
Angelo Cafaro

Research Areas

Natural Human-Computer Interaction, Embodied Conversational Agents, Social Behavior Modeling, Avatars and Agents for Social Simulations, User-Centered Design

Education

2010-2014: Ph.D. in Computer Science, Reykjavik University, Iceland
2006-2009: MSc in Computer Science, Università degli Studi di Salerno, Italy
2003-2006: BSc in Computer Science, Università degli Studi di Salerno, Italy

Work and Research Experience

2014 – present. Postdoctoral Researcher, CNRS-ISIR, Pierre and Marie Curie University (Paris VI), France

- **2015-present: ARIA-VALUSPA (H2020)**. Performing affective information retrieval through virtual assistants that adapt to unexpected situations and user's socio-emotional state.

2014 – 2016. Postdoctoral Researcher, CNRS-LTCI, Télécom ParisTech, France

- **2014-2015: Group Attitude in REVERIE (FP7)**. Modeling and expressing interpersonal attitudes in simulated conversing groups, in collaboration with the École nationale d'ingénieurs de Brest (ENIB).
- **2014: VERVE (FP7)**. 3D serious videogames to support the treatment of elderly people who are at risk of social exclusion. In collaboration with Trinity College Dublin and Testaluna (game company).
- **2014-2015: Avatar 1:1 (Investissement d'Avenir)**. Creating a life-sized virtual character for interacting with museum's visitors. In collaboration with the hi-tech company Cantoche.

2010 – 2014. Research Assistant, CADIA Lab., Reykjavik University, Iceland

Projects:

- **2010-2014: First Impressions in Human-Agent Virtual Encounters (Thesis)**. Designed and conducted empirical studies to evaluate users' first impressions when interacting with on screen and life-sized virtual characters, and museum exhibits. In collaboration with the Relational Agents Group at Northeastern University (USA).
- **2013-2014: Icelandic Language and Culture Training in Virtual Reykjavík (Icelandic Research Fund)**. An online educational game environment to learn Icelandic language and culture in a 3D virtual reconstruction of downtown Reykjavik, Iceland.
- **Humanoid Agents in Social Game Environments (Icelandic Research Fund)**. Observed, analyzed and modeled human social behavior in public spaces for articulated humanoid agents and avatars in gaming environments. In collaboration with CCP Games.

08/2012 - 12/2012. Visiting Research Assistant, Northeastern University, Boston, MA, USA

- **AlwaysOn (NSF)**: Designed and developed virtual companions to provide social support for isolated older adults. Worked on a simplified user interface agent to facilitate the recording, collection and sharing of life stories.
- **Tinker**: Designed and conducted a field study at the *Boston Museum of Science* that involved more than 1500 participants interacting with a virtual museum guide (named Tinker) capable of providing them with information about the exhibits.

02/2010 - 08/2010. Senior Developer, GateLab, Isernia, Italy

Designed, developed and tested server side C++ financial software with hard real-time requirements for Microsoft Windows and GNU/Linux platforms.

Teaching Experience

- 2017**, Course "*Embodied Conversational Agents*", Université Paris 8 - Vincennes-Saint-Denis, France
- 2016** Graduate level, **12 hours** for 14 students.
- 2016** Teaching assistant, "*Java Language*", Télécom ParisTech, France
Undergraduate level, **21 hours** for 45 students.
- 2015** Teaching assistant, "*Unix Programming and C Language*", Télécom ParisTech, France
Undergraduate level, **13.5 hours** for 30 students.
- 2016**, Teaching assistant, "*Programming Paradigms in C++ and Java Swing*", Télécom ParisTech, France
- 2015** Graduate level, **9 hours** for 30 students.
- 2011**: Teaching assistant, "*Introduction to Artificial Intelligence*", Reykjavik University, Iceland
Undergraduate level, **18 hours** (2h courses and 16h lab.) for 33 students.

Grants and Awards

Projects

Project: IMPRESSIONS - "*Seconds that matter: Managing First Impressions for a more Engaging Virtual Agent*".

Funding Sources: ANR and SNF (total **291.000 €**, 136.760 € for CNRS-LTCl).

Collaborators: CNRS-LTCl (France) and University of Genève (Switzerland).

Role: Co-PI and scientific coordination.

Duration: 2016 – 2018.

Awards and Scholarships

2015. Best paper award at the International Conference on Intelligent Virtual Agents (IVA 2015)

2010-2013: PhD scholarship offered by Reykjavik University (50.000 €).

2009-2010: Erasmus scholarship offered by the University of Salerno (2.400 €).

2004-2008: Student scholarship offered by the University of Salerno (6.600 €).

