VIVEK K. SINGH

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PROFILE

I am a Human-centered data scientist who (a) builds AI for social good, and (b) studies human aspects (e.g., fairness, privacy) of algorithms. Using large-scale human data, I audit existing algorithms and design new algorithms for improving individual and societal well-being. The work so far has resulted in 20+ journal articles, 2100+ citations, and $1.25 Million+ in grant funding.

APPOINTMENTS

RUTGERS UNIVERSITY   **New Brunswick, NJ**

Associate Professor (with tenure), Department of Library and Information Science (LIS).   **Jul 2020- current**
Member of Graduate Faculty, Department of Electrical and Computer Engineering (ECE).
Associate Member of Graduate Faculty, Department of Computer Science (CS).
Director, Behavioral Informatics Lab.
Assistant Professor Department of Library and Information Science (LIS).   *Sep 2014- Jun 2020*

- Research Interests: Computational Social Science, Multimedia Information Systems, Data Analytics.
- Teaching Areas: Data Analytics, Social Media, Social Informatics, and Foundations of Data Science.

MASSACHUSSETS INSTITUTE OF TECHNOLOGY   **Cambridge, MA**

Visiting Professor, Media Lab   **Sep 2014 – Aug 2018**
Research Affiliate, Media Lab   **Mar 2019 - Mar 2020**

- This was a 5% time unpaid appointment to allow for collaborative research on understanding human behavior using social, behavioral, 'big' data.

PROFESSIONAL PREPARATION

MASSACHUSSETS INSTITUTE OF TECHNOLOGY   **Cambridge, MA**

Post-Doctoral Associate, Human Dynamics Group, MIT Media Lab   **Sep 2012-Aug 2014**

- Research Focus: Understanding human behavior using social, behavioral, 'big' data.
  (Mentor: Professor Alex 'Sandy' Pentland)
- Research Interests: Social Reality Mining, Computational Social Science, Personal Data Analytics.

UNIVERSITY OF CALIFORNIA, IRVINE   **Irvine, CA**

Ph.D., Computer Science, Donald Bren School of Information and Computer Science,   **2007-2012**

- Thesis Topic: "Personalized Situation Recognition" (Advisor: Professor Ramesh Jain)
- Research Interests: Personalized Decision Systems, Multimedia Systems, Social Media.

NATIONAL UNIVERSITY OF SINGAPORE   **Singapore**

Master of Computing, Computer Science   **2003-2005**

- Fully sponsored (tuition, room, and board) for undergraduate studies under the Singapore Airlines- Neptune Orient Lines scholarship. (One of ~30 candidates selected from over 8,000 applicants nation-wide in India).

AWARDS AND ACHIEVEMENTS

- ***ASIS&T SIG of the Year 2018-2019***. Won by SIG-Social Media. I was the *Chair-Elect* during this period.
- ***Honorable Mention*** (Social Integration category), [The Data For Refugees Challenge](), which aimed to present solutions for the problems of Syrian refugees in Turkey. Organized by Türk Telekom, Boğaziçi University and TÜBİTAK, with support of UNICEF, UNHCR and the International Organization for Migration, 2018.
- ***Distinguished Achievement in Research*** Award, Department of Library and Information Science, Rutgers University, 2015.
- Selected as a "**Rising Star**" speaker by ACM SIG Multimedia (one out of 12 selected worldwide- details [here]()), 2015.
- ***1st prize*** in ***Datathon*** on ***"Big Data for Social Good"*** organized by O$_2$, MIT, Telefonica and Open Data Institute, at Campus Party, London, Sep 2013.
- Selected as an *"Emerging Leader in Multimedia Research",* by *IBM Research Labs, NY.* One of 10 selected world-wide in 2009.
- ***Best Paper Award*** at ACM Workshop on Social Media (WSM 2009) co-located with ACM Multimedia Conference.
- ***Best Student Paper*** at IEEE Workshop on Situation Management (SIMA 2009), co-located with IEEE Military Communications conference.

