poster Session*, May 2013. Regina, Saskatchewan, Canada.

Non-peer Reviewed Publications

Stela H. Seo, James E. Young, and Andrea Bunt. "Exploring user attitudes toward affect recognition in web-capable applications," *Technical Report*, 2012. University of Manitoba.

ACADEMIC SERVICE

Conference Chair

Virtual conference chair at *Human-Robot Interaction* (HRI 2022)
[achievement: Excellence in Service Award]

Publicity co-chair at *Human-Agent Interaction* (HAI 2019)

Student volunteer co-chair at *Human-Robot Interaction* (HRI 2017)

Web chair at Next Generation Human-Agent Interaction, Human-Agent Interaction (NGHAI 2016, 2017)

Conference Program Committee Member

Human-Agent Interaction (HAI 2022)

Conference Paper Peer Review

ACM/IEEE Human-Robot Interaction (HRI 2016, 2017, 2018, 2019, 2020, 2022)

ACM Human Factors in Computing Systems (CHI 2017, 2022)

ACM Human-Agent Interaction (HAI 2017, 2018, 2019, 2021, 2022)

ACM Tangible Embedded and Embodied Interaction (TEI 2016, 2019, 2020)

ACM User Interface Software and Technology (UIST 2019)

ACM Conference and Exhibition on Computer Graphics & Interactive Techniques in Asia (SIGGRAPH ASIA 2019)

ACM Spatial User Interaction (SUI 2014, 2016)

IEEE Robotics and Automation Letters (RA-L 2022)
IEEE Robots and Human Interactive Communications (RO-MAN 2015, 2016, 2017, 2018, 2020, 2021)
IEEE 3D User Interfaces (3DUI 2017)
Graphics Interface (GI 2015, 2019)
Advances in Computer Entertainment Technology (ACE 2017)

Journal Paper Peer Review

ACM Transactions on Human-Robot Interaction (THRI 2019, 2020, 2022)
Frontiers in Robotics and AI, section Human-Robot Interaction (Frontiers 2019)

Outreach Staff

"Picassnake: robot performance art," *Science Rendezvous*, 2016, Manitoba, Canada.

Technical Consultant

Seema Goel. "To Move As One," *Art Gallery of Southwestern Manitoba*, 2016. Brandon, Manitoba, Canada

Media Attention

Stela H. Seo. "Would you feel sorry for a simulated robot? Study shows people empathize more with the real thing," *Robohub (http://robohub.org)*, 2015.

EDUCATION

09/2015–04/2021 PH.D., UNIVERSITY OF MANITOBA, CANADA
Human-Robot Interaction, Department of Computer Science, advisor: James E. Young
"Novel egocentric robot teleoperation interfaces for search and rescue"
[thesis defense on April 23, 2021 & convocation on October 21, 2021]

09/2012–01/2015 M.SC., UNIVERSITY OF MANITOBA, CANADA
Human-Robot Interaction, Department of Computer Science, advisor: James E. Young
"A Simulated Robot versus a Real Robot: An Exploration of How Robot Embodiment Impacts People's Empathic Responses"
[thesis defense on January 14, 2015 & convocation on May 26, 2015]

09/2006–08/2012 B.C.SC. HONS., UNIVERSITY OF MANITOBA, CANADA
Department of Computer Science
specializations: Artificial Intelligence, Databases, Software Engineering
[program complete on August 18, 2012 & convocation on October 17, 2012]

RESEARCH EXPERIENCE

07/2021–PRESENT ASSISTANT PROFESSOR
Human-Robot Interaction Lab, Department of Social Informatics,
Graduate School of Informatics, Kyoto University, Japan

09/2012–04/2021 RESEARCH ASSISTANT (M.SC. & PH.D.)
Human-Robot Interaction Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: James E. Young

05/2014–09/2014 RESEARCH ASSISTANT (INTERNSHIP ABROAD)
Interactive Content Design Lab, Research Institute of Electrical Communication,
Tohoku University, Japan
supervisor: Yoshifumi Kitamura, James E. Young, and Kazuki Takashima

