DOMNA BANAKOU
Universitat de Barcelona
Passeig de la Vall d'Hebron 171,
08035 Barcelona, Spain
+34 674880778
dbanakou@ub.edu
www.domnabanakou.com

Personal Profile

- o Postdoctoral researcher with strong academic research background in the fields of virtual reality, cognitive neuroscience, and psychology.
- o Combining technical expertise and experience in research methodologies for the design and implementation of virtual reality applications, experimental studies, data collection and analysis.
- o Solid teamwork and leadership skills including organization and management of academic conferences and projects.
- o Experience with cross-functional teams.

Education

PhD in Clinical Psychology and Psychobiology
University of Barcelona *2014 – 2017*
> PhD Title: "The Impact of Virtual Embodiment on Perception, Attitudes, and Behaviour"
> Supervisor: Prof. Mel Slater.

Funded by the FI-DGR 2014 Grant for universities and research centres for the recruitment of new research personnel.

MSc in Computer Graphics, Vision, and Imaging
University College London *2009 - 2010*
> Thesis: "Experimental Studies in Peoples' Responses towards Blushing in Moral Dilemmas"
> Supervisors: Dr. Sylvia Xueni Pan, Prof. Mel Slater.

BSc in Computer Science
Ionian University *2004 – 2009*
Specialization: Humanities and Social Sciences (honours)
> Thesis: "Developing a Graphical User Interface to Coordinate Video Processing Tasks"
> Supervisor: Dr. Michalis Stefanidakis.

Research

Event-Lab University of Barcelona (Barcelona, Spain)

Postdoc *(May 2017 – Today)*
- o Project: Moments in Time in Immersive Virtual Environments (MoTIVE), ERC Advanced Grant. Principal Investigator, Prof. Mel Slater.
- o Project: Personified Self Interaction (PSI), ERC Proof of Concept. Principal Investigator, Prof. Mel Slater.

Research Assistant *(Jan 2011-Apr 2017)*
- o Project: Beinstein – Becoming Einstein: The Influence of Virtual Embodiment on Intelligence. Principal Investigator, Prof. Mel Slater.
- o Project: VERE – Virtual Embodiment and Robotic Re-Embodiment. Principal Investigator, Prof. Mel Slater.
- o Project: BEAMING – Being in Augmented Multi-Modal Naturally-Networked Gatherings. Principal Investigator, Prof. Mel Slater.

CYENS Centre of Excellence (Limassol, Cyprus)

Research Fellow *(Sept 2020 – Today)*
- o VR for Well-Being Research Group. The VR for Well-being multidisciplinary research group targets research in Virtual Reality for well-being, broadly construed. 'Well-being' refers to the general social, economic, psychological, spiritual, or medical positive condition of an individual or a group.
  Principal Investigator: Dr. Despina Michael-Grigoriou.

University College London (London, UK)

Research Assistant *(May 2010 – Sept 2010)*
- o Project: The exploitation of immersive virtual reality for the study of moral judgements by Leverhulme Trust. Principal Investigators, Dr. Sylvia Xueni Pan, Prof. Mel Slater.

Publications

Gorisse G., Şenel G., **Banakou D.**, Beacco A., Oliva R., Freeman D., Slater M. (2021) Self-observation of a virtual body-double engaged in social interaction reduces persecutory thoughts. *Sci. Rep. 11, 23923*

Slater M., **Banakou D.** (2021) The Golden Rule as a Paradigm for Fostering Prosocial Behavior with Virtual Reality. *Current Directions in Psychological Science: November*

Bellido Rivas A.I., Navarro X., **Banakou D.**, Oliva R., Orvalho V., Slater M. (2021) The Influence of Embodiment as a Cartoon Character on Public Speaking Anxiety. *Front. Virtual Real. 2:695673*

Llobera J., Beacco A., Oliva R., Şenel G., **Banakou D.**, Slater M. (2021) Evaluating participant responses to a virtual reality experience using reinforcement learning. *R. Soc. Open Sci. 8:9*