RESEARCH GRANTS

Total Funding: Over $1.25 Million.
EXTERNAL: FUNDED

- National Science Foundation, RAPID: Countering Language Biases in COVID-19 Search Auto-Completes, Role: PI, Co-PI: Pamela Valera, 2020-2021. $198,985.00.
- National Science Foundation, RAPID: Privacy-Preserving Crowdsensing of COVID-19 and its Sociological and Epidemiological Implications, Role: Co-PI, PI: Jaideep Vaidya, 2020-2021. $199,597.00.
- National Science Foundation, EAGER: SaTC: Early-Stage Interdisciplinary Collaboration: Fair and Accurate Information Quality Assessment Algorithm, Role: PI, Co-PI: Lauren Feldman, 2019-2021. $315,946.00. (including Research Experience for Undergraduates supplement)
- Google Research Cloud Credit, Rutgers Wellness Study, Role: PI, Co-PIs: Vince Silenzio, Sara Pixley, Chidansh Bhatt, 2020-2021. $7,500.
- National Science Foundation, Student Travel Support for the 26th ACM International Conference on Multimedia 2018 (ACM MM 2018), Role: (Single) PI, 2018-2019. $15,543.00.
- National Science Foundation, CRII: CHS: Cyberbullying Detection Using Content and Social Network Analysis, Role: (Single) PI, 2015-2019. $188,348.00. (including Research Experience for Undergraduates supplement)
- Google Research Award, Predicting Search Behavior Using Physical and Online Explorations, Role: Co-PI, PI: Chirag Shah, 2016, $62,813.00.

INTERNAL: FUNDED

- Rutgers Center For COVID-19 Response and Pandemic Preparedness Research Grant, AI, Pandemics, and Mental Health, Role: PI, Co-PIs: Vince Silenzio, Sara Pixley, Fred Roberts, David Pennock, Roseanne Dobkin, and Kostas Bekris, $26,000.00.

- Rutgers Office for Research and Economic Development (ORED) Interdisciplinary Research Group (IRG), Human Centered Design with Communities for Individual and Population Health. Role: Co-PI (one of 27 Co-PIs), PIs: Mark Aakhus and Sarah Allred, 2018-2019, $200,000.00.
- Rutgers Community Design for Health and Wellness Interdisciplinary Research Group Funding, Towards Fairness in Mental Health Prediction Apps, Role: Co-PI, PI: Kaitlin Costello, 2019-2019, $18,000.00.
- Rutgers SC&I Grants for Individual Faculty Research, Gender Bias in the Voices of Smart Home Devices, Role: PI, 2019-2019, $4,000.00.
- Rutgers SC&I Research Development Grant, Reimagining Mobile Phones as Cooperation Catalysts, Role: (Single) PI, 2018-2018. $3,000.00.
- Rutgers SC&I Research Development Grant, Designing Nudges for Mobile Information Privacy, Role: (Single) PI, 2017-2017. $3,400.00.
- Rutgers SC&I Research Development Grant, Real-time Diversity Analytics, Role: (Single) PI, 2016-2016. $3,500.00.
- SCI Research Development Grant, Predicting User Well-being via Socio-Mobile data, Role: (Single) PI, 2015-2015. $7,500.00.

RESEARCH STUDENT/POST-DOC SUPERVISION

Post-Doctoral Associate Research
- **Post-Doctoral Research**
  - Dr. Chidansh Bhatt (Ph.D., CS, National University of Singapore). Research Area: Algorithmic Fairness.

PhD Level Research
- **Dissertation Committee Chair (Primary Advisor) Completed:**
  - Dr. Ghassan Bati (Rutgers ECE); defended: Fall 2018. Dissertation Title: "*Phoneotypic* Modeling of Human Behaviors and Propensities."
  - Dr. Isha Ghosh (Rutgers LIS); defended: Summer 2020. Dissertation Title: "Social Interventions to Reduce the Privacy Paradox."
- **Dissertation Committee Chair (Primary Advisor) In Progress:**
  - Jamal Alasadi (Rutgers ECE). PhD proposal exam passed: Fall 2020.
  - Jinkyung Katie Park (Rutgers LIS). PhD qualifying exam passed: Fall 2020.
- **Dissertation/Qualifying Exam Committee Member:**
  - Teis Kristensen (Rutgers Communication): PhD thesis defended: Summer 2019.
  - Eun Baik (Rutgers LIS): PhD thesis defended: Summer 2019.
  - Mousa Ahmadi (New Jersey Institute of Technology, Information Systems): proposal defended: Fall 2020.
  - Manasa Rath (Rutgers LIS): PhD thesis defended: Summer 2020.
  - Soumik Mandal (Rutgers LIS): passed qualifying exam: Fall 2018.
  - Jiqun Liu (Rutgers LIS): passed qualifying exam: Fall 2018.
  - Dongho Choi (Rutgers LIS): PhD thesis defended: Fall 2017.
- **Independent Study Supervision and Research Assistants**
  - Abdulaziz Almuzaini (Rutgers CS): Independent Study, 2019-2021.
  - Jinkyung (Katie) Park (Rutgers LIS): Volunteer Research Assistant, 2019.
  - Diana Floegel (Rutgers LIS): Research Assistant on an NSF grant, 2019.

