# Alessandro **Roncone, Ph.D.**

## ROBOTICIST · COMPUTER SCIENTIST · TEAM LEAD

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## PERSONAL SUMMARY

The main objective of my research is to **develop robot technologies that enable close, natural, and extended cooperation with humans**. I approach robotics as a **systems science**, and I holistically advance knowledge on: a) robots that are safe to people, b) robots that are capable of operating in complex environments, and c) robots that are good teammates. My work will allow robots to work with and around people, anticipate people's needs, and provide the best support to them. This will allow for humans and robots to accomplish together what neither of them can do alone.

## RELEVANT EXPERIENCE

**Chief Technology Officer** LAB0, INC.                    PACIFIC NORTHWEST AND ITALY  2022 − PRESENT

I am CTO of a stealth startup workin in Robotics and AI for the logistics sector. In two years, I built a team of 30 people and brought in revenue of $4M in 2022 and $26M in 2023.

**Assistant Professor** CS DEPARTMENT, CU BOULDER                    BOULDER, CO, USA  2018 − PRESENT

At CU Boulder, I lead the HUMAN INTERACTION AND ROBOTICS GROUP [HIRO]. We work at the intersection of robotics, artificial intelligence and human-computer interaction to develop intuitive, human-centered technologies for the next generation of robot workers, assistants and collaborators. Our work is *interdisciplinary* and brings together insights from the neurosciences, psychology, and cognitive sciences to advance the field of *human-robot interaction (HRI)*. Our research team is divided in three overlapping strands (with links): PHYSICAL HRI AND CONTROL, LEARNING AND MODELING FOR ROBOTICS, and ALGORITHMIC AND SOCIAL HRI.

**Post-Doc** SOCIAL ROBOTICS LAB, CS DEPARTMENT, YALE UNIVERSITY                    NEW HAVEN, CT, USA  2015 − 2018

My research at Yale focused on task and motion planning for Human-Robot Collaboration [**C, 2018**]. I worked on systems that: i) provide effective support to the human when they need it the most [**J, 2022**]; ii) learn complex hierarchical representations from single instructions; iii) proactively ask questions and provide contextual information to query and share internal states and intents [**C, 2017**].

**Post-Doc** ICUB FACILITY, ITALIAN INSTITUTE OF TECHNOLOGY [IIT]                    GENOA, IT  2015

I worked on implementing a model of peripersonal space on the iCub robot, focusing on: i) *rich body representations* [**J, 2016**] ii) *distributed motor control via whole-body awareness* [**C, 2018**] I also worked on optimization-based approaches to inverse kinematics and robot control: my *gaze stabilization and control* framework [**C, 2014**, **C, 2016**]ormally solved the problem of controlling a binocular head to gaze toward arbitrary 3D points in space, and concurrently exploiting redundancy to stabilize gaze.

**Ph.D. Student** ICUB FACILITY, ITALIAN INSTITUTE OF TECHNOLOGY [IIT]                    GENOA, IT  2012 − 2014

My research improved the sensorimotor capabilities of the iCub humanoid via a multisensory representation of the space around the its body (*Peripersonal Space*) [**C, 2014**, **C, 2015**, **J, 2016**]

**Research Fellow**  ROBOTICS, BRAIN AND COGNITIVE SCIENCES, IIT          GENOA, IT  2010 – 2011

## EDUCATION

**Ph.D. in Robotics**  ITALIAN INSTITUTE OF TECHNOLOGY [IIT]          GENOA, IT  2012 – 2015

Thesis title: *"Expanding sensorimotor capabilities of humanoid robots through multisensory integration. A study on the implementation of peripersonal space on the iCub"* [**T, 2015**]. Supervisors: Giorgio Metta, Luciano Fadiga, Ugo Pattacini, Matej Hoffmann.

**M.sc. in NeuroEngineering** (110/110 *Summa cum Laude*)          UNIVERSITY OF GENOA, IT  2008 – 2011

Thesis title: *"Visuo-Haptic Integration for Object Characterization in an Unstructured Environment"*. Supervisors: Matteo Fumagalli, Francesco Nori.

**B.sc. in Biomedical Engineering** (110/110 *Summa cum Laude*)          UNIVERSITY OF GENOA, IT  2005 – 2008

Thesis title: *"Support Vector Machine Analysis applied to a Manipulator in a Non-Structured Environment"*. Supervisors: Luca Pulina, Lorenzo Natale, Armando Tacchella.

