

Curriculum Vitae – Hemant Purohit, Ph.D.

Department of Information Sciences & Technology, Volgenau School of Engineering
George Mason University (*Mason*), Fairfax, VA, USA
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ACADEMIC DEGREES

Computer Science & Engineering
Wright State University, USA
Ph.D. Supervisor: Dr. Amit Sheth Ph.D., 2015

Communication & Computer Engineering
The LNM Institute of Information Technology, India B. Tech., 2009

ACADEMIC POSITIONS

Tenure-track Assistant Professor 25th Aug 2015 – *present*
Department of Information Sciences & Technology

Faculty Member
Institute for Digital Innovation (Center for Advancing Human-Machine Partnership)
George Mason University, USA

INDUSTRIAL & EXTERNAL INSTITUTE POSITIONS

External Research Collaborator, Interaction Science and Disaster Maps Group Mar 2020 – June 2020
Pro @ Facebook Research, USA [*Visit during Provost Leave*]

Visiting Research Professor Jan 2020 – Feb 2020
Artificial Intelligence Institute, University of South Carolina, USA [*Visit during Provost Leave*]

Research Intern, Social Computing Group Jan 2013 – Apr 2013
Qatar Computing Research Institute, Qatar

Research Intern, Bing Data Science Group Jun 2012 – Aug 2012
Microsoft Research, USA

Research Intern, Human Language Technologies Group Jun 2011 – Aug 2011
IBM Research, India

Graduate Researcher, Social Semantic Web Group Sept 2009 – July 2015
Ohio Center of Excellence in Knowledge-enabled Computing (Kno.e.sis), USA

TEACHING EXPERIENCE

Course Designer and Instructor: [c.f. page 9 for detailed data on Teaching Ratings]

- Advanced Web Analytics using Semantics (AIT734)
- Information Representation, Processing, & Visualization (AIT664)
- Metadata Analytics for Big Data (AIT582)

Programs Served:

- Mason's graduate programs of PhD Information Technology, MS Applied Information Technology, and MS Data Analytics Engineering

RESEARCH — Interests

R1. Social Media Mining[Human-Centered Computing→*Collaborative & Social Computing*], **AD:** Realtime Web Intelligence
R2. Crisis Informatics[Applied Computing→*Computing in Government*], **AD:** Emergency Management and Smart Cities
R3. Semantic Text Analysis[Applied Computing→*Document Management & Text Processing*], **AD:** Fake Text Analysis for Cybersecurity

**Note. AD: Application Domain; R^[^]: ACM classification of research field R in superscript*

RESEARCH – Sponsored Projects

Summary: total 8 external grants, Mason share: ~\$2.24M, responsible share: ~\$0.75M, +New = award being setup

Grant	Org Code	Role	Start Date	End Date	Sponsor	Total Award Amount	Responsible Share
G1	+New	PI	9/1/20	8/31/23	Western Norway Research Institute & Research Council of Norway	20,000	20,000
G2	205153	PI	5/15/20	4/30/21	U.S.National Science Foundation	24,266	24,266
G3	205094	Senior Personnel	3/2/20	06/30/20	Center for Innovative Technology & Department of Homeland Security	199,325	8,650
G4	204567	PI	8/1/18	7/31/21	National Science Foundation	259,701	129,851
G5	204109	PI	9/1/17	5/31/20	National Science Foundation	174,965	174,965
G6	204187	Co-PI	8/15/17	7/31/20	National Science Foundation	299,292	149,646
G7	223046	PI	4/1/17	12/31/20	Western Norway Research Institute & Research Council of Norway	22,914	22,914
G8	203908	Co-PI	8/1/16	7/31/20	US Department of the Navy [Subcontract to Univ. of Maryland]	1,239,078	211,359
<i>Total</i>						<i>2,239,541</i>	<i>749,984</i>

[G1] INTPART: Transnational Partnership for Excellent Research and Education in Disruptive Technologies for a Resilient Future

- **Name of PIs & Co-PIs:** Hemant Purohit (Mason PI), Rajendra Akerkar (International Project PI, Western Norway Research Institute, Norway)
- **Sponsor:** Western Norway Research Institute & Research Council of Norway, Award Number: *New
- **Funded Amount:** \$20,000 (Mason share); **Dates:** 9/1/2020 – 8/31/2023

[G2] RAPID: Collaborative Research: Human-AI Teaming for Big Data Analytics to Enhance Response to the COVID-19 Pandemic

- **Name of PIs & Co-PIs:** Hemant Purohit (PI)
- **Sponsor:** National Science Foundation, Award Number: CMMI-2029719
- **Funded Amount:** \$24,266; **Dates:** 5/15/2020 – 4/30/2021

[G3] Research Team Commercial First Innovation TM a.k.a. Smart Community IoT Innovation (SCITI Labs)

- **Name of PIs & Co-PIs:** Brenda Bannan (PI), Julie (Co-PI), Hemant Purohit (Senior Personnel), Pamela Hudson Baker (Senior Personnel), Jung Yeon Park (Senior Personnel)
- **Sponsor:** Center for Innovative Technology & Department of Homeland Security, [Contract] Award Number: FS-20-014
- **Funded Amount:** \$199,325; **Dates:** 3/2/2020 – 6/30/2020

[G4] III: Summarizing Heterogeneous Crowdsourced & Web Streams Using Uncertain Concept Graphs

- **Name of PIs & Co-PIs:** Hemant Purohit (PI), Huzefa Rangwala (Co-PI)
- **Sponsor:** National Science Foundation, Award Number: IIS-1815459
- **Funded Amount:** \$259,701; **Dates:** 8/1/2018 – 7/31/2021

[G5] CRII:CHS: Mining Intentions on Social Media to Enhance Situational Awareness of Crisis Response Organizations

- **Name of PIs & Co-PIs:** Hemant Purohit (PI)
- **Sponsor:** National Science Foundation, Award Number: IIS-1657379
- **Funded Amount:** \$174,965; **Dates:** 9/1/2017 – 5/31/2020

