

# Jonathan Gratch

Institute for Creative Technologies  
Department of Computer Science  
University of Southern California  
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## Research Interests

Artificial Intelligence, cognitive science, emotion modeling, planning, multi-agent systems.

## Education

Ph.D. in Computer Science, University of Illinois, June 1995  
Thesis: On Efficient Approaches to the Utility Problem in Adaptive Problem Solving  
DOCTORAL COMMITTEE: G. F. DeJong (Chair), J. I. Marden, L. B. Pitt, L. A. Rendell, M. J-P. Shaw

M.S. in Computer Science, University of Illinois, May 1993.  
B.A. magna cum laude in Computer Science, University of Texas at Austin, May 1986.

## Professional Experience

Institute for Creative Technologies, University of Southern California  
Director and Research Professor of Computer Science and Psychology. Head a group researching techniques for incorporating emotions, personality, and story into virtual training environments.  
September 2013 - Present

Institute for Creative Technologies, University of Southern California  
Associate Director and Research Associate Professor of Computer Science and Psychology.  
November 2012 – September 2013

Institute for Creative Technologies, University of Southern California  
Associate Director and Research Associate Professor of Computer Science  
March 2007 – November 2012

Institute for Creative Technologies, University of Southern California  
Project Leader and Research Associate Professor of Computer Science  
July 2006 – March 2007

Institute for Creative Technologies, University of Southern California  
Project Leader and Research Assistant Professor of Computer Science  
June 2000 - July 2006

Information Sciences Institute, University of Southern California  
Computer Scientist and Research Assistant Professor of Computer Science  
Performed research and development into real-time planning techniques, multi-agent cooperative behavior, and behavioral modeling learning.  
August 1995 - June 2000

Beckman Institute, University of Illinois at Urbana-Champaign  
Research Assistant. Developed machine learning techniques for acquiring problem solving heuristics - research lead to significant problem solving improvements on the Deep Space Network scheduling system, a real-world scheduling application, and in several planning domains. Focused on both theoretical analysis of these learning techniques and their application to practical industrial problems.  
Fall 1989 - July 1995

Jet Propulsion Laboratory, California Institute of Technology  
Research Consultant. Worked on learning approach for the Deep Space Network scheduling project.  
July 1992 - October 1992, February 1993, September 1994

## **University Service**

### **Committees:**

Provost University Research Committee (2017-2019)  
Graduate Student Assistantship Committee (2000-2003; 2011-2014)  
Research Faculty Merit Committee (Chair, 2007; 2015-2017)  
Committee for Research Faculty Applications (2007-2008)

### **Courses:**

CS534: Affective Computing (developed), Spring 2007, Spring 2009, Fall 2011, Spring 2014, Fall 2015, Fall 2017, Spring 2018  
CS541: Artificial Intelligence Planning, Fall 2000  
CS593: Autonomous Learning and Discovery Agents, Fall 1997

### **Graduate Students:**

Wenji Mao, PhD 2006  
Thesis: Modeling Social Causality and Social Judgment in Multi-agent Interactions  
Anna Okhmatovskaia, M.S. 2006

Hyeoksoo Kim, PhD 2008

Thesis: A Planner-Independent Approach to Human-Computer Interactive Planning

Celso de Melo, PhD 2012

Thesis: The Interpersonal Effect of Emotion in Decision-making and Social Dilemmas

Lixing Huang, PhD 2013

Thesis: Parasocial Consensus Sampling: Modeling Human Nonverbal Behaviors from Multiple Perspectives

Zahra Nazari, PhD 2017

Thesis: Automated Negotiation with Humans

Johnathan Mell

Emmanuel Johnson

Rens Hoegen

Su Lei

Sophie Mallaro (left program for industry)

**Dissertation Committees:**

Lixing Huang (USC), Chair

Celso de Melo (USC), Chair

Hyeoksoo Kim (USC), Chair

Wenji Mao (USC), Chair

Sejin Oh (GIST Korea), Member

Ahyoung Choi (GIST Korea), Member

Ning Wang (USC), Member

Abe Kazemzadeh (USC), Member

Jina Lee (USC), Member

Marc Sparagen (USC), Member

Nan Jing (USC), Member

Henriette van Vugt (Vrije Universiteit), Member

Mei Si (USC), Member

Brent Lance (USC), Member

Robert Marinier (University of Michigan), Member

Evan Drumwright (USC), Member

Erdan Gu (University of Pennsylvania), Member

Janusz Marecki (USC), Member

Young-jun Kim (USC), Member

Matheen Siddiqu (USC), Member

Dusan Jan (USC), Member

Derya Ozkan (USC), Member

Rong Yang (USC), Member

James Pita (USC), Member

Jonathan Ito (USC), Member

Jerry Lin (USC), Member

Elnaz Nouri (USC), Member

Thanh Nguyen (USC), Member

Matthew Brown (USC), Member  
Sunghyun Park (USC), Member  
Joan Wang (Rochester), Member  
Goncalo Periera (Universidade de Losboa), Member  
Zhaojun Yang (USC), Member  
Jeroen de Man (Vrije Universiteit), Member  
Katelyn Swift-Spong (USC), Member  
Saba Khashe (USC), Member  
Eunkyung Kim (USC), Member  
Naveen Kumar (USC), Member  
Roshni Raveendhran (USC), Member  
Laura Garcia (USC), Member  
Aaron Schlenker (USC), Member  
Sara McCarthy (USC), Member

### **Post-doctoral Training**

Ahyoung Choi, PhD Computer Science  
Celso de Melo, PhD Computer Science  
Sin-Hwa Kang, PhD Communications  
Peter Khooshabeh, PhD Psychology  
Gale Lucas, PhD Psychology  
Wendy Treynor, PhD Psychology  
Ning Wang, PhD Computer Science

### **Visiting Students / Researchers Trained**

Yixian Li, Western University, 2019  
Minha Lee, Eindhoven University, 2018  
Sarah Roediger, University of Twente, 2018  
Lisanne Pauw, University of Amsterdam, 2017  
Guillaume Prevost, French Military Academy 2017  
Adrien Biciacci, French Military Academy 2017  
Shannon Monahan, American University of Paris, 2017  
James Finch, Michigan State University, 2017  
Helen Wauck, University of Illinois at Urbana-Champaign, 2017  
Jaina Lehr, University of Duisburg-Essen, 2017  
Xijing Wang, University College London, 2017  
Sanne van Waveren, University of Twente, 2016  
Clara Peters, University of Duisburg-Essen, 2016  
Lilly-Marie Leisse, University of Duisburg-Essen, 2016  
Lisa-Sophie Tasch, University of Duisburg-Essen, 2016  
Veronica Chu, University of California, Irvine, 2016  
Shari Lieblich, Temple University, 2015  
Danielle Shore, Oxford University, 2015  
Rens Hoegen, University of Twente, 2014-2016  
Eli Fessler, Pomona College, 2014  
Mohammad Shayganfar, Worcester Polytechnic Institute, 2014

Jeroen van Vroonhoven, University of Twente, 2014  
Mathieu Gregorie, Laval University, 2013  
Aisha King, Bard College, 2013  
Peiyun Hu, Tsinghua University, 2013  
Lea Schmidt, University of Duisburg-Essen, 2013  
Joan Wang, RPI, 2013  
Gina Reuther, University of Duisburg-Essen, 2012  
Guillaume Cosnard, French Military Academy, 2012  
Emilie Lostaine, French Military Academy, 2012  
Dimitrios Antos, Harvard, 2012  
Andy Smith, NCSU, 2012  
Ahyoung Choi, GIST Korea, 2011  
Bilge Karacora, University of Duisburg-Essen, 2011  
Sylwia Hyniewska, Telecom ParisTech, 2011  
Wim van der Ham, Twente, 2010  
Philip Kulms, University of Duisburg-Essen, 2010  
Tyler Baldwin, Michigan State University, 2010  
Jennifer Talevich, USC, 2010  
Jana Appel, University of Duisburg-Essen, 2010  
Birgit Endrass, University of Augsburg, 2009  
Astrid von der Puttlin, University of Duisburg-Essen, 2009  
Sejin Oh, GIST Korea, 2007  
Francois Courbier, French Military Academy, 2006  
William Rious, French Military Academy, 2006  
Mark ter Maat, University of Twente, 2006  
Corne Versloot, University of Twente, 2006  
Rick van der Wirt, University of Twente, 2005  
Arien Kock, University of Twente, 2004  
Martin Maatman, Twente, 2004  
Timon Mueler, Twente, 2003