**ISICT Fellowship**  INSTITUTE FOR ADVANCED STUDIES IN ICT [ISICT]          GENOA, IT  2005 – 2008

Successfully selected for scholarship—only three positions available out of hundreds of candidates.

## RESEARCH FUNDING - TOTAL SHARE OF FUNDING: 6.225M$

### GRANTS AS PI – TOTAL FUNDING: 2.925M$

- **SINGLE PI**, *Human Robot Co-Training: A Novel Paradigm for Symbiotic Human Robot Collaboration*, Office of Naval Research (ONR) [2022, **510K$**, 3y, award number N00014-22-1-2482].
- **PI**, *Policy Learning for Optimal Teaming via TF-Conditioned Metalearning (PLOT-Meta)*, Army Research Laboratory (ARL) [2021, **2M$**, 5y, award number W911NF-21-2-02905]. Co-PI: Bradley Hayes (CU Boulder).
- **CO-DIRECTOR**, *Engineering Education and AI-Augmented Learning IRT*, one of six Interdisciplinary Research Themes sponsored by the College of Engineering and Applied Sciences. Our IRT is focused on developing a community and research capacity around a new science at the intersection of AI-augmented learning and K16 education research [2020, **250K$**, 2y].
- **SINGLE PI**, *Strengthening Teamwork for Robust Operations in Novel Groups (STRONG)*, Army Research Laboratory (ARL) [2021, **100K$**, 1y, award number W911NF-21-2-0123].
- **PI**, *Towards equitable robot tutoring: an intersectional analysis of human-robot interaction in racially diverse classrooms*, IRT Seed Grant [2021, **15K$**, 1y]. Co-PI: Tiera Tanksley (CU Boulder).
- **PI**, *Programmable and reconfigurable soft robots for symbiotic soft/rigid robotic systems*, Research and Innovation Office [2020, **50K$**, 1y]. Co-PIs: Jianliang Xiao, Emiliano Dall'Anese (CU Boulder).

### GRANTS AS CO-PI OR SENIOR PERSONNEL – TOTAL FUNDING: 23.3M$ – SHARE: 1.85M$

- **CO-PI**, *Collaborative Research: FW-HTF-R: RoboChemistry: Human-Robot Collaboration for the Future of Organic Synthesis*, National Science Foundation (NSF) [2022, **1.8M$**, 4y, award number 2222952/53]. PI: Carson Bruns, ATLAS Institute; Co-PI: Daniel Szafir, UNC Chapel Hill.
- **CO-PI**, *The co-evolution of Human-AI Adaptation*, Army Research Laboratory (ARL) [2022, **1.5M$**, 3y, award number W911NF-21-2-0126]. Prime: Ying-Choon Wu and Tzyy-Ping Jung (UCSD).
- **SENIOR PERSONNEL**, *NSF AI Institute in Student-AI Teaming*, 2020 National Science Foundation [2020, **20M$**, 5y, award number 2019805].

# MENTORING, TEACHING, & SERVICE

## SERVICE FOR THE UNIVERSITY

- *Associate Director and Gradcomm Chair*, MS and PhD Program in Robotics, AY 2023-2024.
- *Co-Director*, Interdisciplinary Research Theme in Engineering Education Research and AI-Augmented Learning, AYs 2020—2023.
- *Gradcomm Member*, Computer Science Department, AYs 2018—2023.