[G6] EAGER: Social Media Participation as Indicator of Actors, Awareness, Attitudes, and Activities Related to STEM Education

- **Name of PIs & Co-PIs:** Aditya Johri (PI), Hemant Purohit (Co-PI)
- **Sponsor:** National Science Foundation, Award Number: DUE-1707837
- **Funded Amount:** \$299,292; **Dates:** 8/1/2017 – 7/31/2020

[G7] INTPART: Transnational Partnership for Excellent Research and Education in Big Data and Emergency Management

- **Name of PIs & Co-PIs:** Hemant Purohit (Mason PI), Rajendra Akerkar (International Project PI, Western Norway Research Institute, Norway)
- **Sponsor:** Western Norway Research Institute & Research Council of Norway, Award Number: INTPART Programme # 261685
- **Funded Amount:** \$22,980 (*Mason share*); **Dates:** 4/1/2017 – 12/31/2020

[G8] Believable Fake Scientific Document Generation by Exploring Data Semantics

- **Name of PIs & Co-PIs:** Sushil Jajodia (PI), Rajesh Ganesan (Co-PI), Hemant Purohit (Co-PI)
- **Sponsor:** Office of Naval Research, Award Number: N00014-16-1-2896

Funded Amount: \$1,239,078; **Dates:** 8/1/2016 – 7/31/2020

RESEARCH – Publications

Summary:

- *Total publications.* 6 book chapters, 13 journal Articles, 33 refereed conference proceeding papers, 14 refereed symposium & workshop papers, 1 patent
 - o *At Mason:* 5 book chapters, 10 journal Articles, 25 refereed conference proceeding papers, 10 refereed symposium & workshop papers
 - o 1 Best Paper Award 🏆 at the 17th IEEE/ACM International Conference on Web Intelligence
- *Metrics.* h-index: 14, i10-index: 20, Citations: 929 | Source: Google Scholar - <https://tinyurl.com/yajj4nyh>
 - o *At Mason:* h-index: 13, i10-index: 19, Citations: 757
- *Indicator for mentored research assistants:* *PhD, mMasters, vUndergraduate

I. EDITORIALY REVIEWED BOOK CHAPTERS

- B1. Purohit, H., & Peterson, S. (2020, in press). Social Media Mining for Disaster Management and Community Resilience. In *Big Data and Emergency Management*, R. Akerkar, & X. Song, Ed. Cham: Springer International Publishing.
- B2. Purohit, H., & *Pandey, R. (2019). Intent Mining for the Good, Bad & Ugly Use of Social Web: Concepts, Methods, and Challenges. In *Emerging Research Challenges and Opportunities in Computational Social Network Analysis and Mining*, N. Agarwal, N. Dokoohaki, & S. Tokdemir, Ed. Cham: Springer International Publishing. DOI: 10.1007/978-3-319-94105-9
- B3. Bannan, B., Dubrow, S., Dobbins, C., Zaccaro, S., Purohit, H., & uRana, M. (2019). Toward wearable devices for multiteam systems learning. In *Perspectives on Wearable Enhanced Learning (WELL)* (pp. 79-95). Springer, Cham.
- B4. Sheth, A., Purohit, H., Smith, G. A., Brunn, J., Jadhav, A., Kapanipathi, P., Lu, C., & Wang, W. (2018). Twitris: A System for Collective Social Intelligence. In: Reda Alhaji, Jon Rokne. *Encyclopedia of Social Network Analysis and Mining*, 2nd ed., Springer-Verlag New York, pp. 3212-3234.
- B5. Purohit, H., Dalal, M., Singh, P., Nissima, B., Moorthy, V., Vemuri, A., Krishnan, V., Khursheed, R., Balachandran, S., Kushwah, H., & Rajgaria, A. (2016). Empowering Crisis Response-Led Citizen Communities: Lessons Learned from JK Flood Relief.org Initiative. In C. Graham (Ed.), *Strategic Management and Leadership for Systems Development in Virtual Spaces* (pp. 270-292). [Other authors are digital volunteers, who created JK Flood Relief.org]

[Prior to joining Mason]


- B6. Sheth, A., Jadhav, A., Kapanipathi, P., Lu, C., Purohit, H., Smith, G. A., & Wang, W. (2014). Twitris: A system for collective social intelligence. In *Encyclopedia of Social Network Analysis and Mining*, 1st ed., 2240-2253, Springer New York.

