

CURRICULUM VITAE OF ALISTAIR WINDSOR
Associate Professor, Department of Mathematical Sciences
Director, Institute of Intelligent Systems
The University of Memphis
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<http://www.memphis.edu/msci/people/awindsor.php>

Professional Preparation

2002 PhD Mathematics, The Pennsylvania State University
1996 BCA Mathematical Economics, Victoria University of Wellington, New Zealand
1995 BSc Mathematics, Victoria University of Wellington, New Zealand

Appointments

2013– Associate Professor, University of Memphis, TN
2012– Faculty Affiliate, Institute for Intelligent Systems, University of Memphis, TN
2017–2024 Director, Institute of Intelligent Systems, University of Memphis, TN
2012–2014 Co-Director, Tigers Teach, University of Memphis, TN
2007–2013 Assistant Professor, University of Memphis, TN
2004–2007 Instructor, University of Texas at Austin, TX
2002–2004 EPSRC Research Associate, The Victoria University of Manchester, UK

Awards

Dean's Award for Teaching Excellence, 2016

Grant Roles

Co-PI, PI: Stephanie Ivey, S-STEM. Bridging the Gaps: Cultivating STEM Identity and Success through STEM Outreach, Networking, and Scholarships, National Science Foundation, 2025-2029, \$1,999,581

PI, Community of Research Scholars award, *University of Memphis*, 2022-2023, \$2500.

Co-PI, PI: Leah Windsor, Multimodal Signaling and Communication Analysis of World Leaders *National Science Foundation*, 2021-2024, \$450,000

Co-PI, PI: Amy Cook, Improving TAs Feedback Quality in Introductory CS Courses, *National Science Foundation*, 2021-2024, \$395,014.

Co-PI, PI: Leah Windsor, Multilingual Approaches to Corpus Diversification, Minerva Initiative, Department of Defense, 2018-2019, \$198,898.

Co-PI, PI: Leah Windsor, Team Initiation Grant, Division of Research and Sponsored Programs, University of Memphis. 2017-2019 \$30K

PI, Tipton County Schools Mathematics Science Partnership, *Department of Education, State of Tennessee*, 2014-2015. \$26,850 (subcontract)

Co-PI, PI: Ben McCarty, Shelby County Schools Mathematics Science Partnership, *Department of Education, State of Tennessee*, 2013-2014. \$109,127

Co-PI, PI: Ben McCarty, 5th Grade Professional Development, Tipton County Schools, 2013-2014. \$7,987 (subcontract)

PI, Supporting a New Generation, S-STEM Grant, *National Science Foundation*, 2012-2016. \$574,848.

PI, Tigers Teach: A UTeach Replication, *Tennessee Higher Education Commission*, 2010-2014. Replaced original PI in 2012. \$1,730,416.

Co-PI, PI: Michael Grant, mMIND: Mobiles, Mathematics, Inquiry, and Data, STEM Professional Development Grant, *Tennessee Higher Education Commission*, 2012–2013. \$199,553.

PI, Securing the Foundation of the Algebra Pyramid (Professional Development for 5th Grade Mathematics Teachers), Improving Teacher Quality (ITQ) Grant, *Tennessee Higher Education Commission*, 2012. \$67,441

PI, Inquiry-Based Learning for In-Service High School Teachers. *Educational Advancement Foundation*, 2008-2011 (extended). \$30,000

Senior Personnel, Political Crisis, and Language: A Computational Assessment of Social Disequilibrium and Security Threats, Minerva Initiative, *Department of Defense*, 2014-2017. \$1,285,656.

Senior Personnel, Adaptive, Generalizable, Intelligent Tutors for Naval Training and Education, *Office of Naval Research*, 2012-2014. \$1,475,448

Senior Personnel, MemphiSTEP: A STEM Talent Expansion Program. *National Science Foundation*, 2008-2015. (Added as Co-PI, 2014). \$2,000,000.

Senior Personnel, Math Science Partnership Grant: Teacher Excellence: Ensuring Student Competitiveness. *Department of Education, State of Tennessee*, 2008-2009.

Journal Publications

Casal, J. E., Stewart, C. M., & Windsor, A. J. (2025). “It is important to consult” a linguist: Verb-Argument Constructions in ChatGPT and human experts’ medical and financial advice. *PLoS One*, 20(5), e0324611.