## MENTORING

- Current students (1 Post-doc, 12 Ph.D. students):
  - **JOEWIE KOH**, Ph.D. Student, exp. graduation: 2024.
  - **CALEB ESCOBEDO**, Ph.D. Student, exp. graduation: 2024. *NSF GFRP* honorable mention.
  - **ANUJ PASRICHA**, Ph.D. Student, exp. graduation: 2024.
  - **STEPHANE AROCA-OUELLETTE**, Ph.D. Student, co-advised w/ Katharina Kann, exp. graduation: 2025.
  - **CLARE LOHRMANN**, Ph.D. Student, co-advised w/ Bradley Hayes, exp. graduation: 2025.
  - **YI-SHIUAN TUNG**, Ph.D. Student, co-advised w/ Bradley Hayes, exp. graduation: 2025.
  - **KALEB BISHOP**, Ph.D. Student, co-advised w/ Bradley Hayes, exp. graduation: 2025. **CHANCELLOR'S FELLOWSHIP RECIPIENT (2020)**
  - **NATALIYA NECHYPORENKO**, Ph.D. Student, exp. graduation: 2026. **NSF GFRP RECIPIENT (2021), APPLE FELLOWSHIP RECIPIENT (2024)**.
  - **GILBERTO MARTINEZ**, Ph.D. Student, exp. graduation: 2026. *GEM Fellowship* recipient, **NASA NSTGRO RECIPIENT (2022)**.
  - **AVA ABDEREZAEI**, Ph.D. Student, exp. graduation: 2027.
  - **CHI-HUI LIN**, Ph.D. Student, exp. graduation: 2027.
  - **SRIKRISHNA BANGALORE RAGHU**, Ph.D. Student, exp. graduation: 2027.
  - **JAKE BRAWER**, Post-doc.
- Graduated PhD students or Post-docs:
  - **GUOHUI DING**, co-advised w/ Lijun Chen, Ph.D. Spring 2021, now at Meta.
  - **SHIRAN DUDY**, post-doc, co-advised w/ Katharina Kann, now at Northeastern University.
- Primary advisor of Master-level theses:
  - **ANDER ARAMBURU FERNANDEZ**, Summer 2020, MS. Co-author on a conference paper.
  - **KRISHNA KODUR CHAITANYA**, Spring 2020, MS, now Ph.D. student at UT Arlington. Co-author on a conference paper.

- ○ **CHI-JU WU**, Spring 2019, MS, now at Zoox. Co-author on a conference paper.
- Primary advisor of Bachelor-level theses:
  - ○ **CONOR SIMMONS**, Spring 2023, now at Luxonis.
  - ○ **MATTHEW ECCLES**, Spring 2023.
  - ○ **MATT STRONG**, Spring 2021, **NOW PHD STUDENT AT STANFORD UNIVERSITY**. Honorable Mention at the *Computing Research Association's Outstanding Computer Science Undergraduate Researcher award* (national level). Recipient of the *Research Award* and *Active Learning Program Award* for 2021 (College level). Coauthor of two conference publications and first author of one workshop paper.
  - ○ **BYUNGJIN KIM**, Spring 2021, now MS student at UMichigan.
  - ○ **SOUSHEEL VUNNAM**, co-advised w/ Nisar Ahmed, Spring 2020, now at Amazon.
  - ○ **JACOB FIOLA**, Spring 2020.
- Research advising of Master-Level students (independent study or paid research): **JOE MICELI, NIKHIL BARHATE, VATSAL VERMA, IDRISS DJOFACK TELEDJEU, RITHIK KUMAR ATHIGANUR SENTHIL, NIHARIKA SATHYANARAYANA, WYATT REES** (PhD), **TANMAY DESAI, SIJAE SCHIEFER, MANJUNATH NAGARAJA RAO, ABILASH JAHAGIRDAR, EM ELDAR, ANDREW CHEN, DONGMING CHANG, SAYALI SONAWANE, MAYANK YOSHI, MOHANA KRISHNA SANAGAVARAPU**.
- Research advising of Bachelor-level students (research opportunities for undergraduates or paid research): **LIAM MERZ HOFFMEISTER** (now PhD student at Yale University), **FREDDY LIN, CARSON KOHLBRENNER, CALEB KUMAR, NOAH LISKA, SHREYAS KADEKODI** (co-author on a conference publication), **YURI HAN, JUSTIN BRAND, JOSEPH DAVID GALLOWAY II** (SMART Summer Program for URM students around the country to do research at CU Boulder), **MITCHELL SCOTT** (DLA, now MS student at CU Boulder), **SEAN SHAIFUBAHRIM, BENJAMIN PAGE** (DLA), **GARRETT PIERSON** (DLA), **KYLE YAMEK, WILLIAM WANG, ELEANOR SARDER** (DLA), **KYLE YAMEK, WILLIAM WANG**.
- Faculty advisor for CU Robotics, an undergraduate-led recognized student organization. *AYs 2020— 2023*.

## TEACHING

- **CSCI 7000** Physical Human–Robot Interaction and Robot Control—*Spring 2019, Fall 2020, Fall 2021, Fall 2023*.
- **CSCI 7000** Deep Reinforcement Learning and Robotics—*Summer 2020, Fall 2022*.
- **CSCI 3302** Introduction to Robotics—*Fall 2018, Spring 2020, Spring 2021, Spring 2022, Spring 2023*.

