# CRISTINA GETSON

PhD Candidate
Mechanical and Industrial Engineering
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I explore how people interact with social robots. Currently a PhD Candidate researching human-robot interaction, ethics, and AI in healthcare, with a focus on the design of social robots to assist vulnerable populations. A Graduate Affiliate with the Schwartz Reisman Institute for Technology and Society, I hold a Bachelor of Applied Science in Engineering Science from the University of Toronto, and collaborative specializations in Psychology and Robotics. I have extensive product and project management experience in the telecommunication and educational technology sectors. *Research Specializations*: Human-robot interaction, social robotics, human-centered design, persuasive robot behaviors, AI ethics, persuasive technology

### **EDUCATION**

2020 – 2025 Doctor of Philosophy (Ph.D.), University of Toronto Department of Mechanical and Industrial Engineering

Advisor: Dr. Goldie Nejat

Thesis: Development of a Framework for Social Robot Behaviors and Strategies in Human-Robot Interaction with Vulnerable Populations Relevant courses: MIE1412: Human-Automation Interaction, MIE1070: Intelligent Robots for Society, TEP1203: Teaching Engineering in Higher Education

1994 – 1998 Bachelor of Applied Science (B.A.Sc.), University of Toronto Division of Engineering Science, Biomedical option

1996 – 1997 Institut National Polytechnique de Grenoble, France Rhône-Alpes international student exchange program

#### TEACHING EXPERIENCE

Fall 2024 Course Instructor, ENG1101: Renaissance Engineering 1st year undergraduate class of 130 students York University, Lassonde School of Engineering

Spring **Guest Lecturer**, MIE 1070: Intelligent Robots for Society, University of Toronto Graduate course lecture on: *The Age of Social Robots* 

- Winter Tutorial Instructor, MIE443: Mechatronics Systems, Design & Integration
  - 2024 University of Toronto
- Winter Teaching Assistant, MIE443: Mechatronics Systems, Design & Integration
- 2021 2024 University of Toronto

# RESEARCH EXPERIENCE

- 2025 Graduate Affiliate, Schwartz Reisman Institute for Technology and Society,
- present University of Toronto

Part of the AI & Trust Working Group, a multinational and transdisciplinary research initiative

- 2024 2025 **Graduate Fellow,** Schwartz Reisman Institute for Technology and Society,
  - Interdisciplinary research project: *Unpacking Trust: A Conceptual Analysis of How People Understand and Apply Trust in Artificial Intelligence*
  - 2020 Graduate Research Assistant, Autonomous Systems and Biomechatronics Lab
  - present Mechanical and Industrial Engineering, University of Toronto

#### **PUBLICATIONS**

University of Toronto

#### Journal Articles

- 2025 C. Getson and G. Nejat, "The Game Changer: The Role of Persuasive Socially Assistive Robots in the Sustained Engagement and Motivation of Older Adults in a Cognitive Activity," *International Journal of Social Robotics, Under Review*, 2025. Preprint available at Research Square: <a href="https://doi.org/10.21203/rs.3.rs-7556807/v1">https://doi.org/10.21203/rs.3.rs-7556807/v1</a>
- 2024 C. Getson and G. Nejat, "Care Providers' Perspectives on the Design of Assistive Persuasive Behaviors for Socially Assistive Robots," Journal of the American Medical Directors' Association, special issue on Technology in PA-LTC: Innovations and Applications, 25(8):105084, 2024.
- 2024 G. Nejat, A. Zehavi, **C. Getson** and H. Shoef, "Adoption of assistive technologies in long-term care homes: What the pandemic has taught us," *Healthcare Management Forum*, 37(6):418 422, 2024.
- 2023 **C. Getson** and G. Nejat, "Human-Robot Interactions with an Autonomous Health-Screening Robot in Long-Term Care Settings," *Advanced Robotics*, 37:24, 1576 1590, 2023.
- 2022 **C. Getson** and G. Nejat, "The Adoption of Socially Assistive Robots for Long-Term Care: During the Pandemic and in a Post-COVID-19 Society," *Healthcare Management Forum Special Edition on Aging, Technology and Health in a Post-COVID World*, Vol. 35(5) 301 309, 2022.

2021 **C. Getson** and G. Nejat, "Socially Assistive Robots Helping Older Adults through the Pandemic and Life after COVID-19," *Robotics* 10(3), 106, 2021.