- Jiqun Liu (Rutgers LIS): Independent Study, 2017.
- Soumik Mandal (Rutgers LIS): Independent Study, 2017.
- Souvick Ghosh (Rutgers LIS): Research Assistant on an NSF grant, 2016.
- Dongho Choi (Rutgers LIS): Research Assistant on a Google grant, 2016.
- Manasa Rath (Rutgers LIS): Independent Study, 2016.
- Qianjia Huang (Rutgers LIS): Volunteer Research Assistant, 2015.

Masters-Level Research

- **MS thesis supervision**
  - Saket Hegde (MS thesis, Rutgers ECE): defended Fall 2017.
- **MS thesis committee member:**
  - Ashish Tripathi (U. Winnipeg, CS): defended Fall 2015.
  - Abukari Yakubu (U. Winnipeg, CS): defended Fall 2015.
  - Qianjia Huang (U. Winnipeg, CS): defended Fall 2014.

- **Other master's level research**
  - Erick Rivera (Independent Study, Rutgers MI), 2018.
  - Vinayak Nayak (Independent Study, Rutgers Master of Business and Science), 2018.
  - Amirtha Sridharan (Independent Study, Rutgers Master of Business and Science), 2018.
  - Joshua Rochette (Independent Study, Rutgers MI), 2017.
  - Rushil Goyal (Independent Study, Rutgers Master of Business and Science), 2017.
  - Isha Ghosh (Capstone Project, Rutgers Master of Communication and Information Studies), 2016.
  - Priya Subramanian (Independent Study, Rutgers Master of Business and Science), 2015.
  - Christin Jose: Research Assistant on an NSF grant.
  - Yaguang Liu: Research Assistant on an NSF grant.
  - Darshan Songara: Research Assistant on an NSF grant.
  - Raj Inamdar: Research Assistant on an NSF grant.

Undergraduate Researchers

- Yisel Breton (Rutgers): Research assistant (NSF Research Experience for Undergraduates), 2020.
- Aidan Andrucyk (Rutgers): Volunteer research assistant. 2020.
- Connor Hofenbitzer (Rutgers): Research assistant (NSF Research Experience for Undergraduates), 2018-2019.
- Rishab Chawla (Rutgers): Research assistant (NSF Research Experience for Undergraduates), 2018.
- Akansha Atrey (University at Albany): Volunteer research assistant, 2017-2018.
- Devin Soni (Rutgers): Research assistant (NSF Research Experience for Undergraduates), 2016-2018.
- Shenghao Wu (Columbia): Volunteer research assistant, 2016-2018.
- Arushi Jain (Indian Institute of Technology, Kanpur): Volunteer research assistant, 2016.
- Suril Dalal (Rutgers): ITI independent study, 2015.
- Sneha Dasari (Rutgers): ITI independent study, 2015.
- Ariana Blake (Rutgers): ITI independent study, 2015.
- Rishav Raj Agarwal (Indian Institute of Technology, Kanpur): Summer research intern, 2015.

High School Student Researcher

- Aarushi Srivastava (South Brunswick High School, Monmouth Junction, NJ): Research assistant 2017-2018.

TEACHING

Teaching at Rutgers University: **2014- current**

- Classes taught
- Ph.D. level
    - Understanding, Building, and Designing Social Media
        - Spring 2017 (cross-listed with MI).
    - Quantitative Research Methods
        - Fall 2020
- Master of Information (MI)
    - Data Analytics for Information Professionals
        - Fall 2014, Spring 2015, Fall 2015 (cross-listed with ITI).
        - Fall 2016, Spring 2017, Fall 2017, Summer 2018, Fall 2018, Spring 2019, Summer 2019 (not cross-listed).
    - Understanding, Building, and Designing Social Media
        - Spring 2017 (cross-listed with Ph.D.).
    - Foundations of Data Science
        - Fall 2016 (cross-listed with ITI).
- Information Technology and Informatics (ITI, undergraduate level)
    - Data Analytics
        - Fall 2014, Spring 2015, Fall 2015 (cross-listed with MI)
        - Fall 2017, Fall 2018, Spring 2019, Summer 2019, Fall 2020 (not cross-listed).
    - Foundations of Data Science
        - Fall 2016 (cross-listed with ITI).
    - Social Informatics
        - Fall 2015.
- Course material developed/revised significantly for:
    - Understanding, Building, and Designing Social Media
    - Fundamentals of Data Science (new course)
    - Data in Context (new course)