## SERVICE

- **SERVICE FOR THE SCIENTIFIC COMMUNITY**:
  - ○ **ORGANIZER** of the Workshop on "Strengthening Teamwork for Robust Operations in Novel Groups" (STRONG), to be held in Boulder in Mar 2024.
  - ○ **LOCAL CHAIR** for HRI 2024, the most prestigious conference in Human-Robot Interaction, to be held in Boulder in Mar 2024.
  - ○ **WORKSHOP CHAIR** for HAI 2024, the International Conference on Human-Agent Interaction, to be held in Swansea, UK in Nov 2024.
  - ○ **PANELIST** for the National Science Foundation, *2020, 2021, 2022*.

- ○ **ORGANIZER** of the Workshop on "Close-Proximity Human-Robot Collaboration" at RSS 2022.
- ○ **ORGANIZER** of the Workshop on "Development of body representations in humans and robots", at ICDL 2015.
- **INVITED TALKS**:
  - ○ *Int. Conf. on Humanoid Robots* [Humanoids, 2023]. Workshop titled *Building Bridges: A Workshop on Physical & Social Human-Robot Interaction*.
  - ○ *Johns Hopkins University*, Nov 2022.
  - ○ *Int. Conf. on Robots and Systems* [IROS, 2022]. Workshop on *Proximity Perception. Towards next-generation multi-modal sensing in soft structures*.
  - ○ *Robotics: Science and Systems* [RSS, 2022]. Workshop on *Close-Proximity Human-Robot Collaboration: challenges and opportunities*.
  - ○ *Samsung AI center in New York City* [2021].
  - ○ *Int. Conf. on Advanced Robotics* [ICAR, 2021]. Workshop on *Design, Learning and Control for Safe Human-Robot Collaboration*.
  - ○ *Colorado School of Mines* [2019].
  - ○ *iCub Facility*, Italian Institute of Technology [2017].
  - ○ *Computation and Cognitive Development Lab*, Yale University [2017].
  - ○ *Int. Conf. on Social Robotics* [ICSR, 2016]. Workshop on *Synthetic Method in Social Robotics*.
  - ○ *Yale University* [2015 and 2016].
- **ASSOCIATE EDITOR** or **PROGRAM COMMITTEE MEMBER**: *IEEE Int. Conf. on Robotics and Automation* (**ICRA**), *IEEE/RAS Int. Conf. on Humanoid Robots* (**HUMANOIDS**), *ACM Int. Conf. on Human–Robot Interaction* (**HRI**), *Int. Conf. on Artificial Intelligence* (**AAAI**).
- **REVIEWER**: *IEEE Transactions on Robotics*, *IEEE Int. Conf. on Robotics and Automation* (ICRA), *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems* (IROS), *Frontiers in Robotics and AI*, *ACM Int. Conf. on Human–Robot Interaction* (HRI), *ACM Transactions on Human–Robot Interaction* (T-HRI), *Robotics and Automation Letters* (RA-L), *Robotics: Science and Systems* (RSS), *Frontiers in NeuroRobotics*, *IEEE/RAS Int. Conf. on Humanoid Robots* (Humanoids), *International Journal of Humanoid Robotics*, *IEEE Int. Conf. on Development and Learning and on Epigenetic Robotics* (ICDL-Epirob), *IEEE International Symposium on Robot and Human Interactive Communication* (ROMAN), *IEEE Int. Conf. on Robotics and Biomimetics* (ROBIO), *IEEE RAS/EMBS Int. Conf. on Biomedical Robotics* (BioRob).
- **EXTERNAL SERVICE**:
  - ○ *Vice Chair* of the IEEE Denver Computer, Information Theory and Robotics Society (2020, 2019).
  - ○ *Educational Advisor* for Artificial Intelligence Education, St. Vrain Valley School District, serving 37000 students in K-12 (2021, 2020, 2019).
- **TEACHING ASSISTANT** at the *2015 CBMM Summer School*, organized by MIT.
- Featured on the **IEEE SPECTRUM VIDEO FRIDAY** with my **2014 ICRA VIDEO** on self-calibration.

## PUBLICATIONS

Note #1: '**B**' → book, '**J**' → journal paper, '**C**' → conference paper, '**W**' → workshop paper.
Note #2: underlined authors are students I directly supervised.
Note #3: for some citations, clicking on the title leads to PDF of publication.