## **Grants and Contracts**

Psychophysiological, Robotic and Analytical Equipment for Research on the Underlying Mechanisms of Human-Machine Team Interactions, AFOSR (2019), \$130,000, PI  
Organizational Implications of Autonomy-Mediated Interaction, OSD (2018-2021), \$1,500,000, PI  
Examining oxytocin as a causal mechanism for long-term bonding between humans and autonomy, OSD (2018-2021), \$320,000 (USC-portion), Co-PI  
Advancing the Use of Automated Dialogue Systems for Teaching Communication and Interpersonal Skills, NSF (2018-2021), \$744,863, PI  
Affective Computing Research, Fujitsu (2018-2019), \$207,926, PI  
Strategic Emotions for Leader Development, ARL (2018-2019), \$549,000, PI  
Virtual Human Assessment, ARL (2018-2019), \$440,952, PI  
Strategic Emotions for Leader Development, ARL (2014-2017), \$1,719,192, PI  
Virtual Human Assessment: Developing a theory for how human-like traits benefit (or harm) human-machine interaction, ARL (2014-2017), \$1,445,792, PI

EAGER: Constructing Trust and Rapport between Built Environments and Their Users Through Relational Elements. NSF, (2015-2017), \$250,000, Co-PI

Rapport with artificial agents. Honda Research Institute (2015-2016), \$100,000, Co-PI

Modeling Interpersonal Trust and Conflict: a Dynamic Systems Perspective. ARL, (2015-2016), \$300,000. PI

Social Function of Emotions: Modeling and Exploiting the Social Function of Emotions in Mixed Human-Machine Teams, AFOSR (2015-2018), \$1,255,373, PI

Communicating appraisals and social motives (CASM): Interpersonal effects of regulated and unregulated emotion expression, NSF ORA (2014-2016), \$300,000, PI

Exploring the Implications of Virtual Human Research for Human-Robot Teams, Army Research Laboratory HRED (2013-2014), \$100,000, PI

Achieving the Interpersonal Function of Emotion in Human-Machine Collaboration, NSF SoCS (2012-2015), \$749,969.00, PI

Detection and Computational Analysis of Psychological Signals: Evaluation and Assessment. DARPA (2011-2013), \$626,423, PI

Detection and Computational Analysis of Psychological Signals. DARPA (2011-2013), \$4,330,111, Co-PI

HCC: Small: Learning by Explaining to a Virtual Human, NSF (2009-2012), \$496,000, PI

Validating a computational model of emotion's consequences for decision-making, AFOSR, \$933,000 (2009-2012), Co-PI

Stress and Emotion Project, U.S. Army RDECOM (2009), \$826,493, PI

MAJOR: Collaborative Research: Modeling Creative and Emotive Improvisation in Theatre, NSF (2008-2010), Senior personal

Virtual Humans in Kinetic Environments, USC/ICT, \$500,000 (2008), PI

Is rapport in the eye, ear, or mind of the beholder? Phase 2. U.S. Army RDECOM (2008), \$100,000, PI

HCC: Building Rapport with Virtual Humans, NSF (2007-9), \$450,000, PI

Collaborative Research—Dyadic rapport within and across cultures: Multimodal assessment of human-human and human-computer interaction, NSF (2007-2009), \$650,000, Co-PI

Quantifying the Human Interactional Efficacy of Advanced Virtual Human Agents for Training, U.S. Army RDECOM, \$116,000 (2008), PI

Is rapport in the eye, ear, or mind of the beholder? U.S. Army RDECOM (2007), \$100,000, PI

Modeling and Validating Emotion's Impact on Cognition, AFOSR, \$840,000 (2006-08), Co-PI

SocSim, Bavaria California Technology Center (2006), \$4000, Co-PI

Stress and Emotion Project, U.S. Army RDECOM (2006-7), \$1,775,000, PI

Virtual Human Rapport, U.S. Army RDECOM, (2006) \$100,000, PI

HUMAINE Network on Emotion and Man-machine Interaction, EU, \$20,000 (2005-7), Co-PI

Stress and Emotion Project, U.S. Army RDECOM, \$867,000 (2005), PI

Stress and Emotion Project, Army Research Office, \$800,000 (2004), PI

Workshop on Perceptive Animated Interfaces and Virtual Humans, NSF, \$40,000, 2003, Co-PI

Stress and Emotion Project, Army Research Office, \$580,000 (2003), PI

Stress and Emotion Project, Army Research Office, \$398,000 (2002), PI  
Emotional Synthetic Forces, Army Research Institute, \$294,000 (1997-2000), PI

## **Honors and Professional Activities**

### **Editorial Board:**

Editor-in-Chief (founding), IEEE Transactions on Affective Computing (2010-2014) –  
Impact factor on departure: 3.467  
Associate Editor, Affective Science (2019-)  
Associate Editor, Emotion Review (2007-)  
Associate Editor, Journal of Autonomous Agents and Multiagent Systems (2010-)  
Guest Editor, ACM TiiS, special issue on Trust in Autonomy (2017)  
Guest Editor, IEEE Intelligent Systems, special issue on Social and Economic  
Computing

### **Elected Office:**

Steering Committee Chair, IEEE Transactions on Affective Computing (2015-2017)  
President, HUMAINE Association (2009-2011)  
President Elect, HUMAINE Association (2007-2009)  
Executive Committee Member, HUMAINE Association (2007-2013)

### **Program Chair or Co-Chair:**

AAAI Conference on Artificial Intelligence, Area Chair, 2020  
Affective Computing and Intelligent Interaction, General Co-Chair, 2019  
Affective Computing Pre-Conference at International Society for Research on  
Emotions, Co-Chair 2019  
Affective Computing Pre-Conference at Society for Affective Science, Co-Chair 2017  
International Joint Conference on Artificial Intelligence, Area Chair, 2016-2018  
Affective Computing and Intelligent Interaction Conference, Program Chair, 2015  
International Workshop on Emotion Representations and Modelling for Human-  
Computer Interaction Systems, Co-Chair 2013  
Affective Computing and Intelligent Interaction Conference, Demo Chair, 2009  
Affective Computing and Intelligent Interaction Conference, Tutorial Chair, 2007  
Workshop on rapport and social emotions, Chair, 2007  
International Workshop on Modeling the Cognitive Antecedents and Consequences of  
Emotion, Co-chair, 2006  
International Conference on Intelligent Virtual Agents, Chair, 2006  
International Working Conference on Intelligent Virtual Agents, co-chair, 2006  
International Workshop on Virtual Humans: Design Criteria, Techniques and Case  
Studies for Creating and Evaluating Interactive Experiences, Workshop Co-  
chair, 2004  
Workshop on Accelerating Progress in Perceptive Animated Agents  
and Virtual Humans, Workshop Co-chair, 2004  
International Workshop on Virtual Humans, Workshop Co-chair, 2002  
19th International Soar Workshop, Workshop Chair, 2000

**Senior Programming Committee Member:**

International Conference on Autonomous Agents and Multiagent Systems (2010,2013-2019)  
International Conference on Intelligent Virtual Agents (2014, 2015, 2019)  
International Joint Conference on Artificial Intelligence (2018)  
AAAI Conference on Artificial Intelligence (2015, 2016, 2017)  
International Conference on Multimodal Interaction (2014, 2015)  
International Conference on Autonomous Agents and Multiagent Systems, Challenges and Visions Track (2014)  
International Joint Conference on Artificial Intelligence (2013)  
International Conference on Affective Computing and Intelligent Interaction (2013)  
International Conference on Automatic Face and Gesture Recognition (2013)  
International Conference on Intelligent Virtual Agents, Organizing Committee (2006-)  
Conference on Behavioral Representation in Modeling and Simulation (2007)  
International Conference on Virtual Storytelling (2003)  
National Conference on Artificial Intelligence (1998)

