# **DEREK DORAN**

3640 Colonel Glenn Hwy Wright State University Dayton, OH 45435 derek.doran@wright.edu

http://knoesis.wright.edu/people/derek/

# **EXPERIENCE**

Assistan	State University, Dayton, OH	2014 – Present
Maaiatdii	t Professor, Dept. of Computer Science & Engineering	
	. Corporate Research, Raleigh, NC	2013
Interim	Researcher, Industrial Software Systems (Data Analytics Group)	
Bell Lab	s, Nokia (formerly Alcatel-Lucent), Murray Hill, NJ	2011, 2012
Summe	Alumnus, Network Performance and Reliability Department	
Nationa	l Taiwan University, Taipei, Taiwan	2010
Nationa	l Science Foundation East Asia and Pacific Summer Institutes Fellow	
Depend	able Distributed Systems and Networks Laboratory, National Taiwan University	
Univers	ity of Connecticut, Storrs, CT	2007 - 2014
Researc	h Assistant, Dept. of Computer Science & Engineering	
UCATIO:	N	
Univers	ity of Connecticut	
Ph.D.	Computer Science & Engineering	2014
M.S.	Computer Science & Engineering	2012
B.S.	Computer Science, Cum Laude, Minor in Mathematics	2007
VEESSIV	NAL HONORS AND AWARDS	
OLESSIC		
	reer Achievement Award, College of Eng. and Computer Science, Wright State Univ.	2016
Early Ca	reer Achievement Award, College of Eng. and Computer Science, Wright State Univ. sching Paper Runner-up Award, SIGDSA Business Analytics Congress	2016 2015
Early Ca Best Tea		
Early Ca Best Tea Best Pag	ching Paper Runner-up Award, SIGDSA Business Analytics Congress	2015
Early Ca Best Tea Best Pap CISE Res	sching Paper Runner-up Award, SIGDSA Business Analytics Congress per Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining	2015 2015
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc	ching Paper Runner-up Award, SIGDSA Business Analytics Congress per Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining pearch Initiation Initiative Award, National Science Foundation  I Dissertation Fellowship, University of Connecticut  toral Fellowship, University of Connecticut	2015 2015 2015 2013 2013
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc	ching Paper Runner-up Award, SIGDSA Business Analytics Congress per Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining pearch Initiation Initiative Award, National Science Foundation  I Dissertation Fellowship, University of Connecticut	2015 2015 2015 2013 2013
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc Best Pap	ching Paper Runner-up Award, SIGDSA Business Analytics Congress per Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining pearch Initiation Initiative Award, National Science Foundation  I Dissertation Fellowship, University of Connecticut  toral Fellowship, University of Connecticut	2015 2015 2015 2013 2013
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc Best Pap Best Pap Graduat	sching Paper Runner-up Award, SIGDSA Business Analytics Congress over Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining search Initiation Initiative Award, National Science Foundation I Dissertation Fellowship, University of Connecticut coral Fellowship, University of Connecticut over 3 <sup>rd</sup> Place Award, Intl. Conference on Software Engineering and Knowledge Engineering over Award, IEEE Intl. Conference on Machine Learning and Applications over Research Award, Transportation Research Board of the National Academies	2015 2015 2015 2013 2013 2013 2012 2012
Early Ca Best Pag CISE Res Doctora Pre-doc Best Pag Best Pag Graduat	sching Paper Runner-up Award, SIGDSA Business Analytics Congress over Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining search Initiation Initiative Award, National Science Foundation  I Dissertation Fellowship, University of Connecticut toral Fellowship, University of Connecticut over 3 <sup>rd</sup> Place Award, Intl. Conference on Software Engineering and Knowledge Engineering over Award, IEEE Intl. Conference on Machine Learning and Applications	2015 2015 2015 2013 2013 2013 2012 2012
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc Best Pap Best Pap Graduat East Asia	sching Paper Runner-up Award, SIGDSA Business Analytics Congress over Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining search Initiation Initiative Award, National Science Foundation I Dissertation Fellowship, University of Connecticut coral Fellowship, University of Connecticut over 3 <sup>rd</sup> Place Award, Intl. Conference on Software Engineering and Knowledge Engineering over Award, IEEE Intl. Conference on Machine Learning and Applications over Research Award, Transportation Research Board of the National Academies	2015 2015 2013 2013 2013 2012
Early Ca Best Tea Best Pap CISE Res Doctora Pre-doc Best Pap Best Pap Graduat East Asia Best Stu	sching Paper Runner-up Award, SIGDSA Business Analytics Congress over Award, Industry Track, IEEE/ACM Intl. Conf. on Social Network Analysis and Mining search Initiation Initiative Award, National Science Foundation  I Dissertation Fellowship, University of Connecticut toral Fellowship, University of Connecticut over 3 <sup>rd</sup> Place Award, Intl. Conference on Software Engineering and Knowledge Engineering over Award, IEEE Intl. Conference on Machine Learning and Applications  Research Award, Transportation Research Board of the National Academies and Pacific Summer Institutes Fellowship, National Science Foundation	2015 2015 2015 2013 2013 2013 2012 2012 2010