01/2014–06/2014 RESEARCH ASSISTANT (INDUSTRIAL COLLABORATION)
09/2012–02/2013 Human-Robot Interaction Lab, Department of Computer Science, University of Manitoba, Canada
Inuktun Services Ltd., British Columbia, Canada
supervisor: James E. Young

05/2012–08/2012 RESEARCH ASSISTANT
Human-Robot Interaction Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: James E. Young and Andrea Bunt

01/2012–04/2012 UNDERGRADUATE HONOURS PROJECT
Human-Robot Interaction Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: James E. Young

09/2011–12/2011 RESEARCH ASSISTANT (CO-OP WORK TERM)
Human-Robot Interaction Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: James E. Young and Andrea Bunt

04/2009–08/2011 RESEARCH ASSISTANT
Autonomous Agents Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: John Anderson and Jacky Baltes

01/2010–04/2010 RESEARCH ASSISTANT (CO-OP WORK TERM)
Computational Discrete Mathematics Lab, Department of Computer Science, University of Manitoba, Canada
supervisor: John van Rees

TEACHING EXPERIENCE

07/04/2022 USER INTERFACE (ユーザーインターフェイス)
School of Science, University of Tokyo, Japan (東京大学 理学部)
instructor: Igarashi Takeo (五十嵐健夫)
invited speaker: **Stela H. Seo** [title: Social Teleoperation in Human-Robot Interaction]

04/2022–07/2022 INFORMATION SYSTEM ANALYSIS (情報システム分析論)
Social Informatics, Kyoto University, Japan (京都大学 社会情報学専攻)
instructors: **Stela H. Seo**, …

04/2022–07/2022 COMPUTER SCIENCE LABORATORY AND EXERCISE 1
Computer Science, Kyoto University, Japan (京都大学 計算機学科)
instructors: Koh Takeuchi (竹内孝), Kazunari Kato (加藤和成), Ryuta Arisaka (蟻坂竜大), **Stela H. Seo**

09/2021–12/2021 COMPUTER SCIENCE LABORATORY AND EXERCISE 4: ROBOT PROGRAMMING
Computer Science, Kyoto University, Japan (京都大学 計算機学科)
instructors: Dražen Brščić, **Stela H. Seo**

01/2018–04/2018 COMP2160 PROGRAMMING PRACTICES
Computer Science, University of Manitoba, Canada
course director: **Stela H. Seo** [Sessional Instructor]

09/2017–12/2017 COMP2160 PROGRAMMING PRACTICES
Computer Science, University of Manitoba, Canada
course director: Yang Wang
course co-instructor: **Stela H. Seo** [Sessional Instructor]

Teaching Assistant in Department of Computer Science, University of Manitoba, Canada

COMP1010 INTRODUCTION TO COMPUTER SCIENCE (S15 YOUNG)
COMP1260 COMPUTER USAGE I (F12 PENNER)
COMP2140 DATA STRUCTURES AND ALGORITHMS (F11 DUROCHER)
COMP2160 PROGRAMMING PRACTICES (W15 COOPER, F14 BOYER & COOPER, F13 ZAPP & BRAICO, F11 BRAICO)
COMP3010 DISTRIBUTED COMPUTING (S12 BRAICO)
COMP3020 HUMAN-COMPUTER INTERACTION I (F13 YOUNG)
COMP3350 SOFTWARE ENGINEERING I (W13 BRAICO)
COMP3430 OPERATING SYSTEMS (S17 YOUNG, W16 BRAICO, W15 BOYER, W14 YOUNG, W13 YOUNG, W12 GRAHAM)
COMP3490 COMPUTER GRAPHICS I (F20 YOUNG)
COMP4020 HUMAN-COMPUTER INTERACTION II (W20 YOUNG)
COMP4180 INTELLIGENT MOBILE ROBOTICS (F11 BALTES)
COMP4360 MACHINE LEARNING (W12 BALTES)