Teaching at Institute of Technical Education, Singapore   **2002-2006**

- Four years of full-time teaching experience as a Lecturer. Classes taught (at post-secondary education level) included Web Programming, Multimedia Production, and Database Systems. Duties included developing the curriculum, delivering lectures, leading laboratory sessions, and mentoring students on various internal and external projects.

SERVICE

- *Professional Organizations:*
    - *Past-Chair*, ASIS&T (Association for Information Science & Technology) Special Interest Group, SIG-Social Media, 2020-2021. I was *Chair* during 2019-2020 and *Chair-Elect* starting Oct 2018.
- *Conference/Workshop Organization:*
    - *Posters Co-chair*: ACM (Association of Computational Machinery) CSCW conference, 2020.
    - *Co-organizer*: ASIST Symposium on Social Informatics, 2020.

- *Grand Challenge Co-Chair:* ACM (Association of Computational Machinery) Multimedia Conference, 2019.
- *Program Committee Co-Chair*: IEEE (Institute of Electrical and Electronics Engineers) International Conference on Multimedia Big Data, 2019.
- *Student Travel Grant Co-Chair*: ACM Multimedia Conference, 2018.
- *Doctoral Consortium Co-Chair*: ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR), 2018.
- *Tutorials Co-Chair*: ACM Multimedia Conference, 2017.
- *Panels Co-Chair*: ACM/IEE International Conference on Digital Libraries, 2016; ACM International Conference on Multimedia, 2017.
- *Best paper selection committee*: ACM CSCW (Conference on Computer-Supported Cooperative Work and Social Computing), 2018.
- *General Co-Chair:* First ACM Workshop on "Personal Data Meets Distributed Multimedia", co-located with ACM Multimedia Conference, Oct 2013, Barcelona, Spain.
- *Co-organizer:* Temporal Networks, Human Dynamics and Social Physics NetSci'14 Symposium, Berkeley, California, June 2-6 2014.

- *Journal Editing:*
  - Editorial Board Member: Multimedia Systems journal. July 2019- ongoing.
  - Journal *Guest Co-Editor:* IEEE Multimedia Special Issue: *New Signals in Multimedia Systems and Applications*, 2018.
  - Journal *Guest Co-Editor:* IEEE Transactions on Internet Technology, Special Issue: Foundations of Social Computing: Dec 2016.
  - Journal *Guest Co-Editor:* IEEE Internet Computing Special Issue: Physical-Cyber-Social Computing, June, 2015.

- *Program Committee membership:*
  - ACM CSCW Conference (Associate Chair), 2016, 2017, 2018, 2019, 2020.
  - ACM CHI Conference (Associate Chair), 2019, 2021.
  - iConference, the annual conference of information schools, 2019.
  - ACM Multimedia Conference, 2013, 2014, 2015, 2016, 2017, 2018.
  - IEEE International Conference on Multimedia and Expo, 2015, 2016.
  - ACM International Conference on Multimedia Retrieval, 2016, 2019.
  - ACM WebScience Conference, 2016.

- *Reviewing for Journals:*
  - Proceedings of the National Academy of Science
  - Proceedings of the IEEE
  - IEEE Transactions on Multimedia
  - ACM Transactions on Multimedia Computing, Communications and Applications
  - Multimedia Tools and Applications
  - IEEE Transactions on Services Computing
  - Cambridge Network Science
  - Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies
  - Proceedings of the ACM on Human Computer Interaction (CSCW)
  - Human Computer Interaction Journal
  - Journal of the Association for Information Science and Technology (JASIST)