# RESEARCH GRANTS

- Co-PI: Human Centered Big Data
   with M. Raymer (PI), B. Rigling, P. Hitlzer, T. Wishcholl, M. Belkin, J. Hamm, K. Loparo, B. Minnery
   Ohio Federal Research Network, \$1,150,793, 2016 2018
   (Doran's share: \$164,399)
- PI: Network Representations and Analytics for Geospatial Analysis
   NSF I/UCRC Center for Surveillance Research and Air Force Research Labs, \$124,000, 2016 2018
- PI: CRII: CSR: Towards Understanding and Mitigating the Impact of Web Robot Traffic on Web Systems
   National Science Foundation, \$174,319, 2015 2017
- PI: Towards Geospatial Awareness from Wide-Area Aerial Surveillance NSF I/UCRC Center for Surveillance Research, \$45,373, 2015 – 2016
- Co-PI: Assessing the Reliability of Medical Information on Online Social Media with D. Asamoah (PI), S. Schiller
   WSU Research Initiation Grant, \$24,426, 2015 2016
   (Doran's share: \$12,213)
- PI: Understanding User Interactions in Large-Scale Online Emotional Support Systems
   7 Cups of Tea, Inc., \$4,500, 2015
- PI: A Flexible Analytic Framework for Aviation Security Screening Checkpoint Performance
  Transportation Research Board of the National Academy of Sciences, \$10,000, 2012 2013
- PI: EAPSI: Protecting Web Servers by Web Robot Detection National Science Foundation, \$5,617, 2010 – 2011

## (Student) Travel Grants and Doctoral Fellowships

- Travel Grant, Schloss Dagstuhl Seminar on Human-Like Neural-Symbolic Computing, \$1,500, 2017
- Travel Grant (for PhD student Ning Xie), 12<sup>th</sup> Reasoning Summer School, \$2,640, 2016
- Pre-doctoral Fellowship, Univ. of Connecticut Dept. of Computer Science & Engineering, \$2,050, 2013
- Doctoral Dissertation Fellowship, Univ. of Connecticut Graduate School, \$2,000, 2013
- Travel Grant, ACM Conference on Online Social Networks, \$1,500, 2013
- Travel Grant, IEEE Intl. Conference on Quantitative Evaluation of Systems \$450, 2010

## **PUBLICATIONS**

Doran's undergraduate, MS, and PhD advisees are underlined.

\* denotes interdisciplinary work co-authored with colleagues outside of a computer science department or field.

#### **Books**

B1. D. Doran. *Network Role Mining an Analysis*. Springer, 2017, DOI 10.1007/978-3-319-53886-0

#### **Refereed Journal Publications**

Verifiable 1- or 5-year impact factor at time of submission may be listed.