INDUSTRY EXPERIENCE

05/2011–08/2011 SOFTWARE DEVELOPER (CO-OP WORK TERM)
Taibotics, Kaohsiung, Taiwan

09/2010–05/2011 WEB APPLICATION DEVELOPER
Manitoba Centre of Health Policy, University of Manitoba

02/2009–06/2009 JAPANESE LANGUAGE TUTOR
Manitoba Japanese Canadian Cultural Centre

AWARDS

Academic Awards

03/2022 EXCELLENCE IN SERVICE AWARD
ACM/IEEE International Conference on Human-Robot Interaction 2022

09/2018–08/2019 ALEXANDER GRAHAM BELL CANADA GRADUATE SCHOLARSHIP-DOCTORAL (CGS-D)
Natural Sciences and Engineering Research Council of Canada
$35,000 CAD per year

09/2016–08/2018 POSTGRADUATE SCHOLARSHIPS-DOCTORAL (PGS-D)
Natural Sciences and Engineering Research Council of Canada
$21,000 CAD per year (upgraded to NSERC CGS-D)

09/2015–08/2019 CS ENTRANCE AWARD
Department of Computer Science, University of Manitoba
$80,000 CAD in total (reduced to $39,500 CAD due to the funding limit)

09/2015–08/2016 UNIVERSITY OF MANITOBA GRADUATE FELLOWSHIP (UMGF)
Faculty of Graduate Studies, University of Manitoba
$18,000 CAD per year (discontinued after receiving NSERC PGS-D)

09/2012–08/2014 CS ENTRANCE AWARD
Department of Computer Science, University of Manitoba
$32,000 CAD in total

2009, 2011 DEAN'S HONOUR LIST
Faculty of Science, University of Manitoba

International Competitions

05/2016 ROBOTART COMPETITION (TEAM 6TH PLACE) USING PICASSNAKE
RobotArt Organization (http://robotart.org) $5,000 USD

08/2011 MARATHON (TEAM 2ND PLACE) USING DARWIN
HuroCup – Humanoid Robot Competition
Federation of International Robot-soccer Association (FIRA) Competition, Kaohsiung, Taiwan

10/2010 CHAMPION AWARD (TEAM 1ST PLACE)
Humanoid Robot Explorer Competition International Group
Micro-mouse & Robot Contest, Southern Taiwan University, TaiNan, Taiwan

Travel Awards/Supports

08/2017	ROMAN 2017	$1000.00 CAD	Faculty of Graduate Studies, University of Manitoba
08/2017	ROMAN 2017	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
08/2017	ROMAN 2017	$750.00 CAD	Graduate Student Association, University of Manitoba
03/2017	HRI 2017	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
10/2015	HAI 2015	$1000.00 CAD	Faculty of Graduate Studies, University of Manitoba
10/2015	HAI 2015	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
10/2015	HAI 2015	$705.92 CAD	Graduate Student Association, University of Manitoba
03/2015	HRI 2015	$650.00 CAD	Student Volunteering Awards
03/2015	HRI 2015	$750.00 CAD	Faculty of Graduate Studies, University of Manitoba

03/2015	HRI 2015	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
03/2015	HRI 2015	$392.69 CAD	Graduate Student Association, University of Manitoba
09/2014	HIS 2014	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
09/2014	HIS 2014	$650.00 CAD	Research Institute of Electrical Communication, Tohoku University
08/2013	ROMAN 2013	$450.00 CAD	Student Volunteering Awards
08/2013	ROMAN 2013	$700.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba
08/2013	ROMAN 2013	$325.00 CAD	Graduate Student Association, University of Manitoba
05/2013	GI 2013	$500.00 CAD	Dept. of Computer Science & Faculty of Science, University of Manitoba

LANGUAGES

Korean	native
English	fluent conversational, reading, and writing
Japanese	fluent conversational, and advanced reading and writing

PERSONAL

interest in developing programs, video games, Japanese animations, building a plastic model, photography, Rubik's cubes, puzzles, Sudoku, learning instruments (harmonica, guitar, piano)

Kyoto, Japan. (October 7, 2022)