Matamala-Gomez M., Stasolla F., Seinfeld S., Oronzo Caffò A., **Banakou D.**, Bottiroli S. (2021) Neuropsychological and Cognitive-Behavioral Assessment of Neurodegenerative Disease and Rehabilitation Using New Technologies and Virtual Reality. *Front. Psychol. 12(1850)*

Banakou D., Beacco A., Neyret S., Blasco-Oliver M., Seinfeld S., Slater M. (2020) Virtual body ownership and its consequences for implicit racial bias are dependent on social context. *R. Soc. Open Sci. 7:201848*

Gonzalez-Franco M., Ofek E., Pan Y., Antley A., Steed A., Spanlang B., Maselli A., **Banakou D.**, Pelechano N., Orts-Escolano S., Orvalho V., Trutoiu L., Wojcik M., Sanchez-Vives M. V., Bailenson J., Slater M., Lanier J. (2020) The Rocketbox library and the utility of freely available rigged avatars for procedural animation of virtual humans and embodiment. *Front. Virtual Reality 1(20)*

Patané I. [†], Lelgouarch A.[†], **Banakou D.** [†], Verdelet G., Desoche C., Koun E., Salemme R., Slater M., Farnè A. (2020) Exploring the effect of cooperation in reducing implicit racial bias and its relationship with dispositional empathy and political attitudes. *Front. Psychol. 11(2281)*

Kyrlitsias C., Michael-Grigoriou D., **Banakou D.**, Christofi M. (2020), Social Conformity in Immersive Virtual Environments: The Impact of Agents' Gaze Behavior. *Front. Psychol. 11(2254)*

Kyrlitsias C., Christofi M., Michael-Grigoriou D., **Banakou D**., Ioannou A. (2020), A Virtual Tour of a Hardly Accessible Archaeological Site: the Effect of Immersive Virtual Reality in User Experience, Learning and Attitude Change. *Front. Com. Sci. 2(23)*

Bedder R., Bush D., **Banakou D.**, Peck T., Slater M., Burgess N. (2019), A mechanistic account of bodily resonance and implicit bias. *Cognition 184, 1-1*0

Banakou, D., Kishore S., Slater M. (2018), Virtually Being Einstein Results in an Improvement in Cognitive Task Performance and a Decrease in Age Bias. *Front. Psychol. 9(917)*

Hamilton-Giachritsis, C., **Banakou, D**., Quiroga, M.G., Giachritsis C., Slater, M. (2018), Reducing risk and improving maternal perspective-taking and empathy using virtual embodiment. Sci. Rep. 8(1)

Banakou, D., & Slater, M. (2017), Embodiment in a virtual body that speaks produces agency over the speaking but does not necessarily influence subsequent real speaking. *Sci. Rep. 7(1)*

Tajadura-Jiménez A.[†], **Banakou D.**[†], Bianchi-Berthouze N., Slater M. (2017), Embodiment in a Child-Like Talking Virtual Body Influences Object Size Perception, Self-Identification, and Subsequent Real Speaking. *Sci Rep. 7(1)*

Banakou D., Parasuram D. H., & Slater M. (2016). Virtual Embodiment of White People in a Black Virtual Body Leads to a Sustained Reduction in their Implicit Racial Bias. *Front. Hum. Neurosci. 10 (601)*

Banakou, D., & Slater, M. (2014). Body ownership causes illusory self-attribution of speaking and influences subsequent real speaking. *Proc. Natl. Acad. Sci. (PNAS) 111, 17678–17683*

Banakou, **D**., Groten, R. & Slater M. (2013), Illusory ownership of a virtual child body causes overestimation of object sizes and implicit attitude changes. *Proc. Natl. Acad. Sci. (PNAS) 1 (6), 12846–12851*

Pan, X., **Banakou, D**. & Slater, M. (2011). Computer Based Video and Virtual Environments in the Study of the Role of Emotions in Moral Behavior. *Affective Computing and Intelligent Interaction, 6975, 52-61.*

Banakou, D. & Chorianopoulos (2010), The effects of Avatars' Gender and Appearance on Social Behaviour in Virtual Worlds. *J. Virtual Worlds Res. 2(5), 3-16*
ISSN: 1941-8477

