

NICCOLÓ PESCETELLI

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ACADEMIC EMPLOYMENT HISTORY

Research Scientist and Principal Investigator

Max Planck Institute for Human Development - Berlin
August 2019 to Present

Key Responsibilities: led Hybrid Collective Intelligence team; hired and supervised a multi-disciplinary team of computer scientists, physicists, web-developers and psychologists (undergrad, grad, postgrad); founding member and contributed to strategic decision making and management for a newly established center.

Postdoctoral Associate

Massachusetts Institute of Technology - Cambridge, MA
August 2017 to July 2019

Key Responsibilities: managed a IARPA grant, under the Hybrid Forecasting Competition; designed online group experiments; supervised graduate and undergraduate students; coordinated multidisciplinary teams to allow a massive online crowd to remotely control a human in a gamified task (BeeMe Project); managed public dissemination, being featured on BBC technology, Business Insider, El Paris, MIT tech review, the Verge, and ABC; directed an award-winning documentary.

EDUCATION

Doctorate in Cognitive Neuroscience

University of Oxford - Oxford
October 2013 to July 2017

Supervision: Nick Yeung
Co-supervision: Chris Summerfield
Dissertation title: *"On the use of metacognitive signals to navigate the social world"*

Master's in Brain and Mind Sciences

Ecole Normale Supérieure - Paris
September 2012 to August 2013

Supervision: Stanislas Dehaene
Co-supervision: Jean-Remi King

Master's in Brain and Mind Sciences

University College London - London
September 2011 to August 2012

Supervision: Geraint Rees
Co-supervision: Bahador Bahrami
Distinction and Highest cohort's dissertation mark (80/100)

Bachelor's in Psychology

Università degli Studi di Padova - Padova
September 2008 to September 2011

Supervision: Luciano Gamberini
Co-supervision: Anna Spagnoli
Summa cum Laude

PUBLICATIONS

- Reichert, P., Rutherford, A., **Pescetelli, N.** The effects of a single minority-supporting bot on a forecasting crowd. (in prep.)
- Pescetelli, N.**, Rutherford, A., Kao, A., Rahwan, I. Collective Learning in news consumption. *Nature Communications* (under review)
- Pescetelli, N.**, Rutherford, A., Rahwan, I. Multi-trait diversity improves forecasting accuracy in large but not small online groups. *Nature Communications* (under Revise & Resubmit)
- Pescetelli, N.**, and Yeung, N. (2020) The role of decision confidence in advice-taking and trust formation. *Journal of Experimental Psychology: General* (in press)
- Pescetelli, N.**, & Yeung, N. (2020). The effects of recursive communication dynamics on belief updating. *Proceedings of the Royal Society B: Biological Sciences*, 287(1931), 20200025.
- Pescetelli, N.**, Cebrian, M., & Rahwan, I. (2020). BeeMe: Real-Time Internet Control of Situated Human Agents. *Computer*, 53(8), 49–58.
- Epstein, Z., Epstein, M., Almenar, C., Groh, M., **Pescetelli, N.**, Moro, E., Obradovich, N., Cebrian, M., Rahwan, I. (2019). Towards a new social laboratory: An experimental study of search through community participation at Burning Man. *arXiv [cs.SI]*. arXiv. <http://arxiv.org/abs/1903.04125>. [Best poster at IC2S2]
- Rosenberg, L., **Pescetelli, N.**, & Willcox, G. (2017). Artificial Swarm Intelligence amplifies accuracy when predicting financial markets. In 2017 *IEEE 8th Annual Ubiquitous Computing, Electronics and Mobile Communication Conference (UEMCON)* (Vol. 2018-January, pp. 58–62). IEEE.
- Rosenberg, L. B., & **Pescetelli, N.** (2017). Amplifying prediction accuracy using Swarm A.I. *2017 Intelligent Systems Conference (IntelliSys)*, 61–65.
- Pescetelli, N.**, Rees, G., & Bahrami, B. (2016). The perceptual and social components of metacognition. *Journal of Experimental Psychology: General*, 145(8), 949–965.
- King, J.-R.*, **Pescetelli, N.***, & Dehaene, S. (2016). Brain Mechanisms Underlying the Brief Maintenance of Seen and Unseen Sensory Information. *Neuron*, 92(5), 1122–1134.
- Rosenberg, L., Baltaxe, D., & **Pescetelli, N.** (2016). Crowds vs swarms, a comparison of intelligence. In 2016 *Swarm/Human Blended Intelligence, SHBI 2016*.

TEACHING & SUPERVISION

Supervision - Max Planck Institute for Human Development

Dan Barkoczi - Postdoctoral Associate (2019-present)

Thomas Mueller - Postdoctoral Associate (2019-present)

Levin Brinkmann - PhD candidate (2019-present)

Tutor - University of Oxford

Undergraduate course 'Memory, Attention and Information Processing'

2015-2017

ACADEMIC SERVICE

I am Guest Editor for the journal *Forecasting* (ISSN 2571-9394), Special Issue 'Improved Forecasting Through Artificial Intelligence'. I have been a reviewer for several peer-reviewed journals, including *Nature Communications*, *Nature Sustainability*, and *Nature Human Behavior*. I serve as Editorial Board Member of the *American Journal of Computer Science and Technology* (ISSN Online: 2640-012X).

AWARDS

Clarendon Scholarship

October 2013

I was awarded a scholarship by the prestigious Clarendon Fund to complete my doctorate degree at the University of Oxford. Other sources of funding included scholarship from the Christ Church College and the Department of Experimental Psychology.

University of Oxford Christ Church College

October 2013

Awarded a Christ Church College scholarship (2013-2016), in partnership with the Clarendon Fund. I was a member of the House in the period 2013-2017.

Miami International Science Fiction Film Festival 2020: Best Scientific Micro-documentary

April 2020

My documentary "The BeeMe Experiment" won at the Miami International Science Fiction Film Festival 2020 in the category "Best Scientific Micro-documentary". The film is freely available on Vimeo. The film was selected for several other international film festivals around the world (2020 Florence Film Awards, 2020 Toronto Lift-off Film Festival and the 2020 Lift-Off Film Festival Global Network-Genre Extravaganza)

PATENTS

Systems and methods for hybrid swarm intelligence (#US Patent 10,439,836)

2019

Systems and methods for real-time collaborative computing and collective intelligence are disclosed. A hybrid swarm intelligence system includes a central collaboration server, a plurality of computing devices in communication with the central server, and an agent application in communication with the central server.

ADDITIONAL INFORMATION

- Passionate about all performing arts, and especially acting and theatre. I have practiced acting for 15 years, with friends and professionals. I believe in the transformative power of theatre to understand complex realities and redraw human relations. I am trained in Theatre of the Oppressed methodology and Forum Theatre. In 2019, I successfully passed the KURINGA Theatre of the Oppressed Qualification Programme, after participating in a month-long residence workshop led by Barbara Santos, Christoph Leucht and Till Baumann.
- Played piano for 10 years.

SKILLS

Data Science (10+ years)
MATLAB (10+ years)
Python (5 years)
R (5 years)

Machine Learning (4 years)
Experimental Design (10+)
Online Experiments (5)
Lab Experiments (10)
Causal Inference and Analytics (10)

Forecasting
Team Management (5)
Linux (8 years)
French (A2)
Italian (C2)