- J1. \*N. Trivedi, D. Asamoah, and D. Doran. "Keep the Conversation Going: Engagement-Based Customer Segmentation for Online Social Service Platforms", Information Systems Frontiers, 2016, pp. 1-19. doi:10.1007/s10796-016-9719-x (Impact factor: 2.25)
- J2. \*D. Asamoah, R. Sharda, N. Rude, and D. Doran. "RFID-Based Information Visibility for Hospital Operations: Exploring its Positive Effects using Discrete Event Simulation", Healthcare Management Science, 2016. doi:10.1007/s10729-016-9386-y (Impact factor: 1.84)
- J3. D. Doran and S. Gokhale. "An integrated Method for Real-Time and Offline Web Robot Detection", Expert Systems, 2016. doi:10.1111/exsy.12184
- J4. D. Doran and A. Fox. "Operationalizing Central Place and Central Flow Theory with Mobile Phone Data", Annals of Data Science, Vol. 3, No. 1, pp. 1-24, 2016
- J5. D. Doran, K.Severin, S. Gokhale, and A. Dagnino. "Social Media Enabled Human Sensing for Smart Cities", Al Communications, Vol. 29, pp. 57-76, 2016
- J6. D. Doran. "On the Discovery of Social Roles in Large Scale Social Systems", Social Network Analysis and Mining, Vol. 5, No. 49, 2015
- J7. D. Doran, S. Gokhale, and A. Dagnino. "Discovering Perceptions in Online Social Media: A Probabilistic Approach", International Journal of Software Engineering and Knowledge Engineering, Vol. 24, No. 9, pp. 1-27, 2014
- J8. \*D. Doran, S. Gokhale, and N. Lownes. "Analytic Model of Screening Times at Airport Security Checkpoints", Transportation Research Record: Journal of the Transportation Research Board, Vol. 2400, No. 1, pp. 1-8, 2014
- J9. D. Doran, A. De la Rosa Algarin, and S. Gokhale. "Characterizing the Activity of Friendship Triads on Facebook", Journal of Advances in Computer Networks, Vol. 2, No. 1, pp. 35-39, 2014
- J10. C. Phadke, V. Mendiratta, H. Uzunalioglu, D. Kushnir, and D. Doran. "Prediction of Subscriber Churn Using Social Network Analysis", Bell Laboratories Technical Journal, Vol. 17, No. 4, pp. 63-75, 2013
- J11. D. Doran and S. Gokhale. "A Classification Framework for Web Robots", Journal of the American Society for Information Science and Technology, vol.64, pp. 2549-2554, 2012 (Impact factor: 2.16)
- J12. L. Lipsky, D. Doran, and S. Gokhale. "Checkpointing for the RESTART Problem in Markov Networks", Journal of Applied Probability, vol. 48A, pp. 195-207, 2011
- J13. D. Doran and S. Gokhale. "Web Robot Detection Techniques: Overview and Limitations", Data Mining and Knowledge Discovery, vol. 22, pp. 183-210, 2011 (Impact factor: 2.64)

#### Submitted

M. Zabihimayvan, R. Sadeghi, N. Rude, and D. Doran. "An Integrated Approach for Benign and Malicious Web Robot Detection", Expert Systems With Applications, 2016. (Status: Revision Under Review)

M. Hashler, M. Piekenbrock, and D. Doran. "dbscan: Fast Density-based Clustering Algorithms in R", Journal of Statistical Software, 2017 (Status: Under Review)

#### **Book Chapters**

- BC1. D. Doran. "Graph and Link Mining", Encyclopedia of Big Data, Springer, L. Schintler, C. McNeely (Eds.), 2017
- BC2. D. Doran and V. Mendiratta. "Modeling Propagation Phenomena for Mobile Phone Data Analytics",
  Propagation Phenomena in Real World Networks, Springer, D. Krol, D. Fay, and B. Gabrys (Eds.), pp. 335 –
  376, 2015

Submitted, In Review

D. Doran. "Data Scientist", Encyclopedia of Big Data, Springer, L. Schintler, C. McNeely (Eds.)

#### **Refereed Conference Publications**

Verifiable main track acceptance rate may be listed.

- C1. S. Wijeratne, L. Balasuriya, A. Sheth, and D. Doran. "EmojiNet: An Open Service and API for Emoji Sense Discovery", Proc. Of AAAI Intl. Conference on Weblogs and Social Media, Vancouver, CA, May 2017 (Accept Rate: 30%)
- C2. <u>N. Xie, K. Brown, N. Rude</u>, and D. Doran. "A Soft Computing Prefetcher to Mitigate Cache Degradation by Web Robots", Proc. Of Intl. Symposium on Neural Networks, Sapporo, Japan, Jun. 2017
- C3. S. Wijeratne, L. Balasuriya, A. Sheth, and D. Doran. "EmojiNet: Building a Machine Readable Sense Inventory for Emoji", Proc. Of International Conference on Social Informatics, pp. 527-541, Seattle, WA, Nov. 2016 (Accept Rate: 29%)
- C4. <u>L. Balasuriya</u>, S. Wijeratne, D. Doran, and A. Sheth. "Finding Street Gang Members on Twitter", Proc. of IEEE/ACM Intl. Conference on Advances in Social Network Analysis and Mining, pp. 685-692, San Francisco, CA, Aug. 2016 (Accept Rate: 13%)
- C5. S. Wijeratne, <u>L. Balasuriya</u>, D. Doran, and A. Sheth. "Word Embeddings to Enhance Twitter Gang Member Profile Identification", 3<sup>rd</sup> Workshop on Semantic Machine Learning at Intl. Joint Conference on Artificial Intelligence, pp. 18-24, New York, NY, Jul. 2016
- C6. \*M.C. Calzarossa, L. Massari, D. Doran, <u>S. Yelne</u>, <u>N. Trivedi</u>, and G. Moriarty. "Measuring the Users and Conversations of a Vibrant Online Emotional Support System", Proc. Of IEEE Symposium on Computers and Communications, pp. 1193-1199, Messina, Italy, Jul. 2016
- C7. \*D. Asamoah, D. Doran, and S. Schiller. "Teaching the Foundations of Data Science: An Interdisciplinary Approach", SIGDSA Pre-ICIS Business Analytics Congress, Fort Worth, TX, Dec. 2015 (Best Teaching Paper, Runner-up Award)
- C8. M. Maurice, M. Piekenbrock, and D. Doran. "WAMINet: An Open Source Library for Dynamic Geospace Analysis Using WAMI", Proc. Of IEEE Intl. Conf. on Image and Multimedia Processing, pp. 445-448, Miami, FL, Dec. 2015