Banakou, D., Chorianopoulos, K., & Anagnostou, K. (2009). Avatars' Appearance and Social Behavior in Online Virtual Worlds. *IEEE 13th Panhellenic Conference on Informatics, 207-211.*

Conferences and Invited Talks *(sample)*

"How to Overcome the Body", VACZINE ART Symposium. Düsseldorf (Online), Germany, Jul 2021 *(invited speaker).*

"Challenging Tech's Path Forward - Avatars for Virtual Reality", SXSW PanelPicker 2021. USA (Online), Mar 2021 *(panel speaker).*

"Walking in Groups in Immersive Virtual Reality: Temporal coupling during in-group and out-group interactions", Social Bridges e-Conference, Munich, Germany, Nov 2020 *(oral presentation).*

"Immersive virtual reality to reduce racial bias and improve parenting", Middlesex University Dubai Research Seminar Series, Dubai, UAE, Jan 2020 *(invited speaker).*

"Immersive Virtual Reality: Technology, Concepts, Multisensory Integration", The Active Self Autumn School, Herrsching, Germany, Oct 2019 *(invited speaker).*

"Being Somebody Else: The Future of Narrative Storytelling", Filmteractive 2019, Łódź, Poland, Oct 2019 *(invited speaker).*

"Virtual Body Representation Can Change the Self", Integrative Science Symposium: How Changing Our Bodies changes Our Selves, 3rd Biennial International Convention of Psychological Science, Paris, France, Mar 2019 *(invited speaker).*

"Becoming Someone Else through Virtual Reality: Methods and Research", Latvian Digital Forum 'Datos balstīta nācija', Cēsis, Latvia, Oct 2018 (*keynote speaker*).

"Virtual Embodiment: Methods & Research", Central Institute of Mental health, Mannheim, Germany, Sept 2018 *(invited speaker).*

"Virtually being Einstein results in an improvement in cognitive ability and a decrease in age bias", 11th FENS Forum of Neuroscience, Berlin, Jul 2018 *(poster)*.

"Virtual Embodiment for Character-based Gaming: The Impact on Perception, Attitudes, and Behaviour", PhD Days, Marseille, France, Dec 2017 **(invited speaker)**.

"Virtual Embodiment: Perception, Attitudes, and Behaviour", University of Plymouth Seminar Days, Plymouth, UK, Oct 2017 **(invited speaker)**.

"Psychological and Perceptual Embodiment in IVR – Two paradigms", XXVIII International Congress of the Spanish Society for Comparative Psychology, Barcelona, Spain, Sept 2016 *(oral presentation)*.

"The Influence of Body Representation on Behaviour and Cognition – An Extensive Implicit Racial Bias Study", Interdisciplinary Summer School on "Social Cognition: From interactions to intersubjectivity", Aegina, Greece, Jun 2016 *(poster-oral presentation)*.

"Behavioural and Perceptual Embodiment in Immersive Virtual Reality", MSc Design and Development of Computer Games and Interactive Technologies Event Invitation, Cyprus University of Technology, Nov 2015 **(invited speaker)**.

"Computer Based Video and Virtual Environments in the Study of the Role of Emotions in Moral Behavior", Fourth International Conference, ACII 2011, Memphis, TN, USA, Oct 2011 *(poster)*.

"Avatars' Appearance and Social Behavior in Online Virtual Worlds", 13th Panhellenic Student Conference on Informatics, Eureka, Corfu, Sept 2009 *(poster)*.

Teaching

o   Guest Lecturer, Executive MSc Behavioural Science, The London School of Economics and Political Science (June 2021). *Virtual Reality in Psychology.*

o   Assistant Professor, MSc in Video Game Design and Programming, Universitat Oberta de Catalunya, Barcelona (Feb – Jun 2021). *3D videogame programming in Unity.*

o   Seminar Lecturer, MSc in Brain and Cognition, Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcelona (Nov 2020). *Experimental research in virtual reality – theory and technology*.