# Works in Progress

Progress J. Brecka, M. Collis, R. Gelpi, **C. Getson**, M. Mackley, J. Wilson, "Unpacking Trust: A Conceptual Analysis of How People Understand and Apply Trust in Artificial Intelligence," in development as a whitepaper with the Schwartz Reisman Institute for Technology and Society, 2025.

# Workshop Extended Abstracts

- 2025 C. Munteanu, S. Sarcar, J. Sin, C. Ziying Wei, S. Sayago, W. Zhao, J. Waycott, R. Boostani, M. Ghafurian, C. Getson, "Designing Age-Inclusive Interfaces: Emerging Conversational and Generative AI to Support Interactions Across the Life Span," Proceedings of the 7th ACM Conference on Conversational User Interfaces, 2025.
- 2024 C. Getson and G. Nejat, "Investigating Persuasive Socially Assistive Robot Behavior Strategies for Sustained Engagement in Long-Term Care," 2024 IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), Workshop on HRI4WellBeing (extended abstract), 2024.

# Peer-Reviewed Conference Proceedings

2022 **C. Getson** and G. Nejat, "The Robot Screener Will See You Now: A Socially Assistive Robot for COVID-19 Screening in Long-Term Care Homes," 2022 *IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, Napoli, Italy, pp. 672 – 677.

#### CONFERENCE PRESENTATIONS & INVITED TALKS

- March 2025 Schwartz Reisman Institute for Technology and Society Panel:
  "Making Artificial Intelligence Real," presented at HEC Paris special session
  Human-Robot Interactions with Vulnerable Populations
  - August IEEE International Conference on Robot and Human Interaction (RO-MAN),

    2024 HRI4WellBeing workshop presenter, Investigating Persuasive Socially Assistive Robot
    Behavior Strategies for Sustained Engagement in Long-Term Care
  - October AGE-WELL annual conference, presenter
    - 2023 Social Robots as Assistants: Assistive Persuasive Behaviors for Social Robots
  - July 2023 Toronto Robotics Conference, University of Toronto Robotics Institute, presenter The Design and Development of a Social Robot for COVID-19 Screening
  - May 2023 The New Reality, Global News segment

    How Tech is Helping Canadians Living with Dementia

- October Supply AI Conference, MaRS Discovery District, panelist Robots Making Life Easier for Businesses Large and Small
- October AGE-WELL annual conference, poster session
  - 2022 The Adoption of Socially Assistive Robots for Long-Term Care
- September Revive & Thrive session for the Canadian College of Health Leaders, panelist
  - 2022 The adoption of socially assistive robots in long-term, private, and hospital care
  - August IEEE International Conference on Robot and Human Interaction (RO-MAN),
    - 2022 presenter, The Robot Screener Will See You Now: A Socially Assistive Robot for COVID-19 Screening in Long-Term Care Homes
- April 2022 AdvantAge Ontario annual conference, presenter A Robot Screener in Long-Term Care Homes
- 2021, 2022 Roboethics Competition (<a href="https://competition.raiselab.ca/">https://competition.raiselab.ca/</a>) (Winner, RO-MAN 2021; Honourable Mention, ICRA 2022)

# **GRANTS & AWARDS**

- 2024 Schwartz Reisman Institute for Technology and Society Graduate Fellowship (\$7,500)
- 2024 Queen Elizabeth II Graduate Scholarship in Science and Technology (\$15,000)
- 2023 Queen Elizabeth II Graduate Scholarship in Science and Technology (\$15,000)
- Department of Mechanical and Industrial Engineering Endowed Fellowship:
   Applied Science Graduate Student Endowment Fund (APSC GSEF) Award (\$6,500)
- 2022 University of Toronto Mechanical & Industrial Engineering Conference Grant (\$750)
- 2022 University of Toronto School of Graduate Studies Travel Grant (\$1,250)

# **MENTORSHIP** - University of Toronto

- 2023 2024 **Ruopei Chen**, Previous fourth-year Mechanical Engineering student. Now Master of Engineering student at Stanford. Advised on her undergraduate thesis developing an engagement measurement system using a social robot to engage older adults.
  - 2023 Victoria Vastis, Previous Mechanical Engineering undergraduate summer student. Current Master of Integrated Innovation for Products & Services student at Carnegie Mellon. Advised her on a project for the design of an interactive cognitive game.
- 2021 2022 **Yuqian Zhou**, Previous fourth-year Engineering Science thesis student. Advised on her undergraduate thesis on improving robustness of face-mask detection in real world environments.