2006. Best Student Award of the year. Ranked among all third year students and based on average grades for the academic year 2005/2006 at University of Salerno, Italy.

Publications

Journal Articles

1. A. Cafaro, H.H. Vilhjálmsson, T. Bickmore (2016). "**First Impressions in Human-Agent Virtual Encounters**". ACM Transactions on Computer Human Interaction (ToCHI). Volume 23, Issue 4, Article No. 24, 40 pages.
2. A. Cafaro, B. Ravenet, M. Ochs, H.H. Vilhjálmsson, C. Pelachaud (2016). "**The Effect of Interpersonal Attitude of a Group of Agents on User's Presence and Proxemics Behavior**". ACM Transactions on Interactive Intelligent Systems (TIIS). Volume 6, Issue 2, Article No. 12, 33 pages.

Book Chapters

1. C. Clavel, A. Cafaro, S. Campano, and C. Pelachaud (2015). **“Fostering User Engagement in Face-to-Face Human-Agent Interactions: A Survey”**. In *Toward Robotic Socially Believable Behaving Systems - Volume II*. Esposito A. and Jain L. C. (Eds.). Vol. 106 in Intelligent Systems Reference Library pp 93-120.

Refereed Conference Publications

1. Brian Ravenet, Elisabetta Bevacqua, Angelo Cafaro, Magalie Ochs, Catherine Pelachaud (2016). **“Perceiving Attitudes Expressed Through Nonverbal Behaviors in Immersive Virtual Environments”**. *Motion in Games (MIG'16)*, (pp 175-180). San Francisco, CA, USA.
2. F. Pecune, A. Cafaro, M. Ochs, C. Pelachaud (2016). **“Evaluating Social Attitudes of a Virtual Tutor”**. *Intelligent Virtual Agents (IVA'16)*, (pp 245-255). Los Angeles, CA, USA.
3. A. Cafaro, N. Glas, C. Pelachaud (2016). **“The Effects of Interrupting Behavior on Interpersonal Attitude and Engagement in Dyadic Interactions”**. *Autonomous Agents and Multiagent Systems (AAMAS '16)*, (pp 911-920) Singapore.
4. B. Ravenet, A. Cafaro, B. Biancardi, M. Ochs, C. Pelachaud (2015). **“Conversational Behavior Reflecting Interpersonal Attitudes in Small Group Interactions”**. *Intelligent Virtual Agents (IVA'15)*, (pp 375-388). Delft, The Netherlands. **BEST PAPER AWARD.**
5. A. Cafaro, H.H.Vilhjálmsón, T. Bickmore, D. Heylen, C. Pelachaud (2014). **“Representing Communicative Functions in SAIBA with a Unified Function Markup Language”**. *Intelligent Virtual Agents (IVA'14)*, pp 81-94. Boston, MA, USA.
6. A. Cafaro, H.H. Vilhjálmsón, T. Bickmore, D. Heylen, D. Schulman (2013). **“First Impressions in User-Agent Encounters: the Impact of an Agent's Nonverbal Behavior on Users' Relational Decisions”**. *Autonomous Agents and Multiagent Systems (AAMAS '13)*, pp 1201-1202, Saint Paul, MN, USA.
7. A. Cafaro, H.H. Vilhjálmsón, T. Bickmore, D. Heylen, K.R. Jóhannsdóttir, G.S.Valgarðsson (2012). **“First Impressions: Users' Judgments of Virtual Agents' Personality and Interpersonal Attitude in First Encounters”**. *Intelligent Virtual Agents (IVA'12)*, pp 67-80, Santa Cruz, CA, USA.
8. A. Cafaro, R. Gaito, H.H. Vilhjálmsón (2009). **“Animating Idle Gaze in Public Places”**. *Intelligent Virtual Agents (IVA'09)*, pp 250-256, Amsterdam, The Netherlands.

Workshop and Demo Papers

1. M. Valstar, T. Baur, A. Cafaro, A. Ghitulescu, B. Potard, J. Wagner (2016). **“Ask Alice: An Artificial Retrieval of Information Agent”**. Demo at the 18th ACM International Conference on Multimodal Interaction (ICMI), pp 419-420. November 2016, Tokyo, Japan.
2. F. Pecune, A. Cafaro, M. Chollet, P. Philippe, C. Pelachaud (2014). **“Suggestions for Extending SAIBA with the VIB Platform”**. In *Proceedings of the Workshop on Architectures and Standards for Intelligent Virtual Agents (WASIVA) at IVA'14*. August 26, Boston, MA, USA.
3. A. Cafaro, H.H.Vilhjálmsón (2014). **“First Impressions in Human-Agent Virtual Encounters”**. Poster at the Virtual Social Interaction Workshop, UCL Institute of Cognitive Neuroscience, September 4-5, London, UK.