**Program Committee Member:**

International Society for Research on Emotions (2019)  
International Association of Conflict Management (2015)  
Cognitive Science Conference (2004, 2014)  
AAAI Fall Symposium on Integrated Cognition (2014)  
International Workshop on Context Based Affect Recognition (2012)  
International Conference on Intelligent Virtual Agents (2012)  
International Conference on Affective Computing and Intelligent Interaction (2011)  
International Society for Research on Emotions (2011)  
International Workshop on Human Behavior Recognition (2010)  
Workshop on Specification and Computation of Affect in Collaborative and Social NETWORKS (2009)  
International Symposium on Ubiquitous Virtual Reality (2008-2009)  
International Workshop on Social Computing (2008)  
Cognitive Science Conference, Prize Committee (2007)  
International Conference on Cognitive Modeling (2007)  
International Society for Gesture Studies (2007)  
International Conference on Autonomous Agents and Multiagent Systems (2002-2008)  
National Conference on Artificial Intelligence (1996, 1997, 1998, 2004, 2006, 2010)  
Workshop on Perception and Interactive Technologies (2005, 2006)  
International Conference on Affective Computing and Intelligent Interaction (2005)  
Portuguese Conference on Artificial Intelligence (2005)  
Conference on Behavior Representation in Modeling and Simulation (2003)  
Conference on Computer Animation and Social Agents (2003)  
International Conference on Autonomous Agents (2001)  
International Conference on Virtual Storytelling (2001)



International Conference on Artificial Intelligence Planning Systems (2000)  
International Joint Conference on Artificial Intelligence (1997)  
International EMCSR Symposium on Affective Computational Entities (2004)  
IUI workshop on Affective Interactions (2005)  
Workshop on Human-like Intelligent Interfaces (2004)  
Workshop on Affective Dialogue Systems (2004)  
AAAI Spring Symposium on Emotion Architectures (2004)  
Workshop on Affective and Attitude User Modeling (2003)  
International Working Conference on Intelligent Virtual Agents (2003)  
Florida Artificial Intelligence Research Symposium (1998)

**Reviewer:**

Proceedings of the National Academy of Science (2019)  
Emotion (2019)  
IMWUT (2018-2019)  
Emotion Review (2015-2016,2018)  
Journal of Experimental Child Psychology (2018)  
International Journal of Human-Computer Studies (2018)  
Israel Science Foundation (2017)  
Communications of the ACM (2017)  
IEEE Computer (2017)  
Computer Speech and Language (2017)  
NIH Study Section (2016-2017)  
Journal of AI Research (2017)  
CHI (2017)  
CHI Play (2016)  
PlosOne (2016)  
Dutch National Science Foundation (2010, 2013, 2016)  
AI Magazine (2015)  
IEEE Transactions on Affective Computing (2011,2015)  
International Conference on Human Robot Interaction (2015)  
Frontiers in Psychology (2015)  
United States – Israel Binational Science Foundation (2015)  
International Conference on Multimodal Interaction (2015)  
Journal of Human Computer Interaction (2014)  
Journal of Computer Science and Technology (2014)  
Air Force Office of Scientific Research (2009-2014)  
Social Psychological and Personality Science (2011, 2014)  
Cognitive Science (2009, 2013)  
Portuguese NSF (2012)  
NIH/NIDA (2012)  
IEEE Transactions on Autonomous Mental Development (2012)  
Journal of Experimental Social Psychology (2011)  
Psychophysiology (2011)  
Transactions of Affective Computing (2011)

Transactions on Interactive Intelligent Systems (2011)  
Autonomous Robotics (2010)  
Oxford University Press (2010)  
NSF Review Panel, Social-Computational Systems (2010)  
NSF Career Award (1998, 2009)  
Transactions on Vision and Computer Graphics (2009)  
Journal of Brazilian Computer Society  
European Science Foundation, Committee for the Social Sciences (2009)  
Air Force Office of Scientific Research (2009)  
International Journal of Human-Computer Studies (2009)  
Artificial Intelligence Journal (2007, 2008)  
Journal of Autonomous Agents and Multi-agent Systems (2008)  
Adaptive Behavior (2008)  
NSF Review Panel, CreativeIT program (2007)  
Language and Speech (2007)  
Journal of Natural Language Engineering (2007)  
Cognition and Emotion (2006)  
Transactions in Robotics (2006)  
International Journal of Humanoid Robotics (2005, 2006)  
Journal of Computer Science Technology (2006)  
Eurographics (2005)  
Journal of Cognitive Systems Research (2004, 2006)  
Journal of Artificial Intelligence Research (2003, 2004)  
AI Magazine (2002)  
Journal of Visualization and Computer Animation (2002)  
User Modeling and User-Adapted Interaction: An International Journal  
(special Issue on User Modeling and Intelligent Agents. (2001)  
IEEE Transactions on Systems, Man, and Cybernetic (special issue on  
"Socially Intelligent Agents - The Human in the Loop"), 2001  
Machine Learning Journal (1996)  
Journal of Artificial Intelligence Research (1996)  
Journal of Decision Support Systems (1995)  
Annals of Operation Research (1995)  
National Conference on Artificial Intelligence Student Program (1994)  
European Conference on Artificial Intelligence (1994)  
Third International Workshop on Knowledge Compilation and Speed-up  
Learning (1993)

**Miscellaneous:**

Scientific Advisory Board for Automated Negotiation Agents Competition (2018-)  
Advisory Board Member, Psychology of Technology Institute (2017-)  
National Academy of Sciences (NRC): Committee member for study on the context of  
military environment: social and organization factors (2013)  
International Joint Conference on Artificial Intelligence (IJCAI), Local Arrangements  
Committee, 2009

National Academy of Sciences (NRC): Committee member for study on  
Opportunities in Basic Research in the Behavioral and Social Sciences for the  
US Military  
Invited Research Fellow, Center for Advanced Media Research Amsterdam, Free  
University Amsterdam (Summer, 2008)  
US Joint Forces Command Study on Large-Scale Joint Experimentation  
Enabled by Scalable Parallel Processor Computing  
DARPA ISAT study on Mixed-Initiative Control and Monitoring within Human-Bot  
Systems, 2001  
Advisory Board Member, UCLA Center for Computational Social Science  
Soar Advisory Board Member  
Senior Member of IEEE  
Member of the International Society for Research on Emotions  
Member of the American Association for Artificial Intelligence  
Member of the HUMAINE Associate for research on emotion and human-machine  
interaction  
Member of the Operations Research Society of America and the Institute  
of Management Sciences

## **Awards**

Best Paper Finalist, Best Paper Finalist, *International Conference on Autonomous Agents and Multi-Agent Systems*. 2018  
Fellow of the Cognitive Science Society, 2017  
Best Paper, 18th ACM International Conference on Multimodal Interaction, November 2016  
Best Presentation, ACM SIGGRAPH Conference on Motion in Games, October 2016  
Best Paper, 11<sup>th</sup> International Conference on Disability, Virtual Reality, and Associated Technologies, September 2016  
Best Demo Finalist, International Conference on Autonomous Agents and Multiagent Systems, 2016  
Best Demo Paper, International Conference on Affective Computing and Intelligent Interaction, 2015  
Best Paper, International Workshop on Automatic Sentiment Analysis in the Wild, 2015  
IEEE Computer Society Certificate of Appreciation, 2014  
AAAI Fellow, 2014  
UNESCO/Netexplo Award for most innovated and promising digital technologies of the year. UNESCO, Paris, 2014  
IEEE Senior Member, 2014  
Best Paper Finalist, International Conference on Autonomous Agents and Multiagent Systems, 2014  
Best Paper, IEEE International Conference on Face and Gesture, 2013  
ACM/SIGART Autonomous Agents award, 2010  
Best Paper, International Conference on Autonomous Agents and Multiagent Systems, 2010  
Best Paper, International Conference on Affective Computing and Intelligent Interaction, 2009

Best Paper Finalist, Intelligent Virtual Agents 2009  
Best Paper, International Conference on Multimodal Interaction, 2008  
Best Paper, Intelligent Virtual Agents 2008  
Best Paper, Interservice/Industry Training, Simulation & Education Conference (I/ITSEC),  
Emerging Concepts and Innovative Technology track, 2007  
Best Paper Finalist, Intelligent Virtual Agents 2007  
"Best of AAMAS" special issue article, Journal of Autonomous Agents and Multiagent  
Systems, 2005  
Best Paper, Autonomous Agents and Multiagent Systems 2003, Innovative Systems Track  
Best Paper, Autonomous Agents Conference 2001, Software Prototype Track  
Recommended Reading List, Computer Generated Forces and Behavioral Simulation  
2002  
Best Paper, Computer Generated Forces and Behavioral Simulation 2001,  
NASA Group Achievement Award for Advanced Development for the Deep Space  
Mission System, 1999

