Adela BARBULESCU

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English • French • Romanian

About Me

I am a Research Engineer at Inria, where I develop Beepfake, a proactive protection for image and voice data against non-consensual AI cloning. Bringing 15 years of combined research and entrepreneurial experience, I previously co-founded and directed the science of Emoface, a digital therapy platform using data-driven emotional avatars to support social communication for autistic users, deployed to over 20,000 people and developed with clinicians. I hold a PhD in Mathematics and Computer Science from Grenoble Alpes University, with research spanning affective computing, audiovisual prosody, and multimodal synthesis. After modelling how voice and face carry identity and emotion, I now work on protecting them; my work has been published in venues including Speech Communication, IEEE Computer Graphics and Applications, Interspeech, and IEEE VR.

Experience - Researcher

Research lies at the intersection of affective computing, multimodal synthesis, and human computer interaction, with strong grounding in applied artificial intelligence. Focuses on how to leverage AI, cognition, embodied agents, and multimodal synthesis to develop interfaces for communication and learning, as well as for protection against misinformation and manipulation.

Research Engineer and Project manager **02/2026–ongoing**
Inria Startup Studio, Grenoble

- Designed and implemented solutions for protecting image and voice from non-authorized cloning or generative AI model training.

Postdoctoral Researcher **04/2025–01/2026**
GIPSA-lab (CNRS), Grenoble

- Designed and implemented pipeline for creating audio-visual text-to-speech animations transferable to social robots.

Research and Development Engineer **04/2017–10/2018**
GIPSA-lab (CNRS), Grenoble

- Designed, implemented, and conducted user testing for EMOFACE game prototype in Unity, specifically adapted for individuals with autism.

Postdoctoral Researcher **12/2015–11/2016**
INRIA Rhône Alpes, Montbonnot

- Developed algorithms for generating 3D animations from children's make-believe games.

Ph.D. Researcher **12/2012–11/2015**
Grenoble Alpes University, Grenoble

- Research on generating expressive audiovisual speech for virtual actors with emotional context.

Research Assistant **02/2012–07/2012**
Computer Vision Center, Barcelona

- Developed algorithms for estimating 3D human poses from video data.

Experience - Company Founder

Founded and developed Emoface, a pioneering company that integrates cutting-edge research with impact-driven entrepreneurship to create digital therapy tools. The Emoface application is based

on interaction with data-driven emotional 3D avatars to enhance social inclusion and communication of autistic individuals.

Co-founder & CEO, Scientific Director **01/2019–12/2024**
Emoface, Grenoble

- **Strategic Management:** Led strategy including market analysis, financial direction, and business development in France and internationally. +20,000 downloads.
- **R&D Leadership:** Directed interdisciplinary research with academic researchers, health practitioners, and institutions, ensuring alignment with technological advances and user needs. Secured over 800K€ in R&D grants.
- **Partnership Development:** With academic, industrial, and public institutions, including Grenoble Alpes University, Lillab, Multiple (Autism&Tech), and MIAI.
- **Project Management:** Led execution of collaborative R&D initiative, overseeing project milestones, deliverables, and cross-functional coordination. Implemented project management tools to ensure execution and compliance with funding requirements.
- **Team Leadership:** Recruited and managed multidisciplinary team, fostering collaborative environment among developers, researchers, and business professionals.

Education

PhD: Mathematics and Computer Science **12/2012–11/2015**
Grenoble Alpes University, Grenoble, France
Thesis: Generation of audio-visual prosody for expressive virtual actors

Master: Vision, Graphics, and Interactive Systems **09/2010–09/2012**
Aalborg University, Aalborg, Denmark
Universidad Autonoma de Barcelona, Computer Vision Center, Spain

Bachelor: Computer Science **09/2006–07/2010**
Politechnics University, Bucharest, Romania

Innovation Ecosystem Expertise

Deep knowledge of innovation ecosystem: 13+ years of experience within the French research system (CNRS, UGA, Inria), mastery of public funding mechanisms (France 2030, EU, BPI).
Established partnership network: Lasting relationships with key players in Grenoble innovation, including CNRS laboratories, Inria, and innovation support structures.
International experience: Coordination of European projects, development of international partnerships, and representation at international scientific and innovation events.