Activities

Coordination Work

- o **2018**: Program co-chair of the Virtual Agents Track at AAMAS 2018
- o **2017**: Co-Organizer of the **“Workshop on Conversational Interruptions in Human-Agent Interaction”** at IVA2017, Stockholm, Sweden

- **2017:** Poster Chair at the ACM Symposium on Virtual Reality Software and Technology (VRST'17), Gothenburg, Sweden
- **2014:** Co-Organizer of the “**Workshop on Architectures and Standards for IVAs**” at IVA2014, Boston, MA, USA
- **2011:** Student Volunteering Chair, **11th International Conference on Intelligent Virtual Agents**, Iceland

Referee Work

- **2016 – present:** Computer Animation and Virtual Worlds Journal (CAVW)
- **2015 – present:** International Journal of Human-Computer Studies (IJHCS)
- **2015 – present:** Frontiers in ICT - Human-Media Interaction section (Front. ICT)
- IVA (2012-present), CHI (2015), NordiCHI (2016), AAMAS (2015-present), IUI (2016), ICMI (2016)

Relevant Workshops and Schools Attended

- **Sep. 2014:** Workshop “**Virtual Social Interaction**”, UCL, London, UK
- **Aug. 2014:** Workshop “**Architecture and Standards for Intelligent Virtual Agents**”, Boston, MA, USA
- **Sep. 2012:** Workshop “**Real-time Conversations with Virtual Agents**”, Santa Cruz, CA, USA
- **Sep. 2011:** Workshop “**Culturally Motivated Virtual Characters**”, Reykjavik, Iceland (Sep. 2011)
- **May 2011:** Summer School “**The NordForsk Research Training Course on Feedback, Communicative Gesturing, and Gazing**”, Helsinki, Finland
- **May 2011:** “**The 3rd Nordic Symposium on Multimodal Communication**”, Helsinki, Finland

Invited Talks, Seminars and Demos

- Mar. 2017 **Demo of ARIA Framework.** FranceAI,
- Feb. 2017 **Designing Socially Aware and Expressive ECAs.** Seminar at the HMI Lab., University of Twente
- May 2016 **Virtual agents and AI.** Virtual Reality stand of FranceTV in the RGLab for the Roland Garros 2016.
- Apr. 2016 **Designing Socially Aware Interactive Agents.** Seminar at IRISA, Université Rennes 1, France.
- Mar. 2016 **Designing Socially Aware Interactive Agents.** Seminar at ISIR, Université Paris VI, France.
- Mar. 2016 **Designing Socially Aware Interactive Agents.** Seminar at Polytech, Nantes, France.
- Mar. 2016 **Statistics: Basics (Vol. II).** Greta Team seminar, Télécom ParisTech, France.
- Mar. 2016 **Models of Group Interaction and Interpersonal Attitude Expression.** Working group on Animation and Simulation (GTAS), Télécom ParisTech, France.
- Feb. 2016 **Statistics: Basics (Vol. I).** Greta Team seminar, Télécom ParisTech, France.
- Dec. 2015 **Interactive Expressive ECAs - The Greta-VIB platform.** Workshop on human-computer interaction organized by labex SMART and GdR ISIS, Télécom ParisTech, France.
- Aug. 2013 **First Impressions in Human-Agents Virtual Encounters.** Greta Team, Télécom ParisTech, France.
- Sep. 2013 **Demos for the Socially Expressive Computing Group** at the European Researchers' Night, Iceland.
- 2011-2010
- May 2013 **First Interaction with an ECA.** RU's Open Day, Reykjavik University, Iceland.
- Jan. 2013 **First Impressions in Human-Agents Virtual Encounters.** ISISLab, University of Salerno, Italy.
- Sep. 2012 **Standards and architectures for embodied conversational agents.** Relational Agents Group seminar, Northeastern University, Boston, USA.
- May 2012 **First Impressions in Human-Agents Encounters.** CADIA and IIM open day, Reykjavik University, Iceland.
- May 2010 **Simulating the Idle Gaze Behavior of Pedestrians in Motion.** Center for Computer Game Research, IT University of Copenhagen, Denmark.
- May 2011 **Demos for the Socially Expressive Computing Group** at Reykjavik University Open Days, Iceland.
- 2010
- Mar. 2009 **Animating Idle Gaze.** CADIA seminar, Reykjavik University, Iceland.

References

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