### **Invited Lectures, Seminars, and Colloquia:**

Keynote Speaker, 7<sup>th</sup> International Conference on Human-Agent Interaction, Kyoto Japan,  
October 2019

Invited Panelist, American Employment Law Council Conference, Ojai, CA, October  
2019

Keynote Speaker, Workshop on Methodology and/of Evaluation of IVAs, Paris, France,  
July 2019

Research Colloquium, Northwestern University, March 2019

Research Colloquium, UC Merced, February 2019

Keynote Speaker, Society for Cognitive Studies of the Moving Image, June 2018

Invited Panelist, American Psychological Society, May 2018

Research Colloquium, Oxford University, February 2018

Research Colloquium, TU Delft, February 2018

Invited Panelist, NSF Cognitive Assistants Workshop, November 2017

Keynote Speaker, International Society for Research on Emotion, St. Louis, July 2017

Invited Panelist, SIGGRAPH Panel on Emotion and Affect in VR, July 2017

Invited Panelist, Microsoft Research Faculty Summit, June 2017

Invited Seminar, Samsung Research, May 2017

Keynote Speaker, International Conference on Computer Animation and Social Agents,  
Korea, May 2017

Invited Seminar, Stanford University, January 2017

Invited Colloquium, Naval Research Laboratory, Washington D.C., December 2016

Distinguished Lecture, Northwestern University, Chicago, October 2016

Invited Colloquium, University of California, Irvine, October 2016

Keynote Speaker, International Joint Conference on Artificial Intelligence, NYC, July 2016

Invited Speaker, Virtual Social Interaction Workshop, MediaCity, UK, July 2016

Invited Speaker, International Summer School in Affective Sciences, July 2016

Invited Panelist, Talkspace Clinical Conference on the Future of Therapy, NYC, April 2016

Keynote Speaker, Society for Affective Science, Chicago, March 2016

Invited Speaker, Behavioral Informatics Symposium, Vrije Universiteit Amsterdam, February 2016

Invited Speaker, University of Lisbon, Department of Computer Science, December 2015

Invited Speaker, National Academy of Sciences, Science and Entertainment Exchange, Los Angeles, October, 2015

Invited Panelists, Human Factors and Ergonomics Society Annual Meeting, Los Angeles, October, 2015

Invited Speaker, International Workshop on advanced multimodal affective interaction, Beijing, China, September 2015

Invited Speaker, USC Sidney Harman Academy for Polymathic Study, Los Angeles, September 2015

Invited Panelist, International Society for Research on Emotion, Presidential Symposium, Geneva, Switzerland, July 2015

Invited Speaker, Cardiff University Department of Computer Science, June 2015

Keynote, 4<sup>th</sup> International Workshop on Human-Agent Interaction Design and Models, Istanbul Turkey, May 2015

Invited Speaker, W.V.T. Rusch Engineering Honors Colloquium, February, 2015

Keynote speaker, Army Research Laboratory Fellows Meeting, Aberdeen, MD, October 2014

Distinguished Speaker, Rutgers Center for Cognitive Science, September, 2014

Invited Panelist, the Interservice/Industry Training, Simulation and Education Conferences (I/ITSEC), Orlando, FL, December 2013

Invited Speaker, Georgia Tech Games@GeorgiaTech Seminar Series, November 2013

Keynote speaker, Second International Workshop on Context Based Affect Recognition, Geneva, Switzerland, September 2013

Keynote speaker, Workshop on Empathic and Emotional Agents at the International Conference on Autonomous Agents and Multiagent Systems, Valencia, Spain, June 2012

Invited Panelist, International Conference on Cognitive Modeling, Berlin, April 2012

Invited Speaker, Northwestern University Cognitive Science Seminar Series, Chicago, IL  
November 2011

Invited Panelist, International Conference on Affective Computing and Intelligent  
Interaction, Memphis, TN, October 2011

Keynote speaker, Workshop on Standards in Emotion Modeling, Lorentz Center, Leiden.  
August 2011

Keynote speaker, IEEE International Conference on Automatic Face and Gesture  
Recognition, Santa Barbara, March 2011

Keynote speaker, Summer School on Affective Computing and Social Signal Processing,  
Edinburgh, Scotland, August 2010

Keynote speaker, International Conference on Cognitive Modeling, Philadelphia, PA,  
June 2010

ACM SIGART Award Keynote, International Conference on Autonomous Agents and  
Multiagent Systems, Toronto, Canada, May 2010

Invited speaker, Social Science Colloquium, University of California, Santa Barbara,  
April 2010

Invited speaker, SCIS Colloquium Series, Florida International University, November  
2009

Invited speaker, University of Maryland virtual brown bag on culture and negotiation,  
October 2009

Keynote speaker, International Conference on Affective Computing and Intelligent  
Interaction, Amsterdam, September 2009

Invited speaker, Symposium on Social Interactions in Virtual Worlds, A\*STAR,  
Singapore, April 2009

Invited speaker, Annenberg Research Seminar, USC Communications Department, March  
2009

Panel organizer and speaker, International Conference on Human-robot Interaction, March  
2009

Invited speaker, ProjectOne Workshop, University of California, San Diego, December  
2008

Invited speaker, AI Festival, Reykjavík University, November 2008

Panel organizer and speaker, National Communications Association, San Diego,  
November 2008

Carnegie Mellon University, Human Computer Interaction Institute, Seminar Speaker,  
October, 2008

Keynote speaker, International Symposium on Ubiquitous Virtual Reality, July 2008

Greifswald University, Department of Psychology, July 2008

Vrije University of Amsterdam, Joint colloquium for Media Psychology and Computer Science, June 2008

University of Duisburg-Essen, Department of Media and Social Psychology, June 2008

NSF Workshop on Human-Computer Interaction for 21st Century Discovery, April 2008

Future of Games Speaker Series, North Carolina State University, April 2008

National Academy of Sciences, Committee on Opportunities in Neuroscience for Future Army Applications, February 2008.

Pomona College, Computer Science Colloquium Series, December 2007

USC Conference on Emotion, Decision Making, and the Brain, August 2007

Computer Game Design Seminar, University of Applied Sciences, Augsburg, Germany, June 2007

National Academy of Sciences, Board on Army Science and Technology, Washington D.C., December 2006.

Technology and Social Behavior Speaker Series, Northwestern University, November, 2006

International Symposium on Robot and Human Interactive Communication (RO-MAN 2006), Hertfordshire, UK, Invited tutorial, September 2006

Novel Translational Research to Treat Social and Communication Deficits in Autism, Marina del Rey, CA, invited speaker, August 2006

Believable Agents Workshop, invited speaker, Marina del Rey, CA, August, 2006

International Conference on Artificial Intelligence and Interactive Digital Entertainment, Marina del Rey, CA, invited speaker, July 2006

ZiF-Zentrum für interdisziplinäre Forschung, invited speaker, Bielefeld, Germany, April 2006

Pedagogical Catalysts for Adaptable Leaders Workshop, invited speaker, Marina del Rey, CA, December 2005

University of Santa Barbara Research Center for Virtual Environments and Behavior, invited speaker, November 2005.