## BOOKS

[**B, 2022**]  N. Correll, C. Heckman, B. Hayes, and A. Roncone. INTRODUCTION TO AUTONOMOUS ROBOTS: MECHANISMS, SENSORS, ACTUATORS, AND ALGORITHMS. In: *MIT Press*.

## JOURNAL PAPERS

[**J, 2022**]  O. Mangin, A. Roncone, and B. Scassellati. HOW TO BE HELPFUL? IMPLEMENTING SUPPORTIVE BEHAVIORS AND PERSONALIZATION FOR HUMAN-ROBOT COLLABORATION. In: *Frontiers in Robotics and AI*.

[**J, 2022**]  A. Pasricha, Y.S. Tung, B. Hayes, and A. Roncone. POKERRT: POKING AS A SKILL AND FAILURE RECOVERY TACTIC FOR PLANAR NON-PREHENSILE MANIPULATION. In: *Robotics and Automation Letters [RA-L] and IEEE Int. Conf. on Robotics and Automation [ICRA]*.

[**J, 2022**]  K. Merckaert, B. Convens, C. J. Wu, A. Roncone, M. M. Nicotra, and B. Vanderborght. REAL-TIME MOTION CONTROL OF ROBOTIC MANIPULATORS FOR SAFE HUMAN–ROBOT COEXISTENCE. In: *Robotics and Computer-Integrated Manufacturing* 73, p. 102223.

[**J, 2016**]  A. Roncone, M. Hoffmann, U. Pattacini, L. Fadiga, and G. Metta. PERIPERSONAL SPACE AND MARGIN OF SAFETY AROUND THE BODY: LEARNING VISUO-TACTILE ASSOCIATIONS IN A HUMANOID ROBOT WITH ARTIFICIAL SKIN. In: *PLOS ONE*.

[**T, 2015**]  A. Roncone. EXPANDING SENSORIMOTOR CAPABILITIES OF HUMANOID ROBOTS THROUGH MULTISENSORY INTEGRATION – A STUDY ON THE IMPLEMENTATION OF PERIPERSONAL SPACE ON THE ICUB. PhD Dissertation. University of Genoa and Italian Institute of Technology.

## CONFERENCE PAPERS

Note #1: in red, best paper awards or nominations.
Note #2: acceptance rates of HRI, AAMAS, RSS, EMNLP = ∼25% or below.
Note #3: acceptance rates of IROS, ICRA, Humanoids, RO-MAN = ∼40% or below.


[**C, 2023**]  J. Brawer, D. Ghose, K. Candon, M. Qin, A. Roncone, M. Vázquez, and B. Scassellati. INTERACTIVE POLICY SHAPING FOR HUMAN-ROBOT COLLABORATION WITH TRANSPARENT MATRIX OVERLAYS. In: *ACM/IEEE International Conference on Human-Robot Interaction [HRI]*. **Best Paper Award**.

[**C, 2023**]  N. Nechyporenko, C. Escobedo, S. Kadekodi, and A. Roncone. CAT-RRT: MOTION PLANNING THAT ADMITS CONTACT ONE LINKE AT A TIME. In: *2023 IEEE/RSJ International Conference on Intelligent Robots and Systems [IROS]*.

[**C, 2023**]  S. Aroca-Ouellette, M. Aroca-Ouellette, U. Biswas, K. Kann, and A. Roncone. HIERARCHICAL REINFORCEMENT LEARNING FOR AD HOC TEAMING. In: *Proceedings of the 2023 International Conference on Autonomous Agents and Multiagent Systems*.

[**C, 2022**]  C. Escobedo, N. Nechyporenko, S. Kadekodi, and A. Roncone. A FRAMEWORK FOR THE SYSTEMATIC EVALUATION OF OBJECT-AWARE CONTROLLERS. In: *2022 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2022**] Y.S. Tung, K. Bishop, B. Hayes, and A. Roncone. BILEVEL OPTIMIZATION FOR JUST-IN-TIME ROBOTIC KITTING AND DELIVERY VIA ADAPATIVE TASK SEGMENTATION AND SCHEDULING. In: *IEEE Int. Conf. on Robot Human Interactive Communication [RO-MAN]*.

[**C, 2021**] C. Paik, S. Aroca-Ouellette, A. Roncone, and K. Kann. THE WORLD OF AN OCTOPUS: HOW RE-PORTING BIAS INFLUENCES A LANGUAGE MODEL'S PERCEPTION OF COLOR. In: *Int. Conf. on Empirical Methods in Natural Language Processing [EMNLP]*.