- *Reviewing for research grant proposals:*
  - Panel reviewer for National Science Foundation: 2015, 2016, 2017, 2018, 2020.
  - External Reviewer for the Natural Sciences and Engineering Research Council of Canada, 2016-2017.
  - External Reviewer for U.S.-Israel Binational Science Foundation, 2015.
  - External reviewer for the National Science Foundation: 2013, 2020.
- *Rutgers: Multi-school and university-wide committees*
  - Steering Committee, Rutgers Undergraduate Certificate in Data Science: 2020 – current.
  - Organizing Committee, Rutgers AI and Pandemic Working Group.
- *Rutgers School of Communication and Information (SC&I) committees*
  - Chair, SCI Data Science Curriculum Development Committee, 2020 – current.
  - Faculty Secretary: 2018-2020.
  - Member, SC&I Research Development Committee: 2014-2015, 2020-2021.
- *Rutgers Department of Library and Information Science committees*
  - Chair, Faculty Search Committee, 2020-2021.
  - Member, Faculty Search Committee, 2019-2020.
  - Coordinator: Data Science concentration for the MI program: 2018-2019.
  - Member, Department Search Committee, 2018-2019.
  - Member, ALA accreditation task force: Standards team: 2017-2018.
  - Member: Ph.D. curriculum review committee: 2017-2018.
  - Chair, LIS Research Development Committee and Coordinator- LIS Speaker Series: 2015-2016.
  - Member, LIS Research Development Committee: 2014-2015.
- *Community Engagement*
  - Invited Speaker: Highland Park High School, Highland Park, NJ. Introductory lecture to 200 high-school students on online privacy management and cyberbullying prevention, 2015.
  - Member, Congressman Gottheimer's New Jersey Anti-Bullying Task Force, 2020.

PUBLICATIONS
Total Citations: 2163
H-Index: 26
(As per Google Scholar on Dec 31, 2020)

Authored and Edited Books
1. **Singh, V.K.,** & Jain, R*., Situation Recognition Using EventShop* (co-authored monograph), Springer, pp. 1-150, ISBN: 978-3-319-30535-6 / 3319305352 (Published: June 2016.)
2. Bozkaya, B., & **Singh, V.K.** *Geo-Intelligence and Visualization through Big Data Trends* (edited book). Hershey, PA: IGI Global. doi 10.4018/978-1-4666-8465-2, pp. 1-349, 2015.

Journal Articles: Published or Accepted[1]

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[1] ᵍ indicates that the co-author was a *graduate* student who was supervised by Vivek Singh;
ᵘ indicates that the co-author was an *undergraduate* student who was supervised by Vivek Singh.

1. **Singh, V.,** Ghosh, I. ᵍ, & Sonagara, D. ᵍ (2020), Detecting fake news stories via multimodal analysis. *Journal of the Association for Information Science & Technology.* Early Access: https://asistdl.onlinelibrary.wiley.com/doi/abs/10.1002/asi.24359. Length: 15 pages. H5-Index as obtained from Google Scholar on Feb 14, 2020. (Impact Factor: 2.738, H5 Index: 60).

2. **Singh, V. K.**, André, E., Boll, S., Hildebrandt, M., & Shamma, D. A. (2020). Legal and ethical challenges in multimedia research. *IEEE MultiMedia*, *27*(2), 46-54.

3. Choi, D., Shah, C., & **Singh, V**., Toward Bridging Physical and Online Spaces for Information Interactions Using Search Behaviors. Accepted: Journal of Information Science. https://doi.org/10.1177/0165551520972285

4. **Singh, V.,** Chayko, M., Inamdar, R. ᵍ, & Floegel, D. ᵍ (2020), Female Librarians and Male Computer Programmers: Gender Bias in Occupational Images on Digital Media Platforms. *Journal of the Association for Information Science & Technology.* Early Access: **https://doi.org/10.1002/asi.24335**. Length: 14 pages. H5-Index as obtained from Google Scholar on Feb 14, 2020. (Impact Factor: 2.738, H5 Index: 60).

5. Agarwal, R. Rᵍ., Lin, C. C., Chen, K. T., & **Singh, V. K.** (2018). Predicting financial trouble using call data—On social capital, phone logs, and financial trouble. *PloS one*, *13*(2), e0191863. Length: 17 pages. Impact Factor as obtained from InCites Journal Citation Reports on Aug 06, 2019. H5-Index as obtained from Google Scholar on Aug 06, 2019. (Impact Factor: 2.776, H5 Index: 176).

6. **Singh, V. K.,** Goyal, R. ᵍ, & Wu, S. ᵘ (2018). Riskalyzer: Inferring Individual Risk-Taking Propensity Using Phone Metadata. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, *2*(1), 34. Length: 21 pages. (H5 Index: 57. ACM Conference on Pervasive and Ubiquitous Computing (UbiComp) conference proceedings have transitioned into a journal model in 2017. The papers go through two cycles of reviews (with revisions) before acceptance. Accepted papers are invited to present at the conference and the papers are published in the abovementioned journal. See: http://ubicomp.org/ubicomp2019/cfp_papers.html. The H5 index is based on the proceedings of the conference.)