Zaman, A., Cook, A., Phan, V., & Windsor, A. (2025). Graduate Computer Science TA Perspectives on In-Person Pedagogical Training: An Experience Report. *Proceedings of the 30th ACM Conference on Innovation and Technology in Computer Science Education V. 1*, 548–554. <https://doi.org/10.1145/3724363.3729072>

Zaman, A., Cook, A., Phan, V., & Windsor, A. (2023). A Practical Strategy for Training Graduate CS Teaching Assistants to Provide Effective Feedback. *Proceedings of the 2023 Conference on Innovation and Technology in Computer Science Education V. 1*, 285–291. <https://doi.org/10.1145/3587102.3588776>

Windsor, L. C., Tatara, J. H., Peters, C. B., Kronsted, C., & Windsor, A. (2023). The language of wine reviews. *Journal of Wine Research*, 34(2), 81–100. <https://doi.org/10.1080/09571264.2023.2205116>

- Cook, A., Phan, V., Windsor, A. (2022). Improving TA Feedback on In-Class Coding Assignments for Introductory Computer Science. In Proceedings of the 27th ACM Conference on Innovation and Technology in Computer Science Education Vol. 1 (ITiCSE '22). Association for Computing Machinery, New York, NY, USA, 421–427. <https://doi.org/10.1145/3502718.3524746>
- Chiovaro, M., Windsor, L. C., Windsor, A., & Paxton, A. (2021). Online social cohesion reflects real-world group action in Syria during the Arab Spring. *PLOS ONE*, 16(7), e0254087.
- Giger, J. T., Barnhart, S., Feltner, F., Slone, M., Lawler, M. J., Windsor, L., & Windsor, A. (2021). Validating the eHealth Literacy Scale in Rural Adolescents. *The Journal of Rural Health*, 37(3), 504–516.
- Windsor, L., Yannitell Reinhardt, G., Windsor, A., Ostergard, R., Allen, S. (2020) Gender in the time of COVID-19: Evaluating national leadership and COVID-19 fatalities. *PLOS ONE*, 15 (12), e0244531
- Windsor, L., Cupit, J.G. & Windsor, A. (2019) Automated Content Analysis Across Six Languages. *PLOS ONE* 14(11): e0224425. <https://doi.org/10.1371/journal.pone.0224425>
- Nye, B. D., Windsor, A., Pavlik, P., Olney, A., Hajeer, M., Graesser, A. C., & Hu, X. (2018) SKOPE-IT (Shareable Knowledge Objects as Portable Intelligent Tutors): overlaying natural language tutoring on an adaptive learning system for mathematics. *International Journal of STEM Education* 5 (1), 12
- Ivey, S., Windsor, A. (2018) Using Mid-Semester Evaluations for Increasing Success of STEM Students: A Case-Study. *Journal of STEM Education* 19 (3)
- Windsor, L. C., Dowell, N., Windsor, A. & Kaltner, J. (2018) Leader Language and Political Survival Strategies. *International Interactions* 44 (2), 321-336
- Campbell, C., McCutcheon, R., Windsor, A. (2018) Independence and Alpern multitowers. *Dynamical Systems*, DOI: 10.1080/14689367.2018.1504891
- Nye, B. D., Windsor, A., Pavlik, P., Olney, A., Hajeer, M., Graesser, A. C., & Hu, X. (2015). Evaluating the Effectiveness of Integrating Natural Language Tutoring into an Existing Adaptive Learning System. In *International Conference on Artificial Intelligence in Education* (pp. 743-747). Springer International Publishing
- Windsor, A. – Lead, Bargagliotti, A. M., Best, R., Franceschetti, D., Haddock, J., Ivey, S. and Russomanno, D. (2015) Increasing Retention in STEM: Results from a STEM Talent Expansion Program at the University of Memphis. *Journal of STEM Education* 16(2).
- McCutcheon, R., Windsor, A. (2014) A Characteristic Factor for the 3-Term IP Roth Theorem In $\mathbb{Z}_3^{\mathbb{N}}$. *Electronic Journal of Combinatorics*, 21(3).
- McCutcheon, R., Windsor, A. (2014) D-Sets and a Sarkozy Theorem for Finite Fields. (2014) *Israel Journal of Mathematics*. 201(1), 123–146.
- Bargagliotti, A.E., Botelho, F., Gleason, J., Haddock, J., Windsor, A. (2012). The Effectiveness of Blended Instruction in Postsecondary General Education Mathematics Courses.