[**C, 2021**] C. Escobedo, M. Strong, M. West, A. Aramburu, and A. Roncone. CONTACT ANTICIPATION FOR PHYSICAL HUMAN−ROBOT INTERACTION WITH ROBOTIC MANIPULATORS USING ONBOARD PROXIMITY SENSORS. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2021**] K. Watanabe, M. Strong, M. West, K. Chaitanya, C. Escobedo, and A. Roncone. SELF-CONTAINED KINEMATIC CALIBRATION OF A NOVEL WHOLE−BODY ARTIFICIAL SKIN FOR COLLABORATIVE ROBOTICS. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2021**] S. Aroca-Ouellette, C. Paik, A. Roncone, and K. Kann. PROST: PHYSICAL REASONING ABOUT OBJECTS THROUGH SPACE AND TIME. In: *Findings of the Association for Computational Linguistics: ACL-IJCNLP*.

[**C, 2020**] G. Ding, J. J. Koh, C. Heckman, L. Chen, and A. Roncone. COOPERATIVE CONTROL OF MOBILE ROBOTS WITH STACKELBERG LEARNING. In: *2020 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2020**] G. Ding, J. J. Koh, K. Merckaert, B. Vanderborght, M. M. Nicotra, C. Heckman, A. Roncone, and L. Chen. DISTRIBUTED REINFORCEMENT LEARNING FOR COOPERATIVE MULTI-ROBOT OBJECT MANIPULATION. In: *19th Int. Conf. on Autonomous Agents and Multiagent Systems [AAMAS]*.

[**C, 2018**] S. Nirenburg, M. McShane, S. Beale, P. Wood, B. Scassellati, O. Mangin, and A. Roncone. TO-WARD HUMAN−LIKE ROBOT LEARNING. In: *Int. Conf. on Applications of Natural Language to Information Systems*, pp. 73–82.

[**C, 2018**] E. C. Grigore, O. Mangin, A. Roncone, and B. Scassellati. PREDICTING SUPPORTIVE BEHAV-IORS FOR HUMAN-ROBOT COLLABORATION. In: *2018 Int. Conf. on Autonomous Agents and MultiAgent Systems [AAMAS]*.

[**C, 2018**] E. C. Grigore, A. Roncone, O. Mangin, and B. Scassellati. PREFERENCE-BASED ASSISTANCE PREDICTION FOR HUMAN-ROBOT COLLABORATION TASKS. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2018**] J. Brawer, O. Mangin, A. Roncone, S. Widder, and B. Scassellati. SITUATED HUMAN−ROBOT COLLABORATION: PREDICTING INTENT FROM GROUNDED NATURAL LANGUAGE. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2018**] P. D. H. Nguyen, M. Hoffmann, A. Roncone, U. Pattacini, and G. Metta. COMPACT REAL-TIME AVOIDANCE ON A HUMANOID ROBOT FOR HUMAN-ROBOT INTERACTION. In: *2018 ACM/IEEE Int. Conf. on Human-Robot Interaction [HRI]*.

[**C, 2018**] S. Zeylikman, S. Widder, A. Roncone, O. Mangin, and B. Scassellati. THE HRC MODEL SET FOR HUMAN-ROBOT COLLABORATION RESEARCH. In: *2018 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*.

[**C, 2017**] A. Roncone. LEARNING PERIPERSONAL SPACE REPRESENTATION IN A HUMANOID ROBOT WITH ARTIFICIAL SKIN. In: *AI Matters* 3.1, pp. 17–18.

[**C, 2017**] A. Roncone, O. Mangin, and B. Scassellati. TRANSPARENT ROLE ASSIGNMENT AND TASK ALLOCATION IN HUMAN–ROBOT COLLABORATION. In: *2017 IEEE Int. Conf. on Robotics and Automation [ICRA]*.

[**C, 2016**] H. Lehmann, A. Roncone, U. Pattacini, and G. Metta. PHYSIOLOGICALLY INSPIRED BLINKING BEHAVIOR FOR A HUMANOID ROBOT. In: *8th Int. Conf. on Social Robotics [ICSR]*, pp. 83–93.

[**C, 2016**] A. Roncone, U. Pattacini, G. Metta, and L. Natale. A CARTESIAN 6-DOF GAZE CONTROLLER FOR HUMANOID ROBOTS. In: *Proceedings of Robotics: Science and Systems [RSS]*.