- C9. N. Rude and D. Doran. "Request Type Prediction for Web Robot and Internet of Things Traffic", Proc. Of IEEE Intl. Conference on Machine Learning and Applications, pp.988-993, Miami, FL, Dec. 2015 (Accept Rate: 30%)
- C10. \*D. Doran, <u>S. Yelne</u>, L. Massari, M.C. Calzarossa, L. Jackson, and G. Moriarty. "Stay Awhile and Listen: User Interactions in a Crowdsourced System Offering Emotional Support", Proc. of IEEE/ACM Intl. Conference on Advances in Social Network Analysis and Mining, pp. 667-674, Paris, France, Aug. 2015 (Accept Rate: 18%) (Best Paper Award, Industry Track)
- C11. S. Kumar, P. Kapanipathi, D. Doran, P. Jain, and A. Sheth. "Entity Recommendations Using Hierarchical Knowledge Bases", Proc. Of Intl. Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data at European Semantic Web Conference, Portoroz, Slovenia, Jun. 2015
- C12. \*S. Wijeratne, D. Doran, A. Sheth, and J. Dustin. "Analyzing the Social Media Footprint of Street Gangs", Proc. Of IEEE Intl. Conference on Intelligence Security Informatics, pp. 91-96, Baltimore, MD, May 2015
- C13. D. Doran, A. Fox, and V. Mendiratta. "Where do we Develop? Discovering Regions for Urban Investment in Senegal", Intl. Conf. on the Analysis of Mobile Phone Datasets Data for Development Challenge Book of Abstracts: Scientific Papers, pp. 530-540, Cambridge, MA, Apr. 2015

  (Challenge Rank: top 20% of 150+ submissions)
- C14. H. Alzhami, S. Gokhale, and D. Doran. "Understanding Social Effects in Online Networks", Proc. Of IEEE Intl. Symposium on Social Computing and Semantic Data Mining, pp. 863-868, Anaheim, CA, Feb. 2015 (Accept Rate: 24%)
- C15. D. Doran. "Triad-based Role Discovery for Large Social Systems", Proc. Of Intl. Conference on Social Informatics Workshops, Lect. Notes in Computer Science 8852, pp. 130-143, Barcelona, Spain, Nov. 2014
- C16. L. Lin, A. Dagnino, D. Doran, and S. Gokhale. "Data Analytics for Power Utility Storm Planning", Proc. Of Intl. Conference on Knowledge Discovery and Information Retrieval, SCITEPRESS Digital Proceedings, Rome, Italy, Oct. 2014
- C17. D. Doran, S. Gokhale, and A. Dagnino. "Accurate Local Estimation of Geo-Coordinates for Social Media Posts", Proc. Of Intl. Conference on Software Engineering and Knowledge Engineering, pp. 642 647, Vancouver, CA, July 2014 (Accept Rate: 30%)
- C18. D. Doran. "An Analytic Model of Airport Security Checkpoint Screening Times", Proc. of The 2014 Annual Meeting Compendium of Papers (Online and DVD format), Washington, D.C., Jan. 2014
- C19. \*D. Doran, S. Gokhale, and K. Konduri. "Participatory Paradigms: Promises and Challenges for Urban Transportation", Proc. of The 2014 Annual Meeting Compendium of Papers (Online and DVD format), Washington, D.C., Jan. 2014
- C20. D. Doran, S. Gokhale, and A. Dagnino. "Human Sensing for Smart Cities", Proc. of ACM/IEEE Intl. Conference on Advances in Social Network Analysis and Mining, pp. 1323-1329, Niagara Falls, Canada, Aug. 2013