Awards & Recognition

France 2030 "Pionniers de l'IA" • WomenTechEU Prize • Jacques Chirac Foundation Innovation Prize • BPI i-Lab National Innovation Competition • HandiTech Trophy • Impact Hub Innovation Prize • Digital Health Experimentation "Tiers-Lieux"

Technical Skills

- **Programming Languages:** Python, C++, C#, MATLAB
- **Machine Learning / Deep Learning:** PyTorch, other ML libraries
- **Graphics, Animation & Interaction:** Unity3D, Blender, 3D character animation
- **Tools & Platforms:** Git, Docker

Publications

[12] Barbulescu, Adela; Manin, Lena; Sabathe, Constance; Monthier, Célestine ; Pellerin, Hugues; Grossard, Charline. (2023). **A usability study of a serious game to teach emotion recognition to people with Autism Spectrum Disorder and intellectual disabilities**. *Preprint, not published*.

[11] Portaz, Maxime; Garcia, Maxime; Barbulescu, Adela; Bégault, Antoine; Boissieux, Laurence; Cani, Marie-Paule; Ronfard, Rémi; Vaufreydaz, Dominique. (2017). **Figurines, a multimodal framework for tangible storytelling**. In *6th Workshop on Child Computer Interaction (WOCCI 2017)*, pp. 52–57.

[10] Barbulescu, Adela; Garcia, Maxime; Vaufreydaz, Dominique; Cani, Marie-Paule; Ronfard, Rémi. (2017). **Making Movies from Make-Believe Games**. In *6th Workshop on Intelligent Cinematography and Editing (WICED 2017)*, pp. 51–54.

[9] Barbulescu, Adela; Garcia, Maxime; Bégault, Antoine; Cani, Marie-Paule; Portaz, Maxime; Viand, Alexis; Dulery, Romain; Boissieux, Laurence; Heinish, Pierre; Ronfard, Rémi; Vaufreydaz, Dominique. (2017). **A system for creating virtual reality content from make-believe games**. In *2017 IEEE Virtual Reality (VR)*, pp. 207–208. IEEE.

[8] Barbulescu, Adela; Ronfard, Rémi; Bailly, Gérard. (2017). **Which prosodic features contribute to the recognition of dramatic attitudes?** *Speech Communication*, Vol. 95, pp. 78–86. [Journal]

[7] Barbulescu, Adela; Ronfard, Rémi; Bailly, Gérard. (2017). **A Generative Audio-Visual Prosodic Model for Virtual Actors**. *IEEE Computer Graphics and Applications*, Vol. 37(6), pp. 40–51. [Journal]

[6] Barbulescu, Adela; Ronfard, Rémi; Bailly, Gérard. (2016). **Characterization of Audiovisual Dramatic Attitudes**. In *Interspeech 2016*, pp. 585–589.

[5] Barbulescu, Adela; Bailly, Gérard; Ronfard, Rémi; Pouget, Maël. (2015). **Audiovisual generation of social attitudes from neutral stimuli**. In *FAAVSP 2015 – 1st Joint Conference on Facial Analysis, Animation and Auditory-Visual Speech Processing*, pp. 34–39.

[4] Barbulescu, Adela. (2015). **Generation of audio-visual prosody for expressive virtual actors**. PhD Thesis, Université Grenoble Alpes.

[3] Barbulescu, Adela; Ronfard, Rémi; Bailly, Gérard; Gagneré, Georges; Çakmak, Hüseyin. (2014). **Beyond basic emotions: expressive virtual actors with social attitudes**. In *7th International Conference on Motion in Games (MIG 2014)*, pp. 39–47. ACM.

[2] Barbulescu, Adela; Hueber, Thomas; Bailly, Gérard; Ronfard, Rémi. (2013). **Audio-visual speaker conversion using prosody features**. In *AVSP 2013 – 12th International Conference on Auditory-Visual Speech Processing*, pp. 11–16.

[1] Barbulescu, Adela; Gong, Wenjuan; Gonzàlez, Jordi; Moeslund, Thomas B.; Roca, F. Xavier. (2012). **3D human pose estimation using 2D body part detectors**. In *21st International Conference on Pattern Recognition (ICPR)*, pp. 2484–2487. IEEE.