II. PEER-REVIEWED JOURNAL ARTICLES

- J1. **Purohit, H.**, Castillo, C., & ***Pandey, R.** (2020). Ranking and grouping social media requests for emergency services using serviceability model. *Social Network Analysis and Mining*, 10(1), 1-17. DOI: 10.1007/s13278-020-0633-3 [Impact Factor: 1.61]
- J2. ***Karuna, P.**, **Purohit, H.**, Jajodia, S., Ganesan, R., & Uzuner, O. (2020, early access). Fake Document Generation for Cyber Deception by Manipulating Text Comprehensibility. *IEEE Systems Journal*. DOI: 10.1109/JSYST.2020.2980177 [Impact Factor: 4.46]
- J3. Song X., Zhang H., Akerkar R. A., Huang H., Guo S., Zhong L., Ji Y., Opdahl A. L., **Purohit H.**, Skupin A., Pottathil A. (2020, early access). Big Data and Emergency Management: Concepts, Methodologies, and Applications. *IEEE Transactions on Big Data*. DOI: 10.1109/TBDATA.2020.2972871 [Impact Factor: 5.67]
- J4. Chan, J. L., & **Purohit, H.** (2019). Challenges to transforming unconventional social media data into actionable knowledge for public health systems during disasters. *Disaster medicine and public health preparedness*, 1-8. DOI: 10.1017/dmp.2019.92 [Impact Factor: 1.03]
- J5. Moore, K., & **Purohit, H.** (2019). Discovering Requirements for the Technology Design to Support Disaster Resilience Analytics. *International Journal of Information Systems for Crisis Response and Management (IJISCRAM)*, 11(2), 20-37. DOI: 10.4018/IJISCRAM.2019070102
- J6. Stabile, B., Grant, A., **Purohit, H.**, & Harris, K. (2019). Sex, Lies, and Stereotypes: Gendered Implications of Fake News for Women in Politics. *Public Integrity*, 21(5), 491-502. DOI: 10.1080/10999922.2019.1626695
- J7. Stabile, B., Grant, A., **Purohit, H.**, & vRana, M. (2019). “She Lied”: Social construction, rape myth prevalence in social media, and sexual assault policy. *Sexuality, Gender & Policy*, 2(2), 80-96. DOI: 10.1002/sgp2.12011
- J8. ***Karuna, P.**, **Purohit, H.**, Ganesan, R., & Jajodia, S. (2018). Generating Hard to Comprehend Fake Documents for Defensive Cyber Deception. *IEEE Intelligent Systems*. DOI: 10.1109/MIS.2018.2877277 [Impact Factor: 5.01]
- J9. Malik, A., Johri, A., Handa, R., ***Karbasian, H.**, & **Purohit, H.** (2018). How social media supports hashtag activism through multivocality: A case study of #ILookLikeanEngineer. *First Monday*, 23(11). DOI: 10.5210/fm.v23i11.9181 [Impact Factor: 1.38]
- J10. **Purohit, H.**, Banerjee, T., Hampton, A., Shalin, V. L., Bhandutia, N., & Sheth, A. (2016). Gender-based violence in 140 characters or fewer: A #BigData case study of Twitter. *First Monday*, 21(1). DOI: 10.5210/fm.v21i1.6148 [Highlight of the January 2016 issue] [Impact Factor: 1.38]
- [Prior to joining Mason]
- J11. **Purohit, H.**, Hampton, A., Bhatt, S., Shalin, V. L., Sheth, A. P., & Flach, J. (2014). Identifying Seekers and Suppliers in Social Media Communities to Support Crisis Coordination. *Journal of Computer Supported Cooperative Work*, 23(4-6), 513-545, Springer. DOI: 10.1007/s10606-014-9209-y [Impact Factor: 3.00]
- J12. **Purohit, H.**, Castillo, C., Diaz, F., Sheth, A., & Meier, P. (2014). Emergency-relief coordination on social media: Automatically matching resource requests and offers. *First Monday*, 19(1). DOI: 10.5210/fm.v19i1.4848 [Highlight of the January 2014 issue] [Impact Factor: 1.38]
- J13. **Purohit, H.**, Hampton, A., Shalin, V. L., Sheth, A. P., Flach, J., & Bhatt, S. (2013). What Kind of #Communication is Twitter? Mining #Psycholinguistic Cues for Emergency Coordination. *Computers in Human Behavior*, 29(6), 2438-2447. DOI: 10.1016/j.chb.2013.05.007 [Selected in the expert watchlist of CDC’s Science Communication Digest for October-2013] [Impact Factor: 5.88]

III. PEER-REVIEWED CONFERENCE PAPERS

- C1. ***Krishnan, J.**, **Purohit, H.**, & Rangwala, H. (2020, to appear). Diversity-Based Generalization for Unsupervised Text Classification under Domain Shift. In *Proceedings of the 19th European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)*. [Acceptance=19%]

- C2. *Senarath, Y., & Purohit, H. (2020). Evaluating Semantic Feature Representations to Efficiently Detect Hate Intent on Social Media. In *Proceedings of the 14th IEEE International Conference on Semantic Computing (ICSC)* (pp. 199-202). IEEE.
- C3. *Pandey, R., Bannan, B., & Purohit, H. (2020). CitizenHelper-training: AI-infused System for Multimodal Analytics to assist Training Exercise Debriefs at Emergency Services. In *Proceedings of the 17th International Conference on Information Systems for Crisis Response & Management (ISCRAM)* (pp. 42-53).
- C4. *Pandey, R., Castillo, C., & Purohit, H. (2019). Modeling human annotation errors to design bias-aware systems for social stream processing. In *Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)* (pp. 374-377). IEEE. [Acceptance=29%]
- C5. *Rajabi, Z., Shehu, A., & Purohit, H. (2019). User Behavior Modelling for Fake Information Mitigation on Social Web. In *Proceedings of the 12th International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation (SBP-BRIMS)* (pp. 234-244). Springer. [Acceptance=38%]
- C6. Guo, X., Alipour-Fanid, A., Wu, L., Purohit, H., Chen, X., Zeng, K., & Zhao, L. (2019). Multi-stage Deep Classifier Cascades for Open World Recognition. In *Proceedings of the 28th ACM International Conference on Information and Knowledge Management (CIKM)* (pp. 179-188). ACM. [Acceptance=20%]
- C7. Purohit, H., Dubrow, S., & Bannan, B. (2019). Designing a Multimodal Analytics System to Improve Emergency Response Training. In *Proceedings of the 21st International Conference on Human-Computer Interaction (HCI)* (pp. 89-100). Springer. [Acceptance=25%]
- C8. *Pandey, R., mBahl, G., & Purohit, H. (2019). EMAssistant: A Learning Analytics System for Social and Web Data Filtering to Assist Trainees and Volunteers of Emergency Services. In *Proceedings of the 16th International Conference on Information Systems for Crisis Response And Management (ISCRAM)* (pp. 1151-1159). [Acceptance=59%]
- C9. Peterson, S., Stephens, K., Hughes, A., & Purohit, H. (2019). When Official Systems Overload: A Framework for Finding Social Media Calls for Help during Evacuations. In *Proceedings of the 16th International Conference on Information Systems for Crisis Response And Management (ISCRAM)* (pp. 867-875).
- C10. Chan, J. L., Nam, G., Marshall, A. G., & Purohit, H. (2019). Trends in Humanitarian Health Information during 2010 Haiti Earthquake: Motivation for Curating Domain Knowledge Base. In *Proceedings of the 16th International Conference on Information Systems for Crisis Response And Management (ISCRAM)* (pp. 1057-1069).
- C11. *Pandey, R., Purohit, H., Stabile, B., & Grant, A. (2018). Distributional Semantics Approach to Detect Intent in Twitter Conversations on Sexual Assaults. In *Proceedings of the 2018 IEEE/WIC/ACM International Conference on Web Intelligence (WI)* (pp. 270-277). IEEE. [Acceptance=28%] [ Best Paper Award]
- C12. Purohit, H., Castillo, C., Imran, M., & *Pandey, R. (2018). Ranking of social media alerts with workload bounds in emergency operation centers. In *Proceedings of the 2018 IEEE/WIC/ACM International Conference on Web Intelligence (WI)* (pp. 206-213). IEEE. [Acceptance=28%]
- C13. *Karbasian, H., Purohit, H., Handa, R., Malik, A., & Johri, A. (2018). Real-time inference of user types to assist with more inclusive and diverse social media activism campaigns. In *Proceedings of the 2018 AAAI/ACM Conference on AI, Ethics, and Society (AIES)* (pp. 171-177). [Acceptance=37%]
- C14. Purohit, H., Castillo, C., Imran, M., & *Pandey, R. (2018). Social-eoc: Serviceability model to rank social media requests for emergency operation centers. In *Proceedings of the 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)* (pp. 119-126). IEEE. [Acceptance=15%]
- C15. *Pandey, R., & Purohit, H. (2018). CitizenHelper-Adaptive: Expert-Augmented Streaming Analytics System for Emergency Services and Humanitarian Organizations. In *Proceedings of the 2018 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)* (pp. 630-633). IEEE.
- C16. *Pedrood, B., & Purohit, H. (2018). Mining help intent on twitter during disasters via transfer learning with sparse coding. In *Proceedings of the 11th International Conference on Social Computing, Behavioral-*

Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation (SBP-BRIMS) (pp. 141-153). Springer, Cham. [Acceptance=21%]

- C17. Johri, A., *Karbasian, H., Malik, A., Handa, R., & Purohit, H. (2018). How Diverse Users and Activities Trigger Connective Action via Social Media: Lessons from the Twitter Hashtag Campaign #ILookLikeAnEngineer. In *Proceedings of the 51st Hawaii International Conference on System Sciences (HICSS)* (pp. 2183-2192). [Acceptance=50%]
- C18. Johri, A., Heyman-Schrum, C., Ruiz, D., Malik, A., *Karbasian, H., Handa, R., & Purohit, H. (2018). *More Than an Engineer: Intersectional Self-Expressions in a Hashtag Activism Campaign for Engineering Diversity*. In *Proceedings of the 1st ACM SIGCAS Conference on Computing and Sustainable Societies (COMPASS)* (pp. 1-5). [Acceptance=29%]
- C19. Purohit, H., & Moore, K. (2018). The Digital Crow's Nest: A Framework for Proactive Disaster Informatics & Resilience by Open Source Intelligence. In *Proceedings of the 14th International Conference on Information Systems for Crisis Response and Management (ISCRAM)* (pp. 949-958).
- C20. Malik, A., Johri, A., Handa, R., *Karbasian, H., & Purohit, H. (2018). #EngineersWeek: Broadening our Understanding of Community Engagement through Analysis of Twitter Use during the National Engineers Week. In *Proceedings of 125th ASEE Annual Conference*.
- C21. Dubrow, S., Dobbins, C., Bannan, B., Zaccaro, S., Peixoto, N., Purohit, H., uRana, M., & Au, M. (2017). Using IoT sensors to enhance simulation and training in multiteam systems. In *Proceedings of the Interservice/Industry Training, Simulation and Education Conference (IITSEC) Published* (pp. 1-10).
- C22. *Karuna, P., uRana, M., & Purohit, H. (2017). CitizenHelper: A Streaming Analytics System to Mine Citizen and Web Data for Nonprofit Organizations. In *Proceedings of the 11th International AAI Conference on Weblogs and Social Media (ICWSM)* (pp. 729-730). AAAI.
- C23. Purohit, H., & J. Chan. (2017). Classifying User Types on Social Media to inform Who-What-Where Coordination during Crisis Response. In *Proceedings of the 14th International Conference on Information Systems for Crisis Response and Management (ISCRAM)* (pp. 656-665). [Acceptance=60%]
- C24. Hampton, A. J., Bhatt, S., Smith, A., Brunn, J., Purohit, H., Shalin, V., Flach, J. M., & Sheth, A. P. (2017). Constructing Synthetic Social Media Stimuli for an Emergency Preparedness Functional Exercise. In *Proceedings of the 14th International Conference on Information Systems for Crisis Response and Management (ISCRAM)* (pp. 181-189). [Acceptance=60%]
- C25. Purohit, H., Dong, G., Shalin, V., Thirunarayan, K., & Sheth, A. (2015). Intent Classification of Short-Text on Social Media. In *Proceedings of the 2015 IEEE International Conference on Smart City/SocialCom/SustainCom (SmartCity)* (pp. 222-228). IEEE. [Acceptance=25%]

[Prior to joining Mason]

- C26. Purohit, H., Ruan, Y., Fuhry, D., Parthasarathy, S., & Sheth, A. (2014). On Understanding Divergence of Online Social Group Discussion. In *Proceedings of the 8th International AAI Conference on Weblogs and Social Media (ICWSM)* (pp. 396-405). AAAI. [Acceptance=23%]
- C27. Purohit, H., Bhatt, S., Hampton, A., Shalin, V. L., Sheth, A. P., & Flach, J. (2014). With Whom to Coordinate, Why and How in the Ad-hoc Social Media Communities During Crisis Response. In *Proceedings of the 11th International Conference on Information Systems for Crisis Response and Management (ISCRAM)* (pp. 787-791). [Acceptance=57%]
- C28. Bhatt, S., Purohit, H., Hampton, A., Shalin, V.L., Sheth, A., & Flach, J. (2014). Assisting Coordination during Crisis: A Domain Ontology based Approach to Infer Resource Needs from Tweets. In *Proceedings of the 6th International Conference on Web Science (WebSci)* (pp. 297-298). ACM.
- C29. Purohit, H., & Sheth, A. (2013). Twitris v3: From Citizen Sensing to Analysis, Coordination and Action. In *Proceedings of the 7th International AAI Conference on Weblogs and Social Media (ICWSM)* (pp. 746-747). AAAI.
- C30. Purohit, H., Dow, A., Alonso, O., Duan, L., & Haas, K. (2012). User taglines: Alternative presentations of expertise and interest in social media. In *Proceedings of the first ASE International Conference on Social Informatics* (pp. 236-243). IEEE. [Acceptance=11%]