# **SERVICE**

# **Workshop Committee**

"Designing Age-Inclusive Interfaces: Emerging Conversational and Generative AI to Support Interactions Across the Life Span," the ACM Conversational User Interface (CUI) Conference, Waterloo, Canada, July 2025.

#### **Outreach Activities**

- 2023 2024 Editorial Committee Volunteer, Canadian Science Policy Centre
- 2023 2024 Advisory Committee Volunteer, AGE-WELL
  - 2023 University of Toronto Engineering 150 Open House Volunteer representing the Robotics Institute
  - 2022 Judge for Undergraduate Engineering Research Day, University of Toronto

# Peer-Reviewing

- 2025, 2022 Reviewer for IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)
- 2025, 2023 Reviewer for Scientific Reports Nature
  - 2025 Reviewer for Transactions on Human-Robot Interaction
  - 2025 Reviewer for IEEE Transactions on Robotics
  - 2025 Reviewer for the Journal of Medical Internet Research (JMIR) Human Factors
  - 2024 Reviewer for the International Journal of Social Robotics
  - 2022 Reviewer for International Conference on Social Robotics (ICSR)

#### PREVIOUS PROFESSIONAL EXPERIENCE

2015 – 2020 **Director/Owner**, Cristina Getson Learning Solutions

Managed the redevelopment of clients' online professional learning platforms Provided educational technology consulting services

Created and tested bilingual digital tools for online learning (K – 12)

#### 2014 – 2015 Founder, Like2Minds

Built a learning recommendation service that curates educational content based on an individual's learning preferences

Researched product-market fit; explored corporate education solutions Used agile methodology to build a Minimum Viable Product

#### 2010 – 2014 Digital Product Manager, Pearson Education Canada

Led the delivery of a web application tool to help teachers capture learning in the classroom; managed the design and development of a mobile version of the tool; used agile development to scale the product across multiple grades

Managed the development and customization of a digital content management system for the K – 12 market; conducted usability testing; oversaw content management, metadata creation to place legacy print product onto a digital platform Researched, planned, created, and developed the School Division's first educational mobile apps on the iOS platform (in mathematics and early language learning)

#### 2004 – 2010 Project Manager, School Math, Pearson Education Canada

Managed the development and creation of new digital content for K – 12 math Substantively edited manuscripts by working with authors, reviewers, senior editors Collaborated with the Publisher, and teams in New Media, Design, and Production to take a project through from inception to completion

#### 2001 – 2003 Business Analyst & Project Manager, ember ec3 inc.

Consulted with leading financial services companies, assisted with business planning, implementation, and maintenance of ember's web-based software Worked with Sales/Marketing, Engineering, and Design teams on project proposals

#### 1999 – 2001 Systems Engineer, Optical Networks, Nortel Networks

Developed customized presentation material and delivered client learning sessions on Nortel's portfolio of high-capacity optical networking projects

Created and managed project plans to support the introduction, planning, and deployment of new Optical Networks portfolio into customers' networks

# 1998 – 1999 International Project Manager, IBM Canada

Managed and coordinated multiple international data network installations, from planning to installation

# CREATIVE PRACTICE (WWW.CRISTINAGETSONART.COM)

- 2019, 2020 Toronto Outdoor Art Fair (Toronto, ON, Canada)
  - 2020 Art Palm Beach, Steidel Contemporary (Palm Beach, Florida, USA)
  - 2019 Arta Gallery (Toronto, ON, Canada)
  - 2019 Elaine Fleck Gallery (Toronto, ON, Canada)
  - 2019 Blue Crow Gallery (Toronto, ON, Canada)
  - 2018 Aqua Art Miami (Miami, Florida, USA)
  - 2018 Texas Contemporary Art Fair (Houston, Texas, USA)
  - 2018 Artist residency, Palazzo Monti (Brescia, Italy)
- 2017, 2018 Queen West Art Crawl (Toronto, ON, Canada)
- 2017, 2018 The Other Art Fair (Brooklyn, NY, USA)