7. Bati, G. F. ᵍ, & **Singh, V. K.** (2018). Altrumetrics: Inferring Altruism Propensity Based on Mobile Phone Use Patterns. *IEEE Transactions on Big Data*. Early Access: DOI: 10.1109/TBDATA.2018.2873346. Length: 11 pages. (Impact Factor: N/A; new journal, H5 Index: 29)

8. Soni, D. ᵘ, & **Singh, V. K.** (2018). See No Evil, Hear No Evil: Audio-Visual-Textual Cyberbullying Detection. *Proceedings of the ACM on Human-Computer Interaction*, *2*(CSCW), 164. Length: 25 pages. (H5 Index: 60. Note: ACM Conference on Computer-Supported Cooperative Work & Social Computing conference (CSCW) proceedings have transitioned into a journal model in 2017. The papers go through two cycles of reviews (with revisions) before acceptance. Accepted papers are invited to present at the conference and the papers are published in the abovementioned journal. See: https://cscw.acm.org/2018/program/toc.html. The H5 index is based on the proceedings of the conference.)

9. Ghosh, I. ᵍ, & **Singh, V.** (2018). Phones, privacy, and predictions: A study of phone logged data to predict privacy attitudes of individuals. *Online Information Review*. Early Access: https://doi.org/10.1108/OIR-03-2018-0112. Length: 20 pages. (Impact Factor: 1.928, H5 Index: 30)

10. Huang, Q. ᵍ, **Singh, V. K.,** & Atrey, P. K. (2018). On cyberbullying incidents and underlying online social relationships. *Journal of Computational Social Science*, *1*(2), 241-260. https://doi.org/10.1007/s42001-018-0026-9. (Impact Factor: N/A; new journal, H5 Index: N/A)

11. Dong, X., Suhara, Y., Bozkaya, B., **Singh, V. K**., Lepri, B., & Pentland, A. S. (2018). Social bridges in urban purchase behavior. *ACM Transactions on Intelligent Systems and Technology (TIST)*, *9*(3), 33. Length: 29 pages. (Impact Factor: 2.861, H5 Index: 38)

12. **Singh, V. K.,** & Ghosh, I. ᵍ (2017). Inferring Individual Social Capital Automatically via Phone Logs. *Proceedings of the ACM on Human-Computer Interaction*, *1*(CSCW), 95. Length: 12 pages. (H5 Index: 60. Note: ACM Conference on Computer-Supported Cooperative Work & Social Computing conference (CSCW) proceedings have

transitioned into a journal model in 2017. Accepted papers are invited to present at the conference and the papers are published in the abovementioned journal. See: https://cscw.acm.org/2018/program/toc.html. The H5 index is based on the proceedings of the conference.)

13. **Singh, V. K.,** Fernandes, D., Kankanhalli, M., & Haenselmann, T. (2016). Decoupled Multicamera Sensing for Flexible View Generation. *Journal of Sensors, 501(*8137859), 1-13. (Impact Factor: 2.024, H5 Index: 29)

14. Almaatouq, A., Shmueli, E., Nouh, M., Alabdulkareem, A., **Singh, V. K.,** Alsaleh, M., Alarifi, A., Alfaris, A. & Pentland, A.S. (2016). If it looks like a spammer and behaves like a spammer, it must be a spammer: analysis and detection of microblogging spam accounts. *International Journal of Information Security*, *15*(5), 475-491. (Impact Factor: 1.822, H5 Index: 25)

15. **Singh, V. K.,** Bozkaya, B., & Pentland, A. (2015). Money Walks: Implicit Mobility Behavior and Financial Well-Being. *PloS one, 10*(8), e0136628. Length: 17 pages. (Impact Factor: 2.776, H5 Index: 176)

16. de Montjoye, Y. A., Radaelli, L., **Singh, V. K.,** & Pentland, A. (2015). Unique in the shopping mall: On the reidentifiability of credit card metadata. *Science, 347*(6221), 536-539. (Impact Factor: 41.037, H5 Index: 338)

17. Shmueli, E., **Singh, V. K.,** Lepri, B., & Pentland, A. (2014). Sensing, understanding, and shaping social behavior. *IEEE Transactions on Computational Social Systems*, *1*(1), 22-34. (Impact Factor: N/A; new journal, H5 Index: 19)