- C31. **Purohit, H.**, Ajmera, J., Joshi, S., Verma, A., & Sheth, A. P. (2012). Finding Influential Authors in Brand-Page Communities. In *Proceedings of the 6th International AAAI Conference on Weblogs and Social Media (ICWSM)* (pp. 551-554). AAAI.
- C32. Ruan, Y., **Purohit, H.**, Fuhry, D., Parthasarathy, S., & Sheth, A. (2012). Prediction of topic volume on twitter. In *Proceedings of the 4th International Conference on Web Science* (pp. 397-402). ACM. [Acceptance=27%]
- C33. Nagarajan, M., **Purohit, H.**, & Sheth, A. P. (2010, May). A Qualitative Examination of Topical Tweet and Retweet Practices. In *Proceedings of the 4th International AAAI Conference on Weblogs and Social Media (ICWSM)* (pp. 295-298). AAAI.

IV. PEER-REVIEWED SYMPOSIUM / WORKSHOP PAPERS

- W1. **Purohit, H.**, Kanagasabai, R., & *m*Deshpande, N. (2019). Towards Next Generation Knowledge Graphs for Disaster Management. In *Proceedings of the 2019 IEEE 13th International Conference on Semantic Computing (ICSC): Workshop on Semantic Machine Learning* (pp. 474-477). IEEE.
- W2. *m*Nalluru, G., *Pandey, R., & **Purohit, H.** (2019). Relevancy Classification of Multimodal Social Media Streams for Emergency Services. In *Proceedings of the 2019 IEEE International Conference on Smart Computing (SMARTCOMP): Workshop on Smart Service Systems* (pp. 121-125). IEEE.
- W3. *m*Nalluru, G., *Pandey, R., & **Purohit, H.** (2019). Classifying Relevant Social Media Posts During Disasters Using Ensemble of Domain-agnostic and Domain-specific Word Embeddings. In *the 2019 AAAI Fall Symposium on Artificial Intelligence for Social Good*. *arXiv preprint arXiv:1911.05165*.
- W4. *Pandey, R., & **Purohit, H.** (2018). Generic Architecture of a Social Media-driven Intervention Support System for Smart Cities. In *Proceedings of the Workshop Program of the 19th International Conference on Distributed Computing and Networking* (pp. 1-6). IEEE.
- W5. *Karuna, P., **Purohit, H.**, Uzuner, O., Jajodia, S., & Ganesan, R. (2018). Enhancing Cohesion and Coherence of Fake Text to Improve Believability for Deceiving Cyber Attackers. In *Proceedings of the First International Workshop on Language Cognition and Computational Models* (pp. 31-40).
- W6. **Purohit, H.**, Nannapaneni, S., Dubey, A., *Karuna, P., & Biswas, G. (2018). Structured Summarization of Social Web for Smart Emergency Services by Uncertain Concept Graph. In *2018 IEEE International Science of Smart City Operations and Platforms Engineering in Partnership with Global City Teams Challenge (SCOPE-GCTC)* (pp. 30-35). IEEE.
- W7. *Pandey, R., **Purohit, H.**, Chan, J., & Johri, A. (2018). AI for Trustworthiness! Credible User Identification on Social Web for Disaster Response Agencies. In *2018 AAAI Fall Symposium on Artificial Intelligence in Government and Public Sector*. *arXiv preprint arXiv:1810.01013*.
- W8. **Purohit, H.**, Vedula, N., Thirunarayan, K., & Parthasarathy, S. (2018). Modeling Transportation Uncertainty in Matching Help Seekers and Suppliers during Disasters. In *First Workshop on Intelligent Transportation Informatics at the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*.
- W9. **Purohit, H.**, Stabile, B., Grant, A., & *Pandey, R. (2018). Modeling Policy-Relevant Intent Related to Gender Violence Myths on Social Media using Social Construction Theory. In *International Conference on Computational Social Science (IC2S2)*.
- W10. *Karuna, P., **Purohit, H.**, Stabile, B., & Hattery, A. (2017). On the Dynamics of Local to Global Campaigns for Curbing Gender-based Violence. In *Online Proceedings of the 2017 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling and Simulation (SBP-BRIMS)*. [Prior to joining Mason]
- W11. Roy Chowdhury, S., **Purohit, H.**, & Imran, M. (2015). D-sieve: a Novel Data Processing Engine for Efficient Handling of Crises-Related Social Messages. In *Proceedings of the 24th International Conference on World Wide Web* (pp. 1227-1232). ACM.
- W12. Clark, T., Keßler, C., & **Purohit, H.** (2015). Feasibility of Information Interoperability in the Humanitarian Domain. In *2015 AAAI Spring Symposium Series*.

- W13. **Purohit, H.**, Hampton, A., Shalin, V. L., Sheth, A. P., & Flach, J. M. (2012). Framework for the analysis of coordination in crisis response. In *Proceedings of the CSCW 2012: Workshop on Collaboration and Crisis Informatics* (pp. 42-46).
- W14. **Purohit, H.**, Ruan, Y., Joshi, A., Parthasarathy, S., & Sheth, A. (2011, March). Understanding user-community engagement by multi-faceted features: A case study on twitter. In *WWW 2011 Workshop on Social Media Engagement (SoME)*.