University of Michigan Automotive Research Center, invited speaker, Oct 2005

HUMAINE Network of Excellence on Emotion and Human-Machine Interaction, Invited panel speaker, Newcastle, Northern Ireland, June 2005, June 2006

DARPA Workshop on Technologically Enhanced Training Agents, Marina del Rey, April, 2005

Workshop on Integrated Models of Cognitive Systems, invited speaker, Saratoga Springs, NY, March 2005

Imagina: European Digital Content Creation Trade Show, invited panelist, Monte Carlo, February, 2005

Pell Center for International Relations and Public Policy, December 2004 Conference on Behavioral Representation in Modeling and Simulation, invited panelist, Arlington, VA, 2004

University of Chicago, Psychology Department, 2004 Dagstuhl-Seminar on Evaluating Embodied Conversational Agents, 2004

AAAI Spring Symposium on Affective Architectures, 2004, Invited panel organizer

University of Hertfordshire, Adaptive Systems Research Group, 2003

Soar Workshop, Michigan, 2003

University of Michigan, Psychology Department, 2003

Austrian Research Institute for Artificial Intelligence, 2003

Vienna Workshop on Educational Agents - More than Virtual Tutors, 2003

Symposium on The Dis/simulations of War and Peace, Brown University, 2003

IJCAI Cognitive Modeling Workshop, Acapulco, Mexico, 2003, Invited panel participant

Cognitive Architecture Workshop, Stanford, CA, 2003

Harvard University Artificial Intelligence Group (2002)

Keynote Speaker, PRICAI Workshop on Lifelike Animated Agents, Tokyo, Japan, 2002

Computational Social Sciences Conference, Lake Arrowhead, CA, 2002

Intelligent User Interfaces Conference, 2002, Invited panel participant

Keynote Speaker, Computer Animation Conference, Seoul, Korea, 2001

Conference on the New Biopolitics (Rational Choice is Nearly Dead), UCLA, 2000

Institute for Research in Cognitive Science, University of Pennsylvania, 2000

Workshop on Multiagent Spatial Modeling, UCLA, 2000

MIT Media Lab, 2000

Brown Department of Media and Cultural Studies, 2000

Watson Institute for International Studies, Virtual Y2K Conference, 1999

Jet Propulsion Laboratory, California Institute of Technology, 1992,1996

Duke University - Department of Computer Science, 1995

AT&T Bell Labs, 1995

University of California at Irvine - Department of Computer Science, 1995

Haverford College - Department of Computer Science, 1995

AAAI Spring Symposium on Goal Driven Learning, Stanford, CA, 1994

University of Iowa - Department of Management Sciences, 1992

NASA Ames Research Center, 1992



## Books

Rafa Calvo, Sidney D'Mello, Jonathan Gratch and Arvid Kappas (Eds). *Handbook of Affective Computing*. Oxford University Press. 2015

Jonathan Gratch and Stacy Marsella (Eds.). *Social Emotions in Nature and Artifact*. Oxford University Press, 2013

## Journal Publications

Celso M. de Melo, Stacy Marsella, and Jonathan Gratch. Human Cooperation when Acting Through Autonomous Machines. *Proceedings of the National Academy of Science (PNAS)* 116 (9), 2019, pp. 3482-3487

Veronica Chu, Gale Lucas, Su Lei, Sharon Mozgai, Peter Khooshabeh, and Jonathan Gratch, J. Emotion Regulation in the Prisoner's Dilemma: Effects of Reappraisal on Behavioral Measures and Cardiovascular Measures of Challenge and Threat. *Frontiers in Human Neuroscience*, 13 (in press)

Magdalena Rychlowska, Job van der Schalk, Jonathan Gratch, Eva Breitinger, and Antony Manstead. Beyond actions: Reparatory effects of regret in intergroup trust games. *Journal of Experimental Social Psychology* 82, 2019, pp. 74-84

Saba Khashe, Gale Lucas, Burcin Becerik-Gerber and Jonathan Gratch. Establishing social dialog between buildings and their users for enabling human-building interactions. *International Journal of Human-Computer Interaction* (in press)

Knott, B. A., Gratch, J., Cangelosi, A., & Caverlee, J. ACM Transactions on Interactive Intelligent Systems (TiiS) Special Issue on Trust and Influence in Intelligent Human-Machine Interaction. *ACM Transactions on Interactive Intelligent Systems* 8(4), 1-3 2018

Xijing Wang, Eva G. Krumhuber and Jonathan Gratch. The Interpersonal Effects of Emotions in Money versus Candy Games. *Journal of Experimental Social Psychology* 79, 2018, pp. 315-327

Sidney D'Mello, Arvid Kappas and Jonathan Gratch. The Affective Computing Approach to Affect Measurement. *Emotion Review* (in press)

Celso de Melo, Stacy Marsella and Jonathan Gratch. Social decisions and fairness change when people's interests are represented by autonomous agents. *Journal of Autonomous Agents and Multiagent Systems* 32(1), 2018. pp. 163-187

Nicole Krämer, Gale Lucas, Lea Schmitt and Jonathan Gratch. Social Snacking with a virtual agent - On the interrelation of need to belong and effects of social responsiveness when interacting with artificial entities. *International Journal of Human-Computer Studies* v109. 2018. pp. 112-121

Gale Lucas, Albert Rizzo, Jonathan Gratch, Stefan Scherer, Giota Stratou, Jill Boberg, Louis-Philippe Morency. Reporting Mental Health Symptoms: Breaking Down Barriers to Care with Virtual Human Interviewers. *Frontiers in Robotics and AI* 4(51). 2017.

Saba Khashe, Gale Lucas, Burcin Becerik and Jonathan Gratch. Buildings with persona: Towards effective building-occupant communication. *Computers in Human Behavior*, Vol 75. 2017. pp. 607-618

Gale Lucas, Jonathan Gratch, Nikolaos Malandrakis, Evan Szablowski, Eli Fessler and Jeffrey Nichols. GOAALLL!: Using Sentiment in the World Cup to Explore Theories of Emotion. *Image and Vision Computing*. Vol 66. 2017. pp 58-65

Nicole C. Krämer, Bilge Karacora, Gale Lucas, Morteza Dehghani, Gina Rütter, and Jonathan Gratch. Closing the gender gap in STEM with friendly male instructors? On the effects of rapport behavior and gender of a virtual agent in an instructional interaction. *Computers & Education*. Vol 99. 2016. pp1-13

Celso de Melo, Stacy Marsella and Jonathan Gratch. People Don't Feel Guilty About Exploiting Machines. *ACM Transactions on Computer-Human Interaction* 23(2), 2016

Scherer, Stefan, Gale Lucas, Jonathan Gratch, Albert Rizzo, and Louis-Philippe Morency. Self-reported symptoms of depression and PTSD are associated with reduced vowel space in screening interviews. *IEEE Transactions on Affective Computing* 7(1). 2016. pp 59-73

Gale Lucas, Jonathan Gratch, Lin Cheng and Stacy Marsella. When the going gets tough: Grit Predicts costly perseverance. *Journal of Research in Personality* vol. 59. 2015. pp 15-22

Yuqiong Wang, Gale Lucas, Peter Khooshabeh, Celso De Melo and Jonathan Gratch. 'Effects of Emotional Expressions on Persuasion. *Social Influence* 10(4). 2015 pp. 236-249

Sunghyun Park, Stefan Scherer, Jonathan Gratch, Peter Carnevale, and Louis-Philippe Morency. I Can Already Guess Your Answer: Predicting Respondent Reactions during Dyadic Negotiation. *IEEE Transactions on Affective Computing* 6(2). 2015. pp 86-96

Celso de Melo, Jonathan Gratch, and Peter Carnevale. Humans vs. Computers: Impact of Emotion Expressions on People's Decision Making. *IEEE Transactions on Affective Computing*. 6(2). 2015. pp 127-136

Ahyoung Choi, Celso de Melo, Peter Khooshabeh, Woontack Woo and Jonathan Gratch. Physiological Evidence for a Dual Process Model of the Social Effects of Emotion in Computers. *International Journal of Human-Computer Studies* Vol. 74. 2015. pp. 41-53

Morteza Dehghani, Peter Khooshabeh, Angela Nazerian and Jonathan Gratch. The Subtlety of Sound: Accent as a Marker for Culture. *Journal of Language and Social Psychology* 34(3). 2015. pp 21-250

Stefan Scherer, Giota Stratou, Gale Lucas, Marwa Mahmoud, Jill Boberg, Jonathan Gratch, Albert Rizzo, and Louis-Philippe Morency. Automatic Audiovisual Behavior Descriptors for Psychological Disorder Analysis. *Image and Vision Computing Journal, Special Issue on Best of Face and Gesture 2013*. 32(10). 2014. pp. 648-658

Giota Stratou, Stefan Scherer, Jonathan Gratch and Louis-Philippe Morency. Automatic Nonverbal Behavior Indicators of Depression and PTSD: The Effect of Gender. *Journal on Multimodal User Interfaces, Special Issue: Best of ACII, 9(1)*. 2015. Pp 17-29.