International Journal for Technology in Mathematics Education. 19(3), 83–94

Bargagliotti, A.E., Botelho, F., Gleason, J., Haddock, J., Windsor, A. (2011) A Report on the Effectiveness of Blended Instruction in General Education Mathematics Courses. Proceedings of the 14th Annual Conference on Research in Undergraduate Mathematics Education. 25-38

de la Llave, R., & Windsor, A. (2011). Smooth dependence on parameters of solutions to cohomology equations over Anosov systems with applications to cohomology equations on diffeomorphism groups. *Discrete and Continuous Dynamical Systems, Series A*, 29(3), 1141 – 1154

de la Llave, R., & Windsor, A. (2011). Avoiding Early Closing: A Corrigendum to “Livsic theory for diffeomorphism groups with applications to conformal structures.” *Ergodic Theory and Dynamical Systems*, 31(4), 1269-1272

Windsor A. (2010). A contraction mapping proof of the smooth dependence on parameters of solutions to Volterra integral equations. *Nonlinear Analysis. Theory, Methods & Applications. Series A: Theory and Methods*, 72(9-10), 3627-3634

de la Llave, R., & Windsor, A. (2009). Livsic theorems for non-commutative groups including diffeomorphism groups and results on the existence of conformal structures for Anosov systems. *Ergodic Theory and Dynamical Systems*. 30(4), 1055 - 1100

de la Llave, R., & Windsor, A. (2009). Multiple recurrence and tiling theory. *Discrete and Continuous Time Dynamical Systems, Series S*, 2(2), 315–324.

Windsor, A. (2008). Smoothness is not an obstruction to realizability. *Ergodic Theory and Dynamical Systems*, 28(3), 1037–1041.

Fayad, B., & Windsor, A. (2007). A dichotomy between discrete and continuous spectrum for a class of special flows over rotations. *Journal of Modern Dynamics*, 1(1), 107–122.

Fayad, B., Saprykina, M., & Windsor, A. (2007). Non-standard smooth realizations of Liouville rotations. *Ergodic Theory and Dynamical Systems*, 27(6), 1803–1818.

Melbourne, I., & Windsor, A. (2005). A C^∞ diffeomorphism with infinitely many intermingled basins. *Ergodic Theory and Dynamical Systems*, 25(6), 1951–1959.

Fayad, B., Katok, A. B., & Windsor, A. (2001). Mixed spectrum reparametrizations of linear flows on T^2 . *Moscow Mathematics Journal*, 1(4), 521–537.

Windsor, A. (2001). Minimal but not uniquely ergodic diffeomorphisms. In Proceedings of Symposia in Pure Mathematics, Volume 69 (pp. 809–824). Providence, RI: American Mathematical Society.

Krawczyk, J. B., & Windsor, A. (1997). An approximated solution to continuous-time stochastic optimal control problems through Markov decision chains.

Windsor, A., & Krawczyk, J. B. (1997). A Matlab package for approximating the solution to a continuous-time stochastic optimal control problem. Available at SSRN 73968.

Internal Roles

University of Memphis Research Council, 2022-
Centers and Institutes Policy Task Force

Faculty Senator (Mathematical Sciences), 2022-2024
Served on Budget and Finance Committee, 2022-2023
Elected Chair of Committee on Committees, 2023-2024
Served on ad-hoc Committee on AI, 2023-2024

University Undergraduate Curriculum Committee
Served as Faculty Senate representative 2022-2023
Served as a CAS representative 2021-2022

College of Arts and Sciences Undergraduate Curriculum Committee
Serve as Mathematical Sciences representative 2017-2023

External Roles (National)

Partnership for Assessment of Readiness for College and Careers (PARCC) Core Leadership
Review Team, 2012–2014

External Roles (State)

Tennessee STEM Education Leadership Council 2019 –

Institutes of Higher Education Common Core Advisory Board, State of Tennessee, 2012 – 2016

Southwestern Core to College Curriculum Council, 2013 – 2016

External Roles (Local)

Associate Director, West Tennessee STEM Hub. 2020 –

Chair, Professional Development Team, West Tennessee STEM Hub. 2017 –

Steering Committee Member, West Tennessee STEM Hub. 2012 –

Mathematics Advisor to the Optional Program at Grahamwood Elementary Schools, 2011–2013

Technical Assistance Visits – High Schools That Work – Wooddale High School and Booker T.
Washington High School, 2011.

