

EDUCATION

2019-22: Postdoc, École Normale Supérieure, Laboratoire des Systèmes Perceptifs ~ Pascal Mamassian
2014-19: PhD, New York University, Cognition & Perception Program ~ Michael S. Landy
2010-13: Bachelor of Science, University of Sydney, physiology & psychology

RESEARCH

Lab visits/internships:

Karl Gegenfurtner ~ Justus-Liebig Universität Giessen, (1 mo., 2021)
Pascal Mamassian ~ École Normale Supérieure (3 mo., 2017)
Alex Holcombe ~ University of Sydney (8 mo., 2014)
David Alais ~ University of Sydney (8 mo., 2014)
Simon Carlile ~ University of Sydney (2.5 yr., 2011-13)

External Collaborators:

Oliver J. Robinson (UCL)
Monica Gori (IIT)

FUNDING

2019-21 Fyssen Post-Doctoral Fellowship, *Fondation Fyssen* – (60,000 EUR)
2014-19 Henry M. MacCracken Fellowship, *New York University* – (tuition + 125,000 USD)
2014-17 Frank Knox Memorial Fellowship (declined), *Harvard University* – (tuition + 80,000 USD)
2010-13 Access Scholarship (financial & geographic disadvantage), *University of Sydney* – (24,000 AUD)
2010-13 National Scholarship, *University of Sydney* – (20,000 AUD)

PREPRINTS

2023 Goettker, A., Locke, S. M., Gegenfurtner, K.R., & Mamassian, P. Sensorimotor Confidence for Tracking Eye Movements. *BioRxiv*: 2023.04.28.538675.

PUBLICATIONS

2023 Fassold, M.E., Locke, S. M., & Landy, M. S. Feeling lucky? Prospective and retrospective cues for sensorimotor confidence. *PLoS Computational Biology*: 19(6): e1010740.
2023 Locke, S. M. Confidence and appearance in perceptual decision-making. *Annales de la Fondation Fyssen* 36e: 92-103.
2022 Locke, S. M., Landy, M. S. & Mamassian, P. Suprathreshold perceptual decisions constrain models of confidence. *PLoS Computational Biology*, 18(7): e1010318.
2022 Rahnev, D., et al. Consensus goals for the field of visual metacognition. *Perspectives on Psychological Sciences*.
2021 Locke, S. M. & Robinson, O. J. Affective bias through the lens of Signal Detection Theory. *Computational Psychiatry*, 5(1): 4-20.
2020 Locke, S. M., Mamassian, P. & Landy, M. S. Performance monitoring for sensorimotor confidence: A visuomotor tracking study. *Cognition*, 205: 104396.
2020 Locke, S. M., Gafin-Cahn, E., Hosseinizadeh, N., Mamassian, P. & Landy, M. S. Priors and payoffs in confidence judgments. *Attention, Perception, & Psychophysics*, 82(6): 3158-3175.

- 2017 Locke, S. M. & Landy, M. S. Temporal causal inference with stochastic audiovisual sequences. *PLoS ONE*, 12(9): e0183776.
- 2016 Alais, D., Locke, S. M., Leung, J., & Van der Burg, E. No Attentional capture from invisible flicker. *Scientific Reports*, 6: 29296.
- 2016 Locke, S. M., Leung, J., & Carlile, S. Sensitivity to auditory velocity contrast. *Scientific Reports*, 6: 27725.
- 2014 Feinkohl, A., Locke, S. M., Leung, J., & Carlile, S. The effect of velocity on auditory representational momentum.

TALKS

- 2022 Locke, S. M. & Mamassian, P. Confidence leak and its affect on appearance. *Perceptual Metacognition Satellite Meeting* in Amsterdam, Netherlands.
- 2022 Locke, S. M., Martolini, C., Lunghi, C., Cappagli, G., Gori, M., & Mamassian, P. Movement-induced biases in auditory spatial perception. *International Multisensory Research Forum* in Ulm, Germany.
- 2022 Locke, S. M., Landy, M. S., & Mamassian, P. Performance Monitoring for Sensorimotor Confidence. *International Conference of Cognitive Neuroscience* in Helsinki, Finland.
- 2022 Evans, M.H., Locke, S. M., & Landy, M. S. Prospective and Retrospective Cues for Sensorimotor Confidence in a Reaching Task. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL.
- 2021 Locke, S. M., Mamassian, P., & Landy, M. S. Sensorimotor confidence. *UCL Decision-Making in Voluntary Action Workshop* in London, UK.
- 2018 Gaffin-Cahn, E., Locke, S. M., Hosseinizadeh, N., Mamassian, P., & Landy, M. S. Assessing the role of rewards and priors on confidence judgments. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL.
- 2016 Locke, S. M. & Landy, M. S. Spatiotemporal factors in audiovisual rate-discrimination. Invited talk at the Department of Psychology, University of Sydney, Australia.
- 2015 Carlile, S., Leung, J., Locke, S. M., & Burgess, M. Hearing motion in motion. *Acoustical Society of America Annual Meeting* in Pittsburgh, PA.
- 2014 Locke, S. M., Feinkohl, A., Leung, J., & Carlile, S. The auditory representational momentum effect. *11th Australasian Auditory Neuroscience Workshop* in Adelaide, Australia.

POSTERS

- 2022 Lutkenherm, I. K., Locke, S. M., & Robinson, O. J. Underlying mechanisms of negative affective bias. *British Association for Psychopharmacology Meeting*.
- 2022 Locke, S. M., Goettker, A., Gegenfurtner, K.R., & Mamassian, P. Sensorimotor Confidence for Tracking Eye Movements. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL
- 2021 Ibrahim, L. F., Destais, C. A., Locke, S. M., & Robinson, O. J. Incorrect prior beliefs: A possible cause to negative affective bias in mood/anxiety disorders. *British Association for Psychopharmacology Meeting* held online.
- 2021 Destais, C. A., Ibrahim, L. F., Locke, S. M., & Robinson, O. J. Investigating accuracy maximisation as a possible cause for negative affective bias in mood disorders. *British Association for Psychopharmacology Meeting* held online and the *Harvard Women in Psychology's Annual Trends in Psychology Summit* held online.