Gale Lucas, Jonathan Gratch, Aisha King and Louis-Philippe Morency. It's Only a Computer: Virtual Humans Increase Willingness to Disclose. *Computers in Human Behavior*. v37. 2014. pp. 94-100

Stacy Marsella and Jonathan Gratch. Computationally modeling human behavior. *Communications of the ACM* 57(12) 2014. pp 55-67

Morteza Dehghani, Peter Carnevale and Jonathan Gratch. Interpersonal effects of expressed anger and sorrow in morally charged negotiation. *Judgment and Decision Making*. 9(2). 2014

Sinhwa Kang and Jonathan Gratch. Exploring Users' Social Responses to Computer Counseling Interviewers' Behavior. *Journal of Computers in Human Behavior*, Vol 34. 2014, pp. 120-130

Celso de Melo, Peter Carnevale, Stephen Read and Jonathan Gratch. Reading people's minds from emotion expressions in interdependent decision making. *Journal of Personality and Social Psychology*, 106(1), 2014, pp. 73-88

Peter Khooshabeh, Morteza Dehghani, Angela Nazarian, Jonathan Gratch. The Cultural Influence Model: When Accented Natural Language Spoken by Virtual Characters Matters. *Journal of Artificial Intelligence and Society*, 32(1), 2014, pp 9-16

Morteza Dehghani, Kenj Sagae, Sonia Sachdeva, Jonathan Gratch. Analyzing Political Rhetoric in Conservative and Liberal Weblogs Related to the Construction of the "Ground Zero Mosque". *Journal of Information Technology & Politics*. Vol. 11 (1), 2014 pp. 1-14.

Rainer Reisenzein, Eva Hudlicka, Mehdi Dastani, Jonathan Gratch, Koen Hindriks, Emiliano Lorini, and John-Jules Meyer. Computational Modeling of Emotion: Towards Improving the Inter- and Intradisciplinary Exchange. *IEEE Transactions on Affective Computing*, 4(3), 2013, pp. 246-266

Jana Appel, Astrid Marieke von der Pütten, Nicole C. Krämer and Jonathan Gratch. Does humanity matter? Analyzing the importance of social cues and perceived agency of a computer system for the emergence of social reactions during human-computer interaction. *Advances in Human-Computer Interaction*. 13, 2012

Choi, A., de Melo, C., Woo, W., & Gratch, J. Affective engagement to emotional facial expressions of embodied social agents in a decision-making game. *Computer Animation and Virtual Worlds*, 23, 3-4, 2012, pp. 331-342

Wenji Mao and Jonathan Gratch. Modeling Social Causality and Responsibility Judgment in Multi-Agent Interactions. *Journal of Artificial Intelligence Research*. Vol 44. 2012. pp 223-273.

Celso M. de Melo, Peter Carnevale and Jonathan Gratch. The Impact of Emotion Displays in Embodied Agents on Emergence of Cooperation with People. *PRESENCE: Teleoperators and Virtual Environments* 20(5). 2012. pp-449-465

Jonathan Gratch. The Sciences of the Artificial Emotions: Commentary on Aylett & Paiva. *Emotion Review*, 4(3). 2012. pp. 266-268

Wenji Mao, Jonathan Gratch, Xiaochen Li. Probabilistic Plan Inference for Group Behavior Prediction. *IEEE Intelligent Systems*. 2012. pp27-36

Peter Khooshabeh, Jonathan Gratch. Affective learner-centered design framework for virtual human educational technologies. Human Computer Interaction and Learning Technologies. Abu Dhabi, UAE: Published by *International Journal of Information Technology & Computer Science (IJITCS)*. 2012

Sin-Hwa Kang and Jonathan Gratch. People Like Virtual Counselors That Highly-Disclose About Themselves. *Annual Review of Cybertherapy and Telemedicine*, vol 167. 2011. pp. 143-148

Astrid M. von der Pütten, Nicole C. Krämer, Jonathan Gratch and Sin-Hwa Kang. It doesn't matter what you are! Explaining social effects of agents and avatars. *Computers in Human Behavior* 26(6). 2010

Celso de Melo, Patrick Kenny and Jonathan Gratch. Influence of Autonomic Signals on Perception of Emotions in Embodied Agents. *Applied Artificial Intelligence* 24(6). 2010. pp. 494-509

Sin-Hwa Kang and Jonathan Gratch. Virtual Humans Elicit Socially Anxious Interactants' Verbal Self-Disclosure. *Journal of Visualization and Computer Animation*, 21(3-4) pp 473-482. 2010.

Celso de Melo, Patrick Kenny, and Jonathan Gratch. Real-Time Expression of Affect through Respiration. *Journal of Visualization and Computer Animation*. 21(3-4). Pp. 225-234. 2010.

Louis-Philippe Morency, Ivan de Kok and Jonathan Gratch. A Probabilistic Multimodal Approach for Predicting Listener Backchannels. *Journal of Autonomous Agents and Multi-Agent Systems*, Springer, 20(1), 2009, 70-84

Jonathan Gratch, Stacy Marsella and Paolo Petta, "Modeling the Antecedents and Consequences of Emotion," *Journal of Cognitive Systems Research*, 10(1), 2009, pp. 1-5.

Stacy Marsella and Jonathan Gratch, "EMA: A process model of appraisal dynamics," *Journal of Cognitive Systems Research*, 10(1), 2009, pp. 70-90.

Wenji Mao and Jonathan Gratch. "Modeling Social Inference in Virtual Agents. *Journal of Artificial Intelligence and Society*, 24(1), 2009, pp. 5-11.

Core, M. G., Traum, D., Lane, H. C., Swartout, W., Marsella, S., Gratch, J., and van Lent, M., "Teaching negotiation skills through practice and reflection with virtual humans," *Simulation*, 82, 2006, pp. 685-701

William Swartout, Jonathan Gratch, Randall Hill, Eduard Hovy, Stacy Marsella, Jeff Rickel and David Traum, "Toward Virtual Humans," *AI Magazine*, 27(1) 2006

Jonathan Gratch and Stacy Marsella, "Evaluating a computational model of emotion," in *Journal of Autonomous Agents and Multiagent Systems*, Special Issue on the Best of AAMAS 2004, 11(1), July 2005, pp. 23-43.

Jonathan Gratch and Stacy Marsella, "Some Lessons for Emotion Psychology for the Design of Educational Agents," *Journal of Applied Artificial Intelligence* (special issue on "Educational Agents - Beyond Virtual Tutors"), vol. 19, 2005, 215-233.

Jonathan Gratch and Stacy Marsella, A Domain-independent Framework for Modeling Emotion, *Journal of Cognitive Systems Research*, Volume 5, Issue 4, 2004, Pages 269-306.

Randall W. Hill, Jr., Jonathan Gratch, Stacy Marsella, Jeff Rickel, William Swartout, and David Traum, "Virtual Humans in the Mission Rehearsal Exercise System," in *Kunstliche Intelligenz* special issue on Embodied Conversational Agents, AI number 4/03, pp. 5-10, 2003.

Jonathan Gratch and Stacy Marsella, Fight the way you train: the role and limits of emotions in training for combat, *Brown Journal of World Affairs*, vol. X, issue 1, 63-76, 2003.

Jonathan Gratch, Jeff Rickel, Elisabeth Andre, Norman Badler, Justine Cassell, and Eric Petajan, "Creating Interactive Virtual Humans: Some Assembly Required," in *IEEE Intelligent Systems* July/August 2002, pp. 54-63.

Jeff Rickel, Stacy Marsella, Jonathan Gratch, Randall Hill, David Traum and Bill Swartout, "Towards a New Generation of Virtual Humans for Interactive Experiences," in *IEEE Intelligent Systems* July/August 2002, pp. 32-38

Jonathan Gratch and Gerald DeJong, "A Decision-theoretic Approach to Adaptive Problem Solving," *Artificial Intelligence*, (88) 1-2, 1996, pp. 101-142.

Jonathan Gratch and Steve Chien, "Adaptive Problem-solving for Large-scale Scheduling Problems: A Case Study," *Journal of Artificial Intelligence Research* 4, 1996, pp. 365-396.

Steve Chien, Jonathan Gratch, and Michael Burl, "On the Efficient Allocation of Resources for Hypothesis Evaluation: A Statistical Approach," *IEEE Transaction on Pattern Analysis and Machine Learning (PAMI)*, 17(4), 1995, pp. 652-665.