- C21. D. Doran, K. Morillo, and S. Gokhale. "A Comparison of Web Robot and Human Requests", Proc. of ACM/IEEE Intl. Conference on Advances in Social Network Analysis and Mining, pp.1374-1380, Niagara Falls, Canada, Aug. 2013
- C22. D. Doran, H. Alzhami, and S. Gokhale. "Triads, Transitivity, and Social Effects in User Interactions on Facebook", Proc. of IEEE Intl. Conference on Computational Aspects of Social Networks, pp. 68-73, Fargo, ND, Aug. 2013
- C23. D. Doran, S. Gokhale, and A. Dagnino. "Understanding Common Perceptions in Online Social Media", Proc. of Intl. Conference on Software Engineering and Knowledge Engineering, pp. 107-112, Boston, MA, July 2013 (Accept Rate: 29%) (Best Paper Top 3 Award)
- C24. B. Lim, D. Doran, V. Mendiratta, M. Rodriguez, and D. Klabjan. "Social Capital for Economic Development: Application of Time Series Cluster Analysis on Personal Network Structures", Intl. Conf. on the Analysis of Mobile Phone Datasets: Mobile Phone Data for Development Book, pp. 97-104, Cambridge, MA, May 2013
- C25. M. Rodriguez, V. Mendiratta, B. Lim, D. Doran, and D. Klabjan. "Interactive Visualization of Cellphone Network Data Using D3: The Case of Ivory Coast", Intl. Conf. on the Analysis of Mobile Phone Datasets and Networks: Mobile Phone Data for Development Book, pp. 303-308, Cambridge, MA, May 2013
- C26. D. Doran and S. Gokhale. "Detecting Web Robots Using Resource Request Patterns", Proc. of IEEE Intl. Conference on Machine Learning and Applications, pp. 7-12, Boca Raton, FL, Dec. 2012
- C27. D. Doran, V. Mendiratta, C. Phadke, and H. Uzunalioglu. "The Importance of Outlier Relationships in Mobile Call Graphs", Proc. Of IEEE Intl. Conference on Machine Learning and Applications, pp. 24-29, Boca Raton, FL, Dec. 2012 (Best Paper Award)
- C28. D. Doran and S. Gokhale. "Long Range Dependence (LRD) in the Arrival Process of Web Robots", Proc. Of Intl. Conference on Intelligent Network and Computing, pp. 176-180, New Delhi, India, Aug. 2012
- C29. D. Doran, S. Curley, and S. Gokhale. "How Social Network APIs Have Ended the Age of Privacy", Proc. Of Intl. Conference on Software Engineering and Knowledge Engineering, pp. 400-405, Redwood City, CA, July 2012 (Accept Rate: 27%)
- C30. K. Severin, C. Spinner, M. Calvo, D. Doran, and L. Fiondella. "Reliability and Performance Assessment of an Aviation Security Screening Checkpoint", Proc. of Reliability and Quality in Design Conference, pp. 364-368, Boston, MA, July 2012
- C31. D. Doran, V. Mendiratta, C. Phadke, and H. Uzunalioglu. "Examining the Social Decomposition of Mobile Call Graphs", Conference on the Analysis of Mobile Phone Datasets and Networks, pp. 86-88, Cambridge, MA, Oct. 2011
- C32. D. Doran, M. Tran, L. Fiondella, and S. Gokhale. "Architecture-based Reliability Analysis with Uncertain Parameters", Proc. of Intl. Conference on Software Engineering and Knowledge Engineering, pp. 629-634, Miami, FL, July 2011 (Accept Rate: 31%)
- C33. D. Doran and S. Gokhale. "Searching for Heavy-Tails in Web Robot Traffic", Proc. of IEEE Intl. Conference on Quantitative Evaluation of Systems, pp. 282-291, Williamsburg, VA, Sept. 2010

- C34. D. Doran, L. Lipsky, and S. Thopmson. "Cost-based Optimization of Buffer Size in M/G/1/N Systems Under Different Service-time Distributions", Proc. of IEEE Intl. Symposium on Network Computing and Applications, pp. 28-35, Cambridge, MA, July 2010 (Accept Rate: 27%) (Best Student Paper Nominee)
- C35. D. Doran and S. Gokhale. "Classifying Web Robot Traffic by K-Means Clustering", Proc. of Intl. Conference on Software Engineering and Knowledge Engineering, pp. 97-102, Boston, MA, July 2009
- C36. D. Doran and S. Gokhale. "Discovering New Trends in Web Robot Traffic through Functional Classification", Proc. of IEEE Intl. Symposium on Network Computing and Applications, pp. 275-278, Cambridge, MA, July 2008

