

LEXING XIE

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RESEARCH INTERESTS

- Machine learning on unstructured data, time series, and graphs
- Computational social science, vision and language
- Ethical AI and machine learning with human values

EMPLOYMENT HISTORY

2010.12 - Lecturer(2010-1), Senior Lecturer (2012-5), Associate Professor (2016-8), Professor (2019-)
Computer Science, Australian National University

2007-2010 Research Staff Member, IBM T J Watson Research Center, Hawthorne, NY

2007-2009 Adjunct Assistant Professor, Dept. of Electrical Engineering, Columbia University.

2005-2006 Josef Raviv Postdoc Fellow, IBM T J Watson Research Center.

EDUCATION BACKGROUND

Columbia University, New York, NY	Electrical Engineering	PhD	Aug 2005
Tsinghua University, Beijing, China	Electronic Engineering	BE	June 2000

SELECTED AWARDS AND HONORS

- Chris Wallace Award for Outstanding Research, CORE Australia, 2018
- IEEE Circuits and Systems Society Distinguished Lecturer, 2016-2017
- *Best Paper Honorable Mention*, ACM CSCW, 2019; *Best Student Paper Awards*, PAKDD 2015, JCDL 2017, ACM Multimedia 2005, IEEE ICIP 2004, ACM Multimedia 2002; *Best paper award*, IEEE SOLI 2011
- IBM Patent Challenge Award, January 2010

SELECTED PROJECTS AND GRANTS

- Director, ANU [Humanising Machine Intelligence](#) (HMI) Initiative, A\$4.8M, 2021-
HMI is an interdisciplinary initiative on responsible AI, across philosophy, sociology, law, political science, with ~20 investigators, ~8 postdocs and ~13 PhD students.
- Strategic consulting on NLP, National Skills Commission Australia, A\$12K, June-July 2022
- US AOARD, “Linking online attention to offline actions”, lead PI, A\$220K, 2019-2022
- Australian Research Council Discovery Project, “Promoting fairness in online attention” AUD 330K, lead-PI, 2018-2021
- US AFOSR, “The Anatomy of Social Media Popularity” lead PI, USD 555K, 2015-2018
- Data61 Collaborative Project, AUD 690K+, sole-PI, 2012-2023
- Data-to-Decision CRC, “Picturing Everyday Knowledge”, sole-PI, 2016-2019, AUD 640K
- Australian Research Council Discovery Project, “Analyzing trajectories in complex information spaces” AUD 440K, lead-PI, 2014-2017

RECENT TEACHING

ANU COMP4670/8600 Statistical Machine Learning (2021-2023); COMP4880 Network Science (2019), COMP4650/6490 Document Analysis (2014-2018); COMP1030 Art of Computing (2016-2017)

SELECTED RECENT PUBLICATIONS

Summary: My publications have 9500+ citations on [google scholar](https://scholar.google.com/citations?user=LXIE), H-index 43. In addition, there are 5 granted and 6 pending patents. See <https://cm.cecs.anu.edu.au/publications/>

- [1] H. Zhu, Y. K. Cheung, L. Xie, "Stability and Efficiency of Personalised Cultural Markets", Proceedings of The Web Conference 2023, to appear
- [2] A. Tran, A. Mathews, L. Xie, C. S. Ong, "Factorized Fourier Neural Operators", Intl. Conf. on Learning Representations (ICLR) 2023, to appear.
- [3] A. Soen, I. Alabdulmohsin, S. Koyejo, Y. Mansour, N Moorosi, R. Nock, K. Sun, L. Xie, "Fair Wrapping for Black-box Predictions", NeuRIPS 2022
- [4] L. R. Lucchesi, P. M. Kuhnert, J. L. Davis, and L. Xie, "Smallset Timelines: A Visual Representation of Data Preprocessing Decisions", ACM Conf. on Fairness, Accountability, and Transparency (FAcCT), 2022
- [5] T. D. Nguyen, G. Lyall, A. Tran, M. Shin, N. G. Carroll, C. Klein, and L. Xie, "Mapping Topics in 100,000 Real-life Moral Dilemmas", AAAI Conf. on Web and Social Media (ICWSM '22), 2022
- [6] A Tran, A Mathews, C. S. Ong, L. Xie, "Radflow: A Recurrent, Aggregated, and Decomposable Model for Networks of Time Series", Proceedings of The Web Conference 2021, 2021
- [7] A Tran, A Mathews, L. Xie, "Transform and Tell: Entity-Aware News Image Captioning", The IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020
- [8] S Wu, M-A Rizoiu, L. Xie, "Variation across Scales: Measurement Fidelity under Twitter Data Sampling", International AAAI Conference on Web and Social Media (ICWSM '20), 2020
- [9] Q Kong, M-A Rizoiu, L Xie, "Modeling Information Cascades with Self-exciting Processes via Generalized Epidemic Models", ACM Intl Conf Web Search and Data Mining (WSDM), 2020
- [10] M Shin, A Soen, B T Readshaw, S M Blackburn, M Whitelaw, L Xie, "Influence Flowers of Academic Entities", IEEE Conf. on Visual Analytics Sci. & Tech. (VAST), Oct 2019
- [11] S Wu, M.-A. Rizoiu, L. Xie, "Estimating Attention Flow in Online Video Networks", ACM Conf. on Computer-Supported Cooperative Work and Social Computing (CSCW '19), 2019
- [12] U Bista, A Mathews, M Shin, A K Menon, L Xie, "Comparative Summarisation of Document Collections", AAAI Conference on Artificial Intelligence (AAAI), 2019, Feb 2019.
- [13] A Mathews, L Xie, X He, "SemStyle: Learning to Generate Stylised Image Captions using Unaligned Text", Conf on Computer Vision and Pattern Recognition (CVPR) 2018
- [14] M.-A. Rizoiu, L. Xie, S Sanner, Cebrian, M.; Yu, H.; and Van Hentenryck, P. "Expecting to be HIP: Hawkes Intensity Processes for Social Media Popularity " Intl Conf. World Wide Web 2017 (WWW '17), pages 735--744, Perth, Australia, 2017.

RECENT INVITED TALKS

- University of Michigan, KAIST Korea, Monash University, 2021
- Keynote speaker, CVPR workshop on Future Video Conferencing, 2021
- IEEE CAS Distinguished Lecture, Nanyang Technological University, Singapore, May 2017
- Invited speaker, Microsoft Research Asia Faculty Summit, Seoul, Korea, Nov 2016
- Tutorial speaker, "Learning Knowledge Bases for Text and Multimedia", ACM Multimedia'15

SELECTED PROFESSIONAL SERVICES

- **Track chair** on Web and Society, The Web Conf 2023; **Editor-in-Chief**, AAAI ICWSM, 2018-2021; **Program Co-Chair**, ACM ICMR 2019
- **Associate Editor**, ACM Journal of Responsible Computing 2022-, ACM TiiS (Trans. Intelligent Inteaaction Sys), 2015-; PeerJ Computer Science, 2015-; ACM TOIS 2019-2021; IEEE T-MM, 2013-2016; ACM TOMM (Trans. Multimedia Comp.), 2012-2018.