V. PATENTS

- P1. **Purohit, H.**, Dow, P. A., Duan, L., & Alonso, O. (2018). Derivation and presentation of expertise summaries and interests for users. U.S. Patent 9,959,579. Washington DC: U.S. PTO. (*with Microsoft*)

VI. SYMPOSIUM/WORKSHOP COMMITTEE PROCEEDINGS & REPORTS

- E1. Rajaraman, K., Morshed, A., & **Purohit, H.** (2017). *Proceedings of the IJCAI Workshop on Semantic Machine Learning (SML 2017) — co-located with 26th International Joint Conference on Artificial Intelligence (IJCAI 2017)*, Melbourne, Australia, August 20, 2017.
- E2. Rajaraman, K., Morshed, A., & **Purohit, H.** (2016). *Proceedings of the IJCAI Workshop on Semantic Machine Learning (SML 2016) — co-located with 25th International Joint Conference on Artificial Intelligence (IJCAI 2016)*, New York, USA, July 10, 2016.
- E3. Agarwal, N., Andrist, S., Bohus, D., Fang, F., Fenstermacher, L., Kagal, L., Kido, T., Kiekintveld, C., Lawless, W. F., Liu, H., McCallum, A., **Purohit, H.**, Seneviratne, O., Takadama, K., & Taylor, G. (2015). Reports on the 2015 AAAI Spring Symposium Series. *AI Magazine*, 36(3), 113-119.
<https://doi.org/10.1609/aimag.v36i3.2608>

RESEARCH – Invited Presentations (*excluding peer-reviewed conference paper talks*)

1. “How Can STEM Empower You for Social Good? – Designing Tools for Future Community Challenges”, in *Medlife NoVA STEM Speaker Series for Fairfax County Public Schools*, December 2019
2. “Human-AI Collaboration for Next-Generation Emergency Services”, in *Facebook Research’s Crisis Informatics Workshop*, October 2019
3. “Improving First Responder Training using Advanced IoT Sensing based Technologies for Active Shooting Incidents,” in *Public Safety Super-Cluster Session at the NIST GCTC Smart and Secure Cities and Communities Challenge Expo*, Washington DC, July 2019 [*with Dr. Brenda Bannan and David Ihrie*]
4. “Human-AI Collaboration to Enhance Social Media Response of Emergency Services,” in the *Invited Session of Social Media in Crisis Management in the Track on Humanitarian Operations and Crisis Management at the 30th Annual Conference of Production and Operations Management Society (POMS)*, May 2019
5. “Human-AI Collaboration Approach to Assist Emergency Services,” in *the Workshop on Interaction between Practitioners and Researchers, the 16th International Conference on Information Systems for Crisis Response and Management*, May 2019
6. “A Human-AI Collaboration Approach to Enhance Online Public Services of Smart Cities,” in *Humanity-Centered Design Seminar Series*, George Mason University, November 2018
7. “Social Media & Web Mining for Public Services Of Smart Cities,” in *Data Science Technology Exchange Series at the Analytics Center of Excellence at U.S. Social Security Administration*, August 2018
8. “Mining Intent for Community Resilience”, *Left of Boom IV Conference at San Diego State University*, May 2018
9. “Mining Big Social Data for Disaster Informatics”, in *Computer Science Seminar Series at Virginia Tech*, December 2017
10. “Fairfax County Cluster: SMART Emergency, Medical and First Response Multi-team Systems”, in *Public Safety session at NIST Global City Team Challenge (GCTC) Expo*, October 2017 [*with Dr. Brenda Bannan*]

11. “Mining Social & Web Data for Social Impact Organizations”, in *the Invited Panel at the Big Data and Analytics Committee Meeting, Northern Virginia Technical Council*, January 2017
12. “Mining Social Data for Public Behaviors to Improve Absorptive Capacity of Organizations for Decision Support”, in *Computational Social Science Fall Seminar Series at the Center for Social Complexity*, George Mason University, October 2016
13. “SoMeC: Social Media Coordination for Disaster Management and Humanitarian Organizations”, in *the Invited fellowship talks at the ITU Telecom World Young Innovator Fellow Program, International Telecom Union - United Nations ICT Agency, Budapest*, October 2015
14. “Big Data Innovation for Social Impact”, *Keynote talk at the International Congress on Information and Communication Technology, Computer Society of India and ACM Udaipur Chapter, India*, October 2015
15. “Social Media-driven Coordination of Tourism Marketplace”, *at the North Carolina State University Workshop on IT for Sustainable Development*, May 2014
16. “Leveraging Social Media and Web of Data to Assist Crisis Response Coordination”, *Tutorial at the 2014 SIAM International Conference on Data Mining (SDM-14)*, April 2014
17. “Leveraging Social Media Communities to Assist Crisis Coordination”, in *the Ignite talks at the International Conference of CrisisMappers, United Nations Nairobi*, November 2013
18. “Crisis Mapping, Citizen Sensing, and Social Media Analytics”, *Tutorial at the 2013 AAAI International Conference on Weblogs and Social Media (ICWSM-13)*, July 2013

TEACHING

I. COURSE CREATION & TEACHING

- *Courses Created*: Advanced Web Analytics using Semantics (AIT734), Information Representation, Processing, & Visualization (AIT664), Metadata Analytics for Big Data (AIT582)
 - o Serving Mason’s graduate programs of MS in Applied Information Technology (*MS AIT*), MS in Data Analytics Engineering (*MS DAEN*), and PhD in Information Technology (*PhD IT*)

Table 1. Summary of teaching performance rating [Department Mean rating in brackets, out of 5.0]

Term	Course Number	Course Title	No. of Students (responded)	Overall Instructor Rating	Overall Course Rating
2019 Fall	AIT 664	Information: Representation, Processing and Visualization	25 (20)	4.65 [4.31]	4.55 [4.01]
2019 Spring	AIT 734	Advanced Web Analytics Using Semantics	3 (3)	5.0 [4.35]	5.0 [3.95]
2019 Spring	AIT 664	Information: Representation, Processing and Visualization	26 (21)	4.38 [4.35]	3.71 [3.95]
2018 Spring	AIT 734	Advanced Web Analytics Using Semantics	5 (5)	5.0 [4.37]	5.0 [3.95]
2018 Spring	AIT 664	Information: Representation, Processing and Visualization	23 (19)	4.68 [4.37]	4.47 [3.95]
2017 Fall	AIT 582	Applications of Metadata for Complex Big Data Problems	25 (21)	4.43 [4.23]	4.19 [3.81]
2017 Spring	AIT 690	Information Processing: Representation, Mining & Visualization	26 (23)	4.57 [4.30]	4.30 [3.78]
2016 Fall	AIT582	Applications of Metadata in Complex Big Data Problems	16 (16)	4.56 [4.20]	4.31 [3.77]
2016 Spring	AIT582	Applications of Metadata in Complex Big Data Problems	24 (23)	4.35 [4.30]	4.23 [3.79]