## **Refereed Posters**

- P1. D. Doran, A. De la Rosa Algarin, and S. Gokhale. "Understanding User Triads on Facebook", Workshop on Information and Decision in Social Networks, Cambridge, MA, Nov. 2012
- P2. D. Doran, V. Mendiratta, C. Phadke, D. Kushnir, and H. Uzunalioglu. "Using Social Influence to Predict Subscriber Churn", Workshop on Information and Decision in Social Networks, Cambridge, MA, Nov. 2012
- P3. V. Mendiratta, D. Doran, C. Phadke, and H. Uzunalioglu. "Applying SNA Techniques to Telecom Subscriber Calling Data", INFORMS Conf. on Business Analytics & Op. Research, Huntington Beach, CA, Apr. 2012

#### **Refereed Abstracts**

- A1. <u>L. Balasuriya, S. Wijeratne, D. Doran, and A. Sheth. "Signals Revealing Street Gang Members on Twitter", 2016 ChASM workshop on Computational Approaches to Social Modeling, Seattle, WA, Nov. 2016</u>
- A2. M. Piekenbrock and D. Doran. "Exploring Information-Optimal Network Discretization for Dynamic Network Analysis", XXXVI SUNBELT Conference Book of Abstracts, pg. 262, Newport Beach, CA, Apr. 2016
- A3. \*D. Doran, N. Lownes, and S. Gokhale. "Flexible, Analytic Modeling of Airport Security Checkpoints", INFORMS Annual Meeting, Minneapolis, MN, Oct. 2013
- A4. \*L. Fiondella, D. Doran, and M. Accorsi. Performance and Reliability Assessment of Aviation Security Screening Checkpoints. In Proc. of National Security Innovation Competition, Apr. 2012

# **PATENTS**

- 1. D. Kushnir, A. Akyamac, V. Mendiratta, H. Uzunalioglu, D. Doran. "Root Cause Analysis for Service Degradation in Computer Networks, U.S. Patent #9424121, Granted 2016
- 2. V. Mendiratta, D. Doran, C. Phadke, H. Uzunalioglu, D. Kushnir. "Method and Apparatus for Deriving Composite Tie Metric For Edge Between Nodes of Telecommunication Call Graph", U.S. Patent #9159077, Granted 2015
- 3. C. Phadke, H. Uzunalioglu, V. Mendiratta, D. Kushnir, D. Doran. "System and Method for Generating Subscriber Churn Predictions", U.S. Patent #8804929, Granted 2015

## STUDENT MENTORING AND ADVISEMENT

#### **Current Graduate Student Advisees**

- Ning Xie (PhD)
- Lakshika Balasuriya (MS)
- Kyle Brown (MS)
- Matthew Maurice (MS)
- Matthew Piekenbrock (MS)
- Jace Robinson (MS)

## **Completed Graduate Students**

- Nathan Rude (MS, 2016). Job after WSU: Software Engineer at LexisNexis Special Services Intelligent Caching to Mitigate the Impact of Web Robots on Web Server Performance
- Samir Yelne (MS, 2016). Job after WSU: Data Scientist at Cisco Systems

  Measures of User Interactions, Conversations, and Attacks in a Crowdsourced Emotional Support System

### **Undergraduate Research Advisees and Independent Studies**

- 2017 Logan Rickert, Scott Duberstein, Ethan Wolfer, Luke Burnett
- 2016 Logan Rickert, Scott Duberstein, Ethan Wolfer
- 2015 Logan Rickert, Matthew Piekenbrock, Nripesh Trivedi, Scott Duberstein

#### Ph.D. Committee Memberships

- Sarasi Lalithsena, Wright State University, 2017 (In Progress)
- 2. Raghava Mutharaju, Wright State University, 2016

  Distributed Rule-Based Ontology Reasoning
- 3. Pavan Kampanipathi, Wright State University, 2016
  Personalized and Adaptive Semantic Information Filtering for Social Media

## M.S. Committee Memberships:

- 1. Sanjeev Bhatta, Wright State University, 2017 (In Progress)
  - Conditional Correlation Analysis
- 2. Siva Kumar, Wright State University, 2017 (In Progress)
  - Specificity in Taxonomic Entity Recommendation
- 3. Reihaneh Amini, Wright State University, 2016
- Crowdsourcing Ontology Alignment Benchmarks4. Kurtis Glendenning, Wright State University, 2015
  - Browser Based Visualization of Parameter Spaces for Big Data Using Client-Server Model
- 5. Jacob Ross, Wright State University, 2015
  - Features for Ranking Tweets Based on Credibility and Newsworthiness
- 6. Revathy Krishnamurthy, Wright State University, 2014 Geo-locating Social Media Users Using Wikipedia