o   Seminar Lecturer, MSc in Brain and Cognition, Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcelona (Nov 2020). *Experimental research in virtual reality – theory and technology; MSc student co-supervisor.*

o   Summer School Lecturer, The Active Self autumn school, Herrsching (Oct 2019). *Experimental research in virtual reality – theory, ethics, technology.*

o   Seminar Lecturer, MSc Interactive Physiology, Department of Physiology and Immunology, Faculty of Biology, University of Barcelona (Dec 2015). *Experimental research in virtual reality – theory and technology.*

o   Seminar Lecturer, MSc Interactive Physiology, Department of Physiology and Immunology, Faculty of Biology, University of Barcelona (Feb 2014). *Experimental research in virtual reality – theory and technology.*

Awards and Grants

- FENS-IBRO/PERC grant, Berlin, 2018.
- SIGGRAPH European Student Volunteer Contest, IST Austria, 2016.
- "Best Young Researcher" Award – University of Barcelona, 2015.
- Eurolife Grant - Summer School "Emotions", Innsbruck, 2015.
- FI-DGR Grant for universities and research centres for the recruitment of new research personnel, 2014.
- Ionian University Award of Undergraduate Program in Informatics, 2009.
- IKY (Greek State Scholarships Foundation) Award & Scholarship, 2006, 2007, 2008, 2009.

Scientific Activities *(sample)*

- IEEE VR 2022 Conference Track International Program Committee, Christchurch, New Zealand.
- ICAT-EGVE International Demo Chair Committee, 2018, Limassol, Cyprus.
- SIGGRAPH ASIA Student Volunteer, 2016, Macao, China.
- SIGGRAPH Student Volunteer, 2016, Anaheim, USA.
- Brain Awareness Week (BAW) campaign volunteer, University of Barcelona, 2016, Barcelona, Spain.
- IEEE Melecon International Program Committee, 2016, Limassol, Cyprus.
- 1st IR3C PhD Symposium Organizing Committee, 2015, Barcelona, Spain.
- IEEE Virtual Reality Student Volunteer, 2015, Arles, France.
- 2nd VERE PhD Symposium Chair Committee, 2014, Barcelona, Spain.

Media References *(sample)*

- **Observer**, "Mind Over Body" Mar 2020, by Alexandra Michel.
- **ERT**, "Virtual reality and the sense of embodiment" Nov 2019, by Eve Tsirigotaki.
- **The Psychologist**, "Shuttering the Self" Aug 2019, by Ella Rhodes.
- **BBC**, "Virtual lives: Could VR change how we think of others?" Oct 11, 2018, by BBC Click.
- **Advocator**, "A Study Showed Better Results on Cognitive Tasks for People Who Embody Albert Einstein in VR", Jul 13, 2018, by Brad Bennett.
- **Big Think**, "Study: People who embody Albert Einstein in VR perform better on cognitive tasks", Jul 11, 2018, by Stephen Johnson.
- **Bias Film**, 2018, directed/produced by Robin Hauser.

- **The New Yorker**, "Are we already living in virtual reality?" Apr 2, 2018, by Joshua Rothman.
- **The New Yorker**, "This is your avatar speaking" Feb 20, 2015, by Nicola Twilley.
- **BBC**, "Can virtual reality be used to tackle racism?" Nov 28, 2013, by Melissa Hogenboom.

Technologies

Programming
- C
- C++
- C#
- Java
- HTML
- XML
- JavaScript
- Python
- MATLAB
- SQL
- STAN
- R

Graphics
- Unity3D
- Unreal Engine
- OpenGL
- XVR
- Autodesk Maya
- Autodesk 3ds Max
- Autodesk Motion Builder
- Adobe Photoshop
- Adobe Premiere Pro
- Adobe After Effects
- Illustrator

Other Software
- STATA
- SPSS
- MS Office
- OpenOffice

Operating Systems
- Windows
- Linux

Languages

- **Greek** Native
- **English** Excellent *Proficiency of Cambridge, Proficiency of Michigan, TOEFL*
- **French** Fluent *Diplome d`Etude de Langue Francaise DELF 1er Degré, 2nd Degré*
- **Spanish** Conversant

Interests

When I am not designing my next research activity, I love reading books, painting, and making cakes.