

CONTACT

INFORMATION

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CURRENT

Senior Lecturer in Machine Learning, University of Bath (2025–)

Lecturer in Machine Learning, University of Bath (2017–2025)

- Areas of expertise: Machine learning for science, theoretical machine learning, Machine learning operations.
- Specialist areas: Bayesian non-parametrics, variational inference, graphical models, Active learning + Bayesian optimisation, directional statistics, density estimation.

Director of educational non-profit, 3Dami CIC

(www.3dami.org, 2012–)

- Yearly summer school where kids create Pixar-style films

PAST

Research Associate, University College London (2013–2017)

- Synthesis of author-specific handwriting using ML and graphics.
Led to interviews by BBC, Reuters, and Associated Press.
- Collaborated with an archaeology project concerning crowd sourcing statistics on amphora over the centuries; won the ADS Date Reuse Award 2015.

Research Assistant, Queen Mary, University of London (2009–2012)

- Detected abnormal behaviour in CCTV using natural language processing techniques

PhD in Computer Vision, University of York (2005–2009)

Industrial Trainee, I.B.M. Hursley (2003–2004)

SELECTED

PUBLICATIONS

T. S. F. Haines, *The Cross-entropy of Piecewise Linear Probability Density Functions*, TMLR, 2024.

W. Kerr, T. S. F. Haines and W. Li, *Unsupervised Scouting and Layout for Storyboarding in Movie Pre-production*, Interactive Media Experiences Workshops, 2023.

R. C. Andrews, B. May, F. J. Hernández, G. E. Cozier, P. A. Townsend, O. B. Sutcliffe, T. S. F. Haines, T. P. Freeman, J. Scott, S. M. Husbands, I. S. Blagbrough, R. W. Bowman, S. E. Lewis, M. N. Grayson, R. Crespo-Otero, D. R. Carbery and C. R. Pudney, *Photochemical fingerprinting is a sensitive probe for the detection of synthetic cannabinoid receptor agonists; toward robust point-of-care detection*, Analytical Chemistry, 2023.

O. Bryan, R. E. Hansen, T. S. F. Haines, N Warakagoda and A Hunter, *Challenges of labelling unknown seabed munition dumpsites from acoustic and optical surveys: A case study at Skagerrak*, Remote Sensing, 2022.

W. Del Pozzo, C. Berry, A. Ghosh, T. Haines and A. Vecchio, *Dirichlet Process Gaussian-mixture model: An application to localizing coalescing binary neutron stars with gravitational-wave observations*, MNRAS, 2018.

J. Moritz, S. James, T. S. F. Haines, T. Ritschel and T. Weyrich, *Texture Stationarization: Turning Photos into Tileable Textures*, Computer Graphics Forum, 2017.

T. S. F. Haines and G. J. Brostow, *My Text in Your Handwriting*, TOG, 2016.

T. S. F. Haines and T. Xiang, *Background Subtraction with Dirichlet Process Mixture Models*, PAMI, 2014.

T. S. F. Haines and T. Xiang, *Active Rare Class Discovery and Classification using Dirichlet Processes*, IJCV, 2014.

T. S. F. Haines and T. Xiang, *Delta-Dual Hierarchical Dirichlet Processes: A pragmatic abnormal behaviour detector*, International Conference on Computer Vision, 2011.

T. S. F. Haines and R. C. Wilson, *Belief Propagation with Directional Statistics for solving the Shape-from-Shading problem*, European Conference on Computer Vision, 2008 (Oral, for which the acceptance rate was 4.6%).

TEACHING

Foundations & Frontiers of Machine Learning (undergraduate, 2021–)

Machine Learning 1 (MSc students, 2017–2021)

Software Technologies for Data Science (MSc students, 2017–2020)

Graphical models and graph cuts at BMVA summer school (PhD students, 2013)

ACADEMIC SERVICE

Area Chair, BMVC 2020–

Manages GPU Cloud for Computer Science department