## TEACHING EXPERIENCE

Wright State University, Dayton, OH (student evaluation out of 5 points are provided in [])

As Assistant Professor, Department of Computer Science & Engineering

- CS 2200 Discrete Structures and Their Algorithms, Sp. 17
- CS 3250/5250 Computational Methods for Data Analysis, Sm.15, Sp. 16 [4.59], Fa. 16 [4.42]\*

- CS 7210 Network Science, Sp. 15 [4.74], Sp. 16 [4.97]\*, Sp. 17
- CEG 4110/6110 Introduction to Software Engineering, Fa. 14 [4.69], Fa. 15 [4.46], Fa. 16 [4.59]

#### Eastern Connecticut State University, Willimantic, CT

As Adjunct Professor, Department of Computer Science

CSC 338 - LANs/MANs/Internetworks, Fa. 11

#### University of Connecticut, Storrs, CT

As Teaching Assistant, Department of Computer Science & Engineering

- CSE 5099 Computational Issues in Social Network Analysis, Fa. 12
- CSE 2012 Introduction to Software Engineering, Fa. 07, Sp. 08, Fa. 08, Sp. 09, Sp. 14
- CSE 4701 Principles of Databases, Fa. 07
- CSE 3504 Probabilistic Analysis of Computer Systems, Sp. 10, Sp. 11
- CSE 4099 Undergraduate Independent Study, Fa. 09, Sp. 10, Sp. 11, Fa. 12

# **SERVICE**

## **Research Community Service**

- Editorial Board Memberships:
  - Social Network Analysis and Mining
  - International Journal on Web Engineering and Technology
  - Journal of Software Networking

#### Conference Leadership:

o Review Process Improvement Chair, European Semantic Web Conference, 2017

#### • Technical Program Committees:

- o (ASONAM) ACM/IEEE Intl Conf. On Advances in Social Network Analysis & Mining, 2017
- o (EmSem) Emerging Semantics Workshop at ISWC, 2017
- o (SMC) IEEE Intl. Conference on Systems, Man, and Cybernetics, 2017
- o (SEKE) Intl. Conference on Software Engineering and Knowledge Engineering, 2017,16,16
- (ICISA) Intl. Conference on Information Science and Applications, 2017
- o (ICITCS) IEEE Intl. Conference on IT Convergence and Security, 2016, 15
- o (IJCAI) Intl. Joint Conference on Artificial Intelligence, 2016
- o (AAAI) AAAI Conference on Artificial Intelligence, 2015
- o (D++@ISWC) Diversity++ Workshop at International Semantic Web Conference, 2015
- o (ICCVIA) IEEE Intl. Conference on Computer Vision & Image Analysis, 2015
- o (ICCIS) Intl. Conference on Information Science and Security, 2015
- o (VisionNet) Intl. Symposium on Computer Vision and the Internet, 2015
- (HST) IEEE Intl. Conference on Technologies for Homeland Security, 2015
- (GSCIT) Global Summit on Computer & Information Technology, 2014

#### Journal Referee:

- Social Network Analysis and Mining
- Data Mining and Knowledge Discovery
- Computers & Security
- Computer Networks
- Journal of the American Society for Information Science and Technology

<sup>\*</sup> Indicates fewer than 8 responses

- Information Systems Frontiers
- International Journal on Web Engineering and Technology
- EURASIP Journal on Information Security
- Conference Referee (As non-TPC Member):
  - o (ECML/PKDD) European Conf. on ML and Principles and Practice of Knowledge Discovery, 2015
  - NSF Conference on Big Data and Urban Informatics
  - o (NetMob) Intl. Conference on the Scientific Analysis of Mobile Phone Datasets, 2015
  - o (CAMAD) Intl. Workshop on Modeling, Analysis, and Design of Comm. Links and Networks, 2012
  - o (SEKE) Intl. Conference on Software Engineering and Knowledge Engineering, 2010

#### **Professional Service**

- o Advisory Board Member, Teradata University Network, 2015 2016
- o Committee Member, TRB Aviation Security and Emergency Management, 2013 2016
- o Committee Member, Young Members Council of the TRB, 2013 2016
- Working Group Member, IEEE Recommended Practice on Software Reliability, 2013 2014