II. MENTORING & SUPERVISION

<i>Graduated Students - Advisees</i>	<i>Graduation Term</i>	<i>Dissertation Title</i>
1. Dr. Prakruthi Karuna [Current: Research Scientist, Perspecta]	Full-time PhD IT, Summer 2019	Manipulating Comprehensibility of Text: An Automated Approach to Generate Deceptive Documents for Cyber Defense
2. Dr. Habib Karbasian (co-advisor) [primary advisor: Dr. Aditya Johri]	Full-time PhD IT, Spring 2020	Real-time Analytics for Resource Mobilization in Engineering Diversity Hashtag Campaigns
3. Ganesh Nalluru [Current: Data Scientist, Blend360]	MS DAEN, Spring 2020	NA [contributed to NSF III project (G4) and 2 publications]
4. Sharan Banola [Current: Senior Data Scientist, RiskSpan]	MS DAEN, Summer 2018	NA [contributed to NSF CHS project (G5), and 1 publication]
5. Yogen Chaudhary [Current: Senior Data Scientist, Comscore]	MS CS, Summer 2018	NA [contributed to CitizenHelper tool design for NSF CHS project (G5)]
6. Voravan Charmsawat [Current: Senior Level Systems Engineer, Google via Qualitest]	MS DAEN, Spring 2018	NA [contributed to CitizenHelper tool design for NSF CHS project (G5)]
7. [*OSCAR Mentee] Mohammad Rana [Current: Senior Associate Software Engineer, Capital One]	BS IT, Spring 2018	NA [contributed to NSF CHS project (G5) and 3 publications]

*OSCAR program: The Mason's flagship program for the inclusion of undergraduates in research

• Graduated Students - Dissertation Committee Member

1. Dr. Qingzhe Li, [primary advisor: Dr. Liang Zhao]; PhD IT, Summer 2020; *Dissertation title:* Interpretable Dynamic Feature Dependencies Modeling, Mining, and Optimization On Multivariate Time Series Data
2. Dr. Hieu-Trung Le [primary advisor: Dr. Aditya Johri], PhD IT, Summer 2019; *Dissertation title:* Meeting Cybersecurity Education Challenges: A Data Analytics Approach for Continuous Learning
3. Dr. John Situ [primary advisor: Dr. Rajesh Ganesan], PhD SEOR - Systems Engineering and Operations Research, Fall 2018; *Dissertation title:* An Approximate Dynamic Programming Approach to Analyzing Military Personnel End-Strength
4. Dr. Omaira Almatrafi, [primary advisor: Dr. Aditya Johri], PhD IT, Fall 2018; *Dissertation title:* Analyzing MOOC Forums: Developing Models to Support Instructors' Monitoring of Learners' Posts
5. Dr. Azad Naik [primary advisor: Dr. Huzefa Rangwala], PhD CS, Spring 2017; *Dissertation title:* Hierarchical Classification with Rare Categories and Inconsistencies
6. Dr. Alex V. Mbaziira, [primary advisor: Dr. Jim Jones], PhD IT; *Dissertation title:* Detecting and Analyzing Cybercrime in Text-based Communication of Cybercriminal Networks Through Computational Linguistic and Psycholinguistic Feature Modeling
7. Dr. Ehab Abozinadah, [primary advisor: Dr. Jim Jones], PhD IT; *Dissertation title:* Detecting Abusive Arabic Language Twitter Accounts using a Multidimensional Analysis Model

• Current Students - Advisees

1. Rahul Pandey; Full-time PhD IT, 3rd year; *Dissertation Topic:* Modeling Human Errors for Human-AI Collaboration in Active Learning based Stream Processing Systems
2. Jessup Cooper; Part-time PhD IT, 2nd year; *Dissertation Topic:* Algorithmic Biases in Summarization for Social Media
3. Yajas Senarath; Full-time PhD IT, 2nd year; *Dissertation Topic:* Cross-lingual Classification for Intentional Behavior
4. Jitin Krishnan (co-advisor); [primary advisor: Dr. Huzefa Rangwala]; Full-time PhD CS, passed Comprehensive Exam; *Dissertation Topic:* Unsupervised and Interpretable Domain Adaptation for Semantic Text Classification

• Current Students - Dissertation Committee Member

1. Xiaojie Guo [primary advisor: Dr. Liang Zhao]; PhD IT
2. Kahyun Lee [primary advisor: Dr. Ozlem Uzuner]; PhD IT
3. Rashaq Otunba [primary advisor: Dr. Jessica Lin]; PhD IT
4. Ali Seyedmazloom [primary advisor: Dr. Rajesh Ganesan]; PhD IT
5. Junxiang Wang [primary advisor: Dr. Liang Zhao]; PhD IT