## Fully Refereed Conference Publications

Kerstin S. Haring, Jessica Tobias, Justin Waligora, Elizabeth Phillips, Nathan L. Tenhundfeld, Gale Lucas, Ewart J. de Visser, Jonathan Gratch and Chad Tossell. Conflict Mediation in Human-Machine Teaming: Using a Virtual Agent to Support Mission Planning and Debriefing. *The IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*. New Delhi, India, October 2019

Su Lei and Jonathan Gratch. Smile Signals Surprise in a Social Dilemma. *8th International Conference on Affective Computing & Intelligent Interaction*. Cambridge, UK 2019

Rens Hoegen, Jonathan Gratch, Brian Parkinson and Danielle Shore. Signals of Emotion Regulation in a Social Dilemma: Detection from Face and Context. *8th International Conference on Affective Computing & Intelligent Interaction*. Cambridge, UK 2019

Johnathan Mell, Jonathan Gratch, Reyhan Aydoğan, Tim Baarslag and Catholijn M. Jonker. The Likeability-Success Tradeoff: Results of the 2nd Annual Human-Agent Automated Negotiating Agents Competition. *8th International Conference on Affective Computing & Intelligent Interaction*. Cambridge, UK 2019

Kerstin S. Haring, Jessica Tobias, Justin Waligora, Elizabeth Phillips, Nathan L. Tenhundfeld, Gale Lucas, Ewart J. de Visser, Jonathan Gratch and Chad Tossell. Conflict Mediation in Human-Machine Teaming: Using a Virtual Agent to Support Mission Planning and Debriefing. *International Symposium on Robot and Human Interactive Communication (RO-MAN)*. New Delhi, India 2019

Emmanuel Johnson, Sarah Roediger, Gale Lucas and Johnathan Gratch. Assessing Common Errors Students Make When Negotiating. *19<sup>th</sup> International Conference on Intelligent Virtual Agents*. Paris, France 2019

Gale Lucas, Janina Lehr, Nicole Kraemer and Johnathan Gratch. The effectiveness of social influence tactics when used by a virtual agent. *19<sup>th</sup> International Conference on Intelligent Virtual Agents*. Paris, France 2019

Minha Lee, Gale Lucas, Johnathan Mell, Emmanuel Johnson and Jonathan Gratch. What's on Your Virtual Mind? Mind Perception in Human-Agent Negotiations. *19<sup>th</sup> International Conference on Intelligent Virtual Agents*. Paris, France 2019

Emmanuel Johnson, Gale Lucas, Peter Kim and Jonathan Gratch. Intelligent Tutoring System for Negotiation Skills Training. *20<sup>th</sup> International Conference on Artificial Intelligence in Education*. London, UK 2018

Rens Hoegen, Job van der Schalk, Gale Lucas and Jonathan Gratch. The impact of agent facial mimicry on social behavior in a prisoner's dilemma. *18<sup>th</sup> International Conference on Intelligent Virtual Agents*. Sydney, Australia 2018

Gale Lucas, David Traum, Ron Artstein, Jonathan Gratch, Jill Boberg, Alesia Gainer, Emmanuel Johnson, Anton Leuski and Mikio Nakano. Culture, errors, and rapport-building dialogue in social agents. *18<sup>th</sup> International Conference on Intelligent Virtual Agents*. Sydney, Australia 2018

Gale Lucas, Nicole Krämer, Clara Peters, Lisa-Sophie Taesch, Johnathan Mell and Jon Gratch. Effects of perceived agency and message tone in responding to a virtual personal trainer. *18<sup>th</sup> International Conference on Intelligent Virtual Agents*. Sydney, Australia 2018

Johnathan Mell, Gale Lucas, Sharon Mozgai, Jill Boberg, Ron Artstein and Jonathan Gratch. Towards a repeated negotiating agent that treats people individually: Cooperation, social value orientation, and Machiavellianism. *18<sup>th</sup> International Conference on Intelligent Virtual Agents*. Sydney, Australia 2018

Johnathan Mell, Jonathan Gratch, Tim Baarslag, Reyhan Aydogan and Catholijn Jonker. Results of the First Annual Human-Agent League of the Automated Negotiating Agents Competition. *18<sup>th</sup> International Conference on Intelligent Virtual Agents*. Sydney, Australia 2018

Shannon Monahan, Emmanuel Johnson, Gale Lucas, James Finch, and Jonathan Gratch. Autonomous Agent that Provides Automated Feedback Improves Negotiation Skills. *19<sup>th</sup> International Conference on Artificial Intelligence in Education*. London, UK 2018

Johnathan Mell, Gale Lucas and Jonathan Gratch. Welcome to the real world: How agent strategy increases human willingness to deceive. *Proceedings of the 17<sup>th</sup> International Conference on Autonomous Agents and Multi-Agent Systems*. Stockholm, Sweden 2018

Celso de Melo, Ori Amir, Rene Weber, Peter Khooshabeh and Jonathan Gratch. Shaping Cooperation between Humans and Agents with Emotion Expressions and Framing. *Proceedings of the conference on Autonomous Agents and Multi-Agent Systems*. Stockholm, Sweden 2018

Doratha Vinkemeier, Michel Valstar and Jonathan Gratch. Predicting folds in poker using action unit detectors and decision trees. *13th IEEE International Conference on Face and Gesture Recognition*, Xi'an, China, May 2018

Helen Wauck, Gale Lucas, Ari Shapiro, Andrew Feng, Jill Boberg and Jonathan Gratch. Analyzing the Effect of Avatar Self-Similarity on Men and Women in a Search and Rescue Game. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. Montreal, Canada 2018

Eli Pincus, Su Lei, Gale Lucas, Emmanuel Johnson, Michael Tsang, Jonathan Gratch, and David Traum. The Importance of Regulatory Fit & Early Success in a Human-Machine Game. *Proceedings of the APA Conference on Technology, Mind, and Society*, Washington D.C. 2018

Gale Lucas, Jill Boberg, David Traum, Ron Artstein, Jonathan Gratch, Alesia Gainer, and Emmanuel Johnson. Getting to Know Each Other: The Role of Social Dialogue in Recovery from Errors in Social Robots. *13th Annual ACM/IEEE International Conference on Human Robot Interaction*. Chicago, IL 2018

F Ringeval, B Schuller, M Valstar, J Gratch, R Cowie, and M Pantic. Summary for AVEC 2017: Real-life Depression and Affect Challenge and Workshop. *Proceedings of the 2017 ACM Conference on Multimedia*. Mountain View, CA 2017

Giota Stratou, Job Van Der Schalk, Rens Hoegen and Jonathan Gratch. Refactoring Facial Expressions: an Automatic Analysis of Natural Occurring Facial Expressions in Iterative Social Dilemma. *7<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. San Antonio, TX. 2017

Lucas, Gale M., Jill Boberg, David Traum, Ron Artstein, Jonathan Gratch, Alesia Gainer, Emmanuel Johnson, Anton Leuski, and Mikiyo Nakano. "The Role of Social Dialogue and Errors in Robots." *5th International Conference on Human Agent Interaction*, 431-33. Bielefeld, Germany: ACM, 2017

Giota Stratou, Rens Hoegen, Gale Lucas and Jonathan Gratch. Investigating Gender Differences in Temporal Dynamics during an Iterated Social Dilemma: an Automatic Analysis Using Networks. *7<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. San Antonio, TX. 2017



Zahra Nazari, Gale Lucas and Jonathan Gratch. Fixed-pie Lie in Action. *17<sup>th</sup> International Conference on Intelligent Virtual Agents*. Stockholm, Sweden. 2017

Johnathan Mell, Gale Lucas and Jonathan Gratch. Prestige Questions, Online Agents and Gender-driven Differences in Disclosure. *17<sup>th</sup> International Conference on Intelligent Virtual Agents*. Stockholm, Sweden. 2017

Sharon Mozgai, Gale Lucas and Jonathan Gratch. To Tell the Truth: Virtual Agents and Morning Morality. *17<sup>th</sup> International Conference on Intelligent Virtual Agents*. Stockholm, Sweden. 2017

Tim Baarslag, Michael Kaisers, Enrico Gerding, Catholijn M. Jonker and Jonathan Gratch. When will negotiation agents be able to represent us? The challenges and opportunities for autonomous negotiators. *26<sup>th</sup> International Joint Conference on Artificial Intelligence*, Melbourne, Australia. Aug 2017.