- 2018 Locke, S. M., Landy, M. S., & Mamassian, P. Sequential effects in confidence. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL.
- 2017 Locke, S. M., Landy, M. S., Mamassian, P. & Simoncelli, E. P. The temporal dynamics of meta-cognition in a continuous visuomotor task. *Annual Conference on Cognitive Computational Neuroscience* in New York, NY.
- 2017 Locke, S. M., Landy, M. S., Mamassian, P. & Simoncelli, E. P. Dynamic visual localization with moving dot clouds. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL.
- 2016 Locke, S. M., & Landy, M. S. Spatiotemporal factors in audiovisual rate-discrimination. *Vision Sciences Society Annual Meeting* in St. Pete Beach, FL and *Collaborative Research in Computational Neuroscience Conference* in Paris, France.
- 2015 Locke, S. M., Leung, J., & Carlile, S. Perceiving velocity changes in auditory motion. *Association for Research in Otolaryngology 38th Midwinter Meeting* in Baltimore, MD.
- 2013 Locke, S. M., Feinkohl, A., Leung, J., & Carlile, S. The auditory representational momentum effect. *The 4th UWS Sensory Neuroscience Symposium* in Sydney, Australia and *The Bosch Institute Young Investigators Symposium* in Sydney, Australia.

DISTINCTIONS

- 2018 Student Sentators Council's Travel Grant, *New York University*
- 2016 Dean's Student Travel Grant, *GSAS, New York University*
- 2014 Engberg Fellowship, *Department of Psychology, New York University*
- 2014 Dean's Supplementary Fellowship Grant, *Department of Psychology, New York University*
- 2013 University Medal, *University of Sydney*
- 2013 Colin Dunlop Prize in Physiology, *School of Medical Sciences, University of Sydney*
- 2012 Summer Vacation Scholarship, *School of Medical Sciences, University of Sydney*
- 2012 YE Knight Neuroscience Essay Prize, *School of Medical Sciences, University of Sydney*
- 2012 Top Student Prize in Perception (PSYC3013), *School of Psychology, University of Sydney*
- 2011 Summer Research Scholarship, *School of Medical Sciences, University of Sydney*
- 2008 Long Tan Leadership and Teamwork Award, *Australian Defence Force*

TEACHING

- 2021 Teaching Assistant, Graduate level, UCL/PSL:- *Summer School: Consciousness & Metacognition*
- 2020 Instructor, Graduate level, ENS:- *Practical Modelling Skills Workshop*
- 2020 Guest Lecturer, Graduate level, NYU (Fall):- *Psychophysics: Practical Modelling Skills*
- 2018 Instructor, Undergraduate level, NYU (Summer):- *Perception*
- 2017 Guest Lecturer, Graduate level, NYU (Fall):- *Psychophysics – Implementing Model Comparison*
- 2017 Teaching Assistant, Undergraduate level, NYU (Fall):- *Perception*

MENTORING & OUTREACH

- 2017-21 Mentor, 1000 Girls 1000 Futures Program (high school), *New York Academy of Sciences*

2021 Interviewee, Women in Science Instagram Campaign, *Singapore Girl-Up*, *UN Foundation*

2017-18 Volunteer science advocate (young children, general public), *BrainNY*, *Society for Neuroscience*

2018 Volunteer academic tutor (middle/high school), *Harlem StreetSquash*

2013 Mentor, Faculty of Science Peer Program (first year undergrads), *University of Sydney*

2013 Volunteer, Great Australian Byte Science Outreach Program (high school), *University of Sydney*

PhD Students:

Marissa Evans (2 yr, NYU)

Chiara Martolini (3 mo., IIT)

Masters Students:

Isabel Lutkenherm (1 yr, UCL)

Constance Destais (1 yr, UCL)

Layla Ibrahim (1 yr, UCL)

Research Interns:

Nadia Hosseini (6 mo., NYU)

Damaris Beutel (6 mo., NYU)

SERVICE

2020-22 Organiser, Confidence Journal Club, *LSP*, *ENS*

2020-22 Manager, LSP lab Twitter Account, *LSP*, *ENS*

2021 Organiser, New Ideas in Confidence and Uncertainty Workshop (online), *LSP*, *ENS*

2017-18 Organiser, Beer & Co.(de) peer-programming events, *Psychology Department*, *NYU*

2018 Officer, NYU CogCollective student organisation, *Graduate School of Arts & Science*, *NYU*

2010 Officer, social events at International House (university residence), *University of Sydney*

Peer Reviewer for: PNAS, Psychonomic Bulletin & Review, Perception

Current Organisations: Vision Sciences Society, New York Academy of Sciences

TECHNOLOGICAL SKILLS

Languages: :- **Packages:**

MATLAB :- **Psychtoolbox**, **Eyelink**

R :- **RStan**, **Markdown**

Python :- **PsychoPy**, **Pandas**, **numPy**

L^AT_EX :- **Tikz**, **Pgfplots**, **Beamer**

Level: *advanced*, *intermediate*, *basic*.

MISC.

Graduate Courses Completed: Perception, Visual Neuroscience, Cognitive Neuroscience, Neuroeconomics and Decision-making, MathTools for Cognitive Science and Neuroscience, Psychophysics, Bayesian Data Analysis, Neuroanatomy. GPA 4.0.