18. **Singh, V. K.,** Mani, A., & Pentland, A. (2014). Social Persuasion in Online and Physical Networks. *Proceedings of the IEEE, 102*(12), 1903-1910. (Impact Factor: 10.694, H5 Index: 80)

19. **Singh, V. K.,** Freeman, L., Lepri, B., & Pentland, A. S. (2013). Classifying spending behavior using socio-mobile data. *HUMAN, 2*(2), pp-99. Length: 13 pages. (H5 Index: 10. Note: Top 10% submissions to the ACM/IEEE/ASE SocialCom conference, 2013 were automatically published in this journal. H5 index is based on the proceedings of the conference.)

20. **Singh, V. K.,** & Kankanhalli, M. S. (2009). Adversary aware surveillance systems. *IEEE Transactions on Information Forensics and Security*, *4*(3), 552-563. (Impact Factor: 6.211, H5 Index: 78)

21. **Singh, V. K.,** Pirsiavash, H., Rishabh, I., & Jain, R. (2009). Towards environment-to-environment (e2e) multimedia communication systems. *Multimedia Tools and Applications*, *44*(3), 361-388. (Impact Factor: 2.101, H5 Index: 52)

22. **Singh, V. K.,** Atrey, P. K., & Kankanhalli, M. S. (2008). Coopetitive multi-camera surveillance using model predictive control. *Machine Vision and applications*, *19*(5-6), 375-393. (Impact Factor: 1.788, H5 Index: 33)

Journal Guest Editorials

1. Cesar, P., **Singh, V.,** Jain, R., Sebe, N., & Oliver, N. (2018). (Guest editorial) New Signals in Multimedia Systems and Applications. *IEEE MultiMedia*, (1), 12-13. (Impact Factor: 3.556, H5 Index: 24)

2. Chopra, A. K., Shmueli, E., & **Singh, V. K.** (2017). (Guest editorial) Introduction to the special issue on advances in social computing. *ACM Transactions on Internet Technology (TOIT)*, *17*(2), 11. DOI: https://doi.org/10.1145/3080258. Length: 2 pages. (Impact Factor: 2.382, H5 Index: 22)

3. Barnaghi, P., Sheth, A., **Singh, V.,** & Hauswirth, M. (2015). (Guest editorial) Physical-cyber-social computing: looking back, looking forward. *IEEE Internet Computing*, *19*(3), 7-11. (Impact Factor: 2.891, H5 Index: 30)

Journal Articles: Under Review

1. Ghosh, I. ᵍ, & **Singh, V.,** Not all my friends and *friends*, (Under review) *Journal of the Association for Information Science & Technology.* 19 page manuscript.

Book Chapters: Published

1. **Singh, V.** (2017). Situation recognition using multimodal data. In S-F Chang. (Ed.), *Frontiers of Multimedia Research* (pp. 159-189). San Rafael, CA: Association for Computing Machinery and Morgan & Claypool.

2. Srivastava, K. A., **Singh, V. K.**, & Bozkaya, B. (2015). Assessing financial well-being of merchants by analyzing behavioral patterns in historical transactions. In Bozkaya, B., & Singh, V. K. (Eds.) *Geo-Intelligence and Visualization through Big Data Trends* (pp. 76-93). Hershey, PA: IGI Global.

3. **Singh, V. K.,** Jain, R., & Kankanhalli, M. (2011). Mechanism design for incentivizing social media contributions. In Hoi, S.C.H., Luo, J., Boll, S., Xu, D, Jin, R., King, I. (Eds.), *Social media modeling and computing* (pp. 121-143). London, UK: Springer.

International Peer-Reviewed Conferences: Proceedings Published[2]

1. Alasadi, J. [g], Ramanathan, A. [g], Atrey, P. & **Singh, V. K.** (2020). A Fairness-Aware Fusion Framework for Multimodal Cyberbullying Detection. *In Proceedings of the IEEE International Conference on Multimedia Big Data.*

2. Abdulaziz, A. [g], & **Singh, V. K.** (2020). Balancing Fairness and Accuracy in Sentiment Detection Using Multiple Black-box Models. *In Proceedings of the 2nd ACM International Workshop on Fairness, Accountability, and Transparency, and Ethics in MultiMedia.*