Eunkyung Kim, Jared Gilbert, Charlotte Horowitz, Jonathan Gratch, Jonas Kaplan, and Morteza Dehghani. Decoding Partner Type in Human-Agent Negotiation using functional MRI. *39<sup>th</sup> Annual Meeting of the Cognitive Science Society*. London 2017

Emmanuel Johnson, David DeVault and Jonathan Gratch. Towards an autonomous agent that provides automated feedback on student's negotiation skills. *16<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Sao Paulo, Brazil 2017.

Rens Hoegen, Giota Stratou and Jonathan Gratch. Incorporating emotion perception into opponent modeling for social dilemmas. *16<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Sao Paulo, Brazil 2017.

Johnathan Mell and Jonathan Gratch. Grumpy and Pinocchio: The effect of language and strategy in human-agent negotiation. *16<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Sao Paulo, Brazil 2017.

Celso de Melo, Stacy Marsella and Jonathan Gratch. Increasing Fairness by Delegating Decisions to Autonomous Agents. *16<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Sao Paulo, Brazil 2017.

Ron Arstein, David Traum, Jill Boberg, Alesia Gainer, Jonathan Gratch, Emmanuel Johnson, Anton Leuski, and Mikio Nakano. Listen to my body: Does making friends help influence people? *The 30<sup>th</sup> International FLAIRS Conference*. Marco Island, Florida 2017

Gale Lucas, Evan Szablowski, Jon Gratch, Andrew Feng, Tiffany Huang, Jill Boberg and Ari Shapiro. The effect of operating a virtual doppelganger in a 3d simulation. *The ACM SIGGRAPH Conference on Motion in Games*. San Francisco, CA 2016.

Jonathan Gratch, David DeVault and Gale Lucas. The benefits of virtual humans for teaching negotiation. *16<sup>th</sup> International Conference on Intelligent Virtual Agents*. Los Angeles, CA, September 2016.

Skip Rizzo, Gale Lucas, Jonathan Gratch, Giota Stratou, Louis-Philippe Morency, Russ Shilling, Arno Hartholt and Stefan Scherer. Clinical interviewing by a virtual human agent with automatic behavior analysis. *11<sup>th</sup> International Conference on Disability, Virtual Reality, and Associated Technologies*, September 2016

Gale Lucas, Giota Stratou, Shari Liebllich, and Jonathan Gratch. Trust me: Multimodal signals of trustworthiness for virtual human negotiators. *Proceedings of the 18th International Conference on Multimodal Interaction*. Tokyo, Japan. 2016

Zahra Nazari and Jonathan Gratch. Predictive Models of Malicious Behavior in Human Negotiations. *International Joint Conference on Artificial Intelligence*, New York, 2016.

Jonathan Gratch, Zahra Nazari and Emmanuel Johnson, The Misrepresentation Game: How to win at negotiation while seeming like a nice guy. *15<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Singapore, 2016.

Celso de Melo, Stacy Marsella and Jonathan Gratch. “Do As I Say, Not As I Do:” Challenges in Delegating Decisions to Automated Agents. *15<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*, Singapore, 2016.

Celso de Melo and Jonathan Gratch. People Show Envy, Not Guilt, when Making Decisions with Machines. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi’an, China, 2015

Jonathan Gratch, Stacy Marsella and Lin Cheng. The Appraisal Equivalence Hypothesis: Verifying the domain-independence of a computational model of emotion dynamics. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi’an, China, 2015

Giota Stratou, Rens Hoegen, Gale Lucas and Jonathan Gratch. Emotional Signaling in a Social Dilemma: an Automatic Analysis. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi’an, China, 2015

Gale Lucas, Jon Gratch, Stefan Scherer, Jill Boberg and Giota Stratou. Towards an Affective Interface for Assessment of Psychological Distress. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi’an, China, 2015

Johnathan Mell, Gale Lucas, Jonathan Gratch and Avi Rosenfeld. Saying YES! The Cross-cultural Complexities of Favors, Fairness, and Trust in Negotiation. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi’an, China, 2015

Zahra Nazari, Gale Lucas and Jonathan Gratch. Multimodal Approach for Automatic Recognition of Machiavellianism. *6<sup>th</sup> International Conference on Affective Computing and Intelligent Interaction*. Xi'an, China, 2015

Rens Hoegen, Giota Stratou, Gale M. Lucas, and Jonathan Gratch. Comparing behavior towards humans and virtual humans in a social dilemma. *15<sup>th</sup> International Conference on Intelligent Virtual Agents*. Delft, The Netherlands. 2015.

Zahra Nazari, Gale Lucas and Jonathan Gratch. Opponent Modeling for Virtual Human Negotiators. *15<sup>th</sup> International Conference on Intelligent Virtual Agents*. Delft, The Netherlands. 2015.

Celso De Melo and Jonathan Gratch. Beyond Believability: Quantifying the Differences between Real and Virtual Humans. *15<sup>th</sup> International Conference on Intelligent Virtual Agents*. Delft, The Netherlands. 2015.

Jonathan Gratch, David DeVault, Gale Lucas, Stacy Marsella. Negotiation as a Challenge Problem for Virtual Humans. *15<sup>th</sup> International Conference on Intelligent Virtual Agents*. Delft, The Netherlands. 2015.

Paul Rosenbloom, Jonathan Gratch, Volkan Ustun. Towards Emotion in Sigma: From Appraisal to Attention. *8<sup>th</sup> Conference on Artificial General Intelligence*. Berlin, Germany 2015

Johnathan Mell, Gale Lucas and Jonathan Gratch. An Effective Conversation Tactic for Creating Value over Repeated Negotiations. *14<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*. Istanbul, Turkey 2015

Celso de Melo, Jonathan Gratch and Peter Carnevale. The importance of cognition and affect for artificially intelligent decision makers. *28<sup>th</sup> AAAI Conference on Artificial Intelligence*. Québec City, Canada 2014

Jonathan Gratch, Ron Artstein, Gale Lucas, Giota Stratou, Stefan Scherer, Angela Nazarian, Rachel Wood, Jill Boberg, David DeVault, Stacy Marsella, David Traum, Albert "Skip" Rizzo and Louis-Philippe Morency. The Distress Analysis Interview Corpus of Human and Computer Interviews. The 9th edition of the Language Resources and Evaluation Conference (LREC), Reykjavik, Iceland. 2014

Jonathan Gratch, Gale Lucas, Aisha King, Louis-Philippe Morency. It's Only a Computer: The Impact of Human-agent Interaction in Clinical Interviews. *13<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems*. Paris, France 2014

David DeVault, Ron Artstein, Grace Benn, Teresa Dey, Alesia Egan, Ed Fast, Kallirroi Georgila, Jonathan Gratch, Arno Hartholt, Margaux Lhommet, et al. SimSensei: A Virtual

Human Interviewer for Healthcare Decision Support. *13th International Conference on Autonomous Agents and Multiagent Systems*. Paris, France 2014 [**Best paper nominee**]

Celso de Melo, Peter Carnevale, Jonathan Gratch. The Effect of Agency on the Impact of Emotion Expressions on People's Decision Making. *International Conference on Affective Computing and Intelligent Interaction*. Geneva, Switzerland. 2013.

Sunghyun Park, Stefan Scherer, Jonathan Gratch, Peter Carnevale, and Louis-Philippe Morency. Mutual Behaviors during Dyadic Negotiation: Automatic Prediction of Respondent Reactions. *International Conferences on Affective Computing and Intelligent Interaction*. Geneva, Switzerland. 2013.

Giota Stratou, Stefan Scherer, Jonathan Gratch and Louis-Philippe Morency. Automatic Nonverbal Behavior Indicators of Depression and PTSD: Exploring Gender Differences. *International Conferences on Affective Computing and Intelligent Interaction*. Geneva, Switzerland. 2013.

Stefan Scherer, Giota Stratou, Jonathan Gratch, and Louis-Philippe Morency, Investigating Voice Quality as a Speaker-Independent Indicator of Depression and PTSD. *14<sup>th</sup> Annual Conference of the International Speech Communication Association (INTERSPEECH)*, Lyon, France. August 2013.

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Stefan Scherer, Giota Stratou, Marwa Mahmoud, Jill Boberg, Jonathan Gratch, Albert (Skip) Rizzo, Louis-Philippe Morency. Automatic behavior descriptors for psychological disorder analysis. *10<sup>th</sup> IEEE International Conference on Automatic Face and Gesture Recognition*. Shanghai, China, April 2013 (12% acceptance rate)

**Best Paper Award**

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## Other Publications

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