Theses Supervised

2014	Jeff Lewis, MS, Pythagorean Triples in the Classroom
2010	Scotty Houston, MS, A Comparison of Some Numerical Methods for Solving Volterra Integral Equations
2008	Daniel Boboc, MS, Applications of Fourier Analysis in Image Processing
2003	Mathew Blakeman, MSc, Arithmetic and Growth of Periodic Orbits for Dynamical Systems

Additionally, I have served on five MS committees (David Bonds, Melanie Holt, Jee Zhou, Alex Russo, Tai Nguyen) and nine Ph.D. committees (Shaun Ceci, Jared Collins, Nia Dowell, Richard Johnson, Dias Kurmachev, Amy Shaw, Stephen Smith, Richard Snyder, and Rebekah Hermann) and on three Ed.D. (Shelly Burr, Lisa Loden and Jessica Webb) committees. I currently co-chair one PhD committee in the Department of Mathematical Sciences.

Technical Skills

Highly proficient in Python (pandas, scikit-learn, scipy, numpy, seaborn, matplotlib, pytorch), Mathematica, and Stata.

Proficient in C++, and SQL.

Other Synergistic Activities

Marcus Orr Center for Humanities Informance, Tom Stoppard's Arcadia, 2011

M2 Enrichment Cohort Program for 8th grade Statistics, Ridgeway Middle School, April 2011.

Mathematics at Memphis, Presentation for High School Students, March 2009

Address $\mu\alpha\theta$ (MATH) Induction, White Station High School, Memphis, TN, November 2007

Saturday Morning Math Group, Presentation for High School Students, February 2006

Invited Seminar and Conference Talks

The Age of AGI, Rust College, 2024

Working Seminar in Ergodic Theory, University of Utah, November 9, 2020.

INVEST Educator Preparation Conference, Lipscomb University, TN, May 20, 2014

Fall Southeastern Sectional Meeting,
University of Louisville, Louisville, KY, October 5-6, 2013

Topology and Geometry Seminar
Florida State University, October 2011

Erdős Conference
University of Memphis, September 2011

Legacy of R. L. Moore Conference
Austin, Texas, 17-19 June 2010

International Conference on Interdisciplinary Mathematical & Statistical Techniques
University of Memphis, 15-18 May 2008

1st Joint International Meeting between the American Mathematical Society and the New Zealand Mathematical Society
Victoria University of Wellington, December 12-15, 2007

Analysis Seminar
Texas A&M University, November 1, 2007

AMS Central Sectional Meeting
DePaul University, Chicago, October 2007

Math Department Colloquium
Trinity University, San Antonio, TX, November 7, 2006

Semi Annual Workshop in Dynamical Systems
Penn State University, November 2–5, 2006

Analysis Seminar
University of Houston, TX, September 29, 2006

SIAM Conference on Applications of Dynamical Systems
Hyperbolic Dynamical Systems Mini-Symposium
Snowbird, UT, May 22–26, 2005

Dynamical Systems Seminar
University of Surrey, U.K., October 24, 2003

Dynamical Systems Seminar
Queen Mary, University of London, October 14, 2003

Equa-Diff Session on Ergodicity in Dynamical Systems
Hasselt, Belgium, July 22–26, 2003

Dynamical Systems Seminar
University of Warwick, U.K., May 27, 2003

Dynamical Systems Seminar
Jussieu, Paris, March 28, 2003

Dynamical Systems Seminar
Villetaneuse, France, March 24, 2003

Pure Mathematics Colloquium
University of Liverpool, U.K., March 21, 2003

One Day Ergodic Theory Meeting
Victoria University of Manchester, U.K., November 13, 2002

Semi-Annual Workshop in Dynamics and Related Topics
Pennsylvania State University, October 11–14, 2001

School of Mathematics, Computer Science, and Statistics Seminar
Victoria University of Wellington, New Zealand, July 31, 2001

EuroConference on Ergodic Theory, Geometric Rigidity and Number Theory
Isaac Newton Institute for Mathematical Sciences, Cambridge, U.K., July 3–7, 2000

AMS Summer Research Institute: Smooth Ergodic Theory and Applications
University of Washington, July 26–August 13, 1999