## **University Service**

- at Wright State University:
  - o Dean's Faculty Fellows Program, College of Eng. and Computer Science, 2016-17
  - o Graduate Studies Committee, Dept. of CSE, 2015-16; 2016-17
  - o Chair, Department Seminar Committee, Dept. of CSE, 2015-16
  - o Guest Lecturer, Summer Alumni College Event, 2015
  - o Speaker, Direct Admit Welcome Event, Dept. of CSE, 2015
  - Chair, Research & Scholarly Environment Committee, Dept. of CSE, 2014-15
  - Undergraduate Studies Committee, Dept. of CSE, 2014-15
- at the University of Connecticut:
  - o Graduate Student Senate
    - Officer and Executive Committee Member, 2010-12
    - Activities Director; Activities Committee Chair, 2010-12
    - At-Large Senator, 2012-14
    - Finance Committee, 2012-14
    - Public Relations Committee, 2010-11
  - Parking Appeals Committee, 2012
  - o Graduate Faculty Council, 2011
  - Student Technology Advisory Group, 2010-13

## INVITED TALKS AND POSTERS (EXCLUDING PEER-REVIEWED ACADEMIC CONFERENCES)

- 1. "A Deep Learning System for Web Robot Traffic Generation", 2016 Women in STEMM Leadership Institute Symposium, Dayton, OH, 2016
- 2. "EmojiNet: A Machine Readable Sense Inventory for Emoji", 2016 Wright Brothers Day, Wright State University, Dayton, OH, 2016
- 3. "A Unified Model for Knowledge Discovery from Geospatial Data", AFRL Big Data Surveillance Analytics Mini-Conference, Air Force Research Laboratories, WBAFB, OH, July 2016
- 4. "A Unified Model for Knowledge Discovery from Geospatial Data", AFRL Big Data Surveillance Analytics Mini-Conference, Wright State University, Dayton, OH, July 2016

- 5. "WAMI.Net: A Software Library for Geospatial Analysis", 2016 Southwestern Ohio Council for Research Education Graduate STEM Research Fair.
- 6. "Mitigating the Impact of Web Robot Traffic on Web Systems", 2016 Southwestern Ohio Council for Research Education Graduate STEM Research Fair.
- 7. "Web and Complex Systems Analysis @ Wright State University", WSU Faculty Speaker Series, Wright State Research Institute, Dayton, OH, October 2015
- 8. "What you can learn from YOUR Facebook Data", Summer Alumni School Lecture, Wright State University, Dayton, OH, August 2015
- 9. "What you can learn from YOUR Facebook Data", Dept. of CSE Open House, Wright State University, Dayton, OH, April 2015
- 10. "Protecting Web Servers From Web Robot Traffic", School of Electrical and Electronics Engineering and Computer Science Seminar, University of Pavia, Italy, November 2014
- 11. "Aviation 101: How to Get Involved and Make a Difference", Roundtable Participant (AV090 Committee Representative), The Transportation Research Board 93<sup>rd</sup> Annual Meeting, Washington, D.C., January 2014
- 12. "Mining Perceptions and Positions in Social Media", Robotics Seminar, ABB Corporate Research, Windsor, CT, November 2013
- 13. "Perceptions and Positions in Social Media", Computer Science and Information Systems Seminar, University of Massachusetts Dartmouth, Dartmouth, MA, November 2013
- 14. "Perceptions and Positions: Human Sensing via Social Media", Industrial Software Systems Seminar, ABB Corporate Research, Raleigh, NC, May 2013
- 15. "Complex Network Diagnosis: Ignoring Architecture to Identify Root Causes", Network Performance & Reliability Seminar, Bell Laboratories, Murray Hill, NJ, August 2012
- 16. "Activity Among Triads in Facebook", School of Engineering Student Tech Forum, University of Connecticut, Storrs, CT, May 2012
- 17. "Social Ties and Predicting Churn in Mobile Call Graphs", Network Performance & Reliability Seminar, Bell Laboratories, Murray Hill, NJ, August 2011
- 18. "Social Ties and Predicting Churn in Mobile Call Graphs", Mathematics and Operations Research Seminar, Bell Laboratories, Murray Hill, NJ, August 2011

## **PROFESSIONAL AFFILIATIONS**

Upsilon Pi Epsilon IEEE IEEE Communications Society
ACM ACM SIGWEB SIAM
TRB (Young Member)

# PROFESSIONAL DEVELOPMENT

## **Graduate Student Professional Development Certificate**

School of Engineering, University of Connecticut

A certificate awarded for completing a series of professional development seminars for graduate students. Topics included proposal writing, ethical issues, lecture preparation, networking, and presentation skills.

## **OTHER**

U.S. Citizen