[**C, 2015**] A. Roncone, M. Hoffmann, U. Pattacini, and G. Metta. LEARNING PERIPERSONAL SPACE REPRESENTATION THROUGH ARTIFICIAL SKIN FOR AVOIDANCE AND REACHING WITH WHOLE BODY SURFACE. In: *2015 IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS]*, pp. 3366–3373.

[**C, 2014**] S. R. Fanello, U. Pattacini, I. Gori, V. Tikhanoff, M. Randazzo, A. Roncone, F. Odone, and G. Metta. 3D STEREO ESTIMATION AND FULLY AUTOMATED LEARNING OF EYE-HAND COORDINATION IN HUMANOID ROBOTS. In: *2014 IEEE-RAS Int. Conf. on Humanoid Robots*, pp. 1028–1035.

[**C, 2014**] A. Roncone, M. Hoffmann, U. Pattacini, and G. Metta. AUTOMATIC KINEMATIC CHAIN CALIBRATION USING ARTIFICIAL SKIN: SELF-TOUCH IN THE ICUB HUMANOID ROBOT. In: *2014 IEEE Int. Conf. on Robotics and Automation [ICRA]*.

[**C, 2014**] A. Roncone, U. Pattacini, G. Metta, and L. Natale. GAZE STABILIZATION FOR HUMANOID ROBOTS: A COMPREHENSIVE FRAMEWORK. In: *2014 IEEE-RAS Int. Conf. on Humanoid Robots*, pp. 259–264.

## WORKSHOP PAPERS

[**W, 2023**] J. Brawer, K. Bishop, B. Hayes, and A. Roncone. TOWARDS A NATURAL LANGUAGE INTERFACE FOR FLEXIBLE MULTI-AGENT TASK ASSIGNMENT. In: *Proceedings of the 2023 AAAI Fall Symposium on Artificial Intelligence for Human-Robot Interaction*.

[**W, 2023**] J. Cao, R. Dickler, M. Grace, J. B. Bush, A. Roncone, L. M. Hirshfield, M. A. Walker, and M. S. Palmer. DESIGNING AN AI PARTNER FOR JIGSAW CLASSROOMS. In: *Workshop on Language-Based AI Agent Interaction with Children [AIAIC]*.

[**W, 2023**] Y.S. Tung, M. B. Luebbers, A. Roncone, and B. Hayes. IMPROVING HUMAN LEGIBILITY IN COLLABORATIVE ROBOT TASKS THROUGH AUGMENTED REALITY AND WORKSPACE PREPARATION. In: *6th International Workshop on Virtual, Augmented, and Mixed-Reality for Human-Robot Interactions (VAM-HRI)*.

[**W, 2022**]  K. Kann, A. Ebrahimi, J. J. Koh, S. Dudy, and A. Roncone. OPEN-DOMAIN DIALOGUE GENERATION: WHAT WE CAN DO, CANNOT DO, AND SHOULD DO NEXT. In: *Association for Computational Linguistics, fourth Workshop on NLP for Conversational AI.*

[**W, 2021**]  A. Pasricha, Y.S. Tung, B. Hayes, and A. Roncone. POKERRT: A KINODYNAMIC PLANNING APPROACH FOR POKING MANIPULATION. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS], workshop on Impact-Aware Robotics.*

[**W, 2021**]  K. Bishop, B. Hayes, and A. Roncone. TEACHING GROUNDED READING SKILLS VIA AN INTERACTIVE ROBOT TUTOR. In: *2021 ACM/IEEE Int. Conf. on Human-Robot Interaction [HRI], Robots for Learning workshop.*

[**W, 2021**]  M. Strong, C. Escobedo, and A. Roncone. VOLUMETRIC DATA FUSION OF EXTERNAL DEPTH AND ONBOARD PROXIMITY DATA FOR OCCLUDED SPACE REDUCTION. In: *IEEE/RSJ Int. Conf. on Intelligent Robots and Systems [IROS], fourth Workshop on Proximity Perception in Robotics.*

[**W, 2019**]  F. Stramandinoli, A. Roncone, O. Mangin, F. Nori, and B. Scassellati. AN AFFORDANCE-BASED ACTION PLANNER FOR ON-LINE AND CONCURRENT HUMAN-ROBOT COLLABORATIVE ASSEMBLY. In: *2nd ICRA International Workshop on Computational Models of Affordance in Robotics.*