SERVICE

I. PROFESSIONAL SOCIETY SERVICE

- **Organizing Committee**
 - Local Co-Chair, the 28th ACM Int'l Conference on Knowledge Discovery & Data Mining (KDD), 2022
 - Program Co-Chair, the 19th IEEE/WIC/ACM Int'l Conference on Web Intelligence (WI), 2020
 - Track Co-Chair, AI Systems for Crisis and Risks track, the 17th Int'l Conference on Information Systems for Crisis Response and Management (ISCRAM), 2020
 - PhD Symposium Co-Chair, ACM Int'l Conference on Web Science (WebSci), 2020
 - Co-Chair, Semantic Machine Learning workshop series at the IEEE Int'l Conference on Semantic Computing (ICSC), 2019 & 2020
 - Co-Chair, NSF Convergence Accelerator Planning Symposium on AI and Disaster Management, 2020
 - Track Chair – Web of People, the 18th IEEE/WIC/ACM Int'l Conference on Web Intelligence (WI), 2019
 - Track Co-Chair, Intelligent and Semantic Web Systems track, the 16th Int'l Conference on Information Systems for Crisis Response and Management (ISCRAM), 2019
 - Publicity Co-chair, the 12th Int'l Conference on Social Computing, Behavioral-Cultural Modeling, and Prediction (SBP-BRiMS), 2019
 - Publicity Co-chair, the 5th IEEE Int'l Conference on Smart Computing (SMARTCOMP), 2019
 - Workshop Co-chair, the 16th Int'l Conference on Information Systems for Crisis Response & Management, 2019
 - Co-Chair, AAAI Fall Symposium on AI for Social Good, 2019 & 2020
 - Co-Chair, Semantic Machine Learning workshop series at the Int'l Joint Conference on Artificial Intelligence (IJCAI) 2017 & 2016
 - Co-Chair, AAAI Spring Symposium on Structured Data for Humanitarian Technologies, 2015
- **Reviewing**
 - Editorial Board Member, Elsevier International Journal of Information Processing & Management
 - Panel Reviewer, U.S. National Science Foundation (NSF)
 - Guest Editor, IEEE Internet Computing Special Issue on Cyber Social Health
 - Coordinating Guest Editor, Information Systems Frontiers Journal
 - Reviewer, IEEE Transactions on Computational Social Systems Journal
 - Reviewer, IEEE Intelligent Systems Journal
 - Reviewer, ACM Transactions on the Web Journal
 - Reviewer, ACM Transactions on Internet Technology Journal
 - Reviewer, ACM Transactions on Social Computing Journal
 - Reviewer, ACM Transactions on Management Information Systems Journal
 - Reviewer, ACM Transactions on Knowledge Discovery from Data Journal
 - Reviewer, Springer Social Network Analysis and Mining Journal
 - Reviewer, Springer Information Systems Frontiers Journal
 - Reviewer, Elsevier International Journal of Human-Computer Studies
 - Reviewer, Elsevier Journal of Online Social Networks and Media
 - Reviewer, Elsevier International Journal of Disaster Risk Reduction
 - Reviewer, Cambridge Disaster Medicine and Public Health Preparedness Journal
 - Reviewer, Behavior and Technology Journal
 - Reviewer, First Monday Journal
 - Reviewer, Int'l Journal of Human-Computer Interaction
- **Program Committee Member**
 - AAAI Int'l Conference on Weblogs & Social Media (ICWSM), since 2015 (Senior Member from 2020)
 - ACM Int'l Web Conference (formerly WWW), since 2016

- IEEE/ACM Int'l Conference on Advances in Social Network Analysis & Mining (ASONAM), since 2019
- IEEE/WIC/ACM Int'l Conference on Web Intelligence (WI), since 2019
- IEEE Int'l Conference on Big Data, since 2016
- ACM Int'l Conference on Computer Supported Cooperative Work & Social Computing (CSCW), since 2016
- Int'l Conference on Information Systems for Crisis Response & Management (ISCRAM), since 2015
- Int'l Conference on Social Computing, Behavioral-Cultural Modeling & Prediction and Behavior Representation in Modeling & Simulation (SBP-BRiMS), since 2016
- Int'l Conference on Social Informatics (SocInfo), since 2015
- **Professional Society Member**
 - Association for the Advancement of Artificial Intelligence (AAAI)
 - Association for Computing Machinery (ACM)
 - Institute of Electrical and Electronics Engineers (IEEE)
 - Information Systems for Crisis Response and Management (ISCRAM)

II. UNIVERSITY SERVICE AT MASON

- Member of Review Committee for Volgenau School of Engineering & College of Science Seed Grants, 2020
- Teaching Review assessment for BS IT courses, 2020 & 2019
- Member of Information Sciences & Technology (IST) department's Graduate Committee, since 2016
- Student advising services for Ph.D. IT (IST concentration) program, since 2016
- PhD IT Qualifier Exam preparation and evaluation for the Cyber-Human Systems topic, since 2018
- Member of MS AIT program re-design task force, 2016
- Member of Grade Appeal Committee, 2016 & 2017
- Faculty Advisor, Mason's Society of Data Analytics Engineers, 2016-2019
- Judge for student competitions for the annual GIS Day of Mason College of Science, 2018
- Volgenau Tenure-track/Tenured Faculty Search Committee member, 2016-2018

AWARDS & HONORS

- Invited Presenter, Crisis Informatics Workshop, Facebook Research, 2019
- Best Paper Award at the 17th IEEE/WIC/ACM Int'l Conference on Web Intelligence, 2018
- George Mason University's Teaching Excellence Award Nominee, 2018
- Executive Committee Member of the Public Safety Super Cluster of NIST Global City Team Challenge and Smart & Connected Communities initiative, since 2017
- Invited member of the subcommittee *Social Media Working Group for Emergency Services & Disaster Management* of DHS Science & Technology Director, since 2016
- George Mason University's Career Connection Faculty Award Nominee, 2017
- Outstanding Ph.D. Student Award, Computer Science & Engineering, Wright State University, 2015
- ITU Telecom World Young Innovator 2014 award from United Nations agency on Information & Communication Technology, 2014
- Outstanding Ph.D. Student Award, Computer Science & Engineering, Wright State University, 2014
- Travel Fellowship Award from ACM Int'l Conference on Web Science, 2014
- Travel Fellowship Award from SIAM Int'l Conference on Data Mining, 2014
- Travel Fellowship Award from AAAI Int'l Conference on Weblogs and Social Media, 2014
- Google, USAID, ICT4Peace, & CrisisMappers fellow for ICCM-2013 at United Nations Nairobi, 2013
- Travel Fellowship Award from AAAI Int'l Conference on Weblogs and Social Media 2013
- Graduate Student Fellowship for NSF Social-Computational Systems Doctoral Consortium, 2013
- Professional Development Grant recipient, Graduate School Assembly, Wright State University, 2012