3. **Singh, V.,** & Hofenbitzer, C. (2019). Fairness across Network Positions in Cyberbullying Detection Algorithms. (September 2019) In *Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*. Length: 3 pages. (Acceptance Rate: 35%. H5-index: 28) Arxiv pre-print available at: https://arxiv.org/abs/1905.03403

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[2] Please note that in computational disciplines, ``...papers in peer-reviewed conferences are accepted as high-quality scholarly articles.'' (1) Expert advisory:https://homes.cs.washington.edu/~mernst/advice/conf-vs-journal-uscis.pdf; (2) Computing Research Association (CRA) Advisory:http://cra.org/resources/best-practice-memos/evaluating-computer-scientists-and-engineers-for-promotion-and-tenure/

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24. **Singh, V. K.,** Luo, J., Joshi, D., Lei, P., Das, M., & Stubler, P. (2011). Reliving on demand: a total viewer experience. In *Proceedings of the 19th ACM international conference on Multimedia* (pp. 333-342). ACM. [Acceptance Rate: 25.0%, H5 Index: 58]

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27. **Singh, V. K.,** & Jain, R. (2009). Situation based control for cyber-physical environments. In *Proceedings of the 2009 IEEE Military Communications Conference* (pp. 1-7). IEEE. **(Best Student Paper for the Workshop/Special Session on Situation Management)**(Acceptance Rate: N/A, H5 Index: 23)

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33. **Singh, V. K.,** Atrey, P. K., & Kankanhalli, M. S. (2007). Coopetitive multimedia surveillance. In *International Conference on Multimedia Modeling* (pp. 343-352). Springer, Berlin, Heidelberg. [Acceptance Rate 31.4%, H5 index: 21]

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PATENTS

1. Lou, J., Joshi, D., Stubler, P., Das, M., Lei, P. & **Singh, V.K.** *Method for Media Reliving Playback*, U.S. Patent No. 8879890: Issued November 4, 2014.

2. Lou, J., Joshi, D., Stubler, P., Das, M., Lei, P. & **Singh, V.K.** *Method for media reliving on demand*, U.S. Patent No. US 908245: Issued July 14, 2015.

INVITED TALKS

1. **Invited (Keynote) Talk:** "Auditing and Controlling for Algorithmic Bias", *ACM International Workshop on Fairness, Accountability, Transparency and Ethics in Multimedia*, co-located with ACM Multimedia Conference, 2020.

2. **Keynote Address:** "Sensing, Understanding, and Shaping Human Behavior", *ACM International Workshop on Computational Models of Social Interactions: Human-Computer-Media Communication*, co-located with ACM Multimedia Conference, Brisbane, Australia, 2015.

3. "Behavioral Informatics," In *Center for Informatics Research in Science and Scholarship Seminar,* University of Illinois, Urbana Champaign, IL, 2019.

4. "Sensing and Shaping Human Behavior," In *Building the Future: New Technological Frontiers in Cities Conference*, Princeton University, Princeton, NJ, 2019.

5. "Behavioral Informatics," In *Connective Media Seminar*, CornellTech, New York City, NY, 2019.

6. "Behavioral Informatics," In *Human Dynamics Group Seminar*, MIT Media Lab, Cambridge, MA, 2017.

7. "Sensing, Understanding, and Shaping Human Behavior," In *5th International Workshop on Cyber-Physical Cloud Computing*, National Institute on Standards and Technology, Gaithersburg, MD, 2015.

8. "Sensing, Understanding, and Shaping Human Behavior," In *Connective Media Seminar*, CornellTech, New York City, NY, 2015.

9. "Sensing, Understanding, and Shaping Human Behavior," In *Bay Area Multimedia Forum*, Stanford, CA, 2014.

MEDIA COVERAGE OF RESEARCH ACTIVITIES

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- BBC News, Mobile location data 'present anonymity risk, http://www.bbc.com/news/science-environment-21923360, 2015.
- Wall Street Journal, Metadata Can Expose Person's Identity Even Without Name, http://www.wsj.com/articles/metadata-can-expose-persons-identity-even-when-name-isnt-1422558349, 2015.
- Nature News, People identified through credit-card use alone, 2015. http://www.nature.com/news/people-identified-through-credit-card-use-alone-1.16817
- Harvard Business Review, There's No Such Thing as Anonymous Data, https://hbr.org/2015/02/theres-no-such-thing-as-anonymous-data, 2015.
- More coverage: MIT Technology Review, PBS, Le Monde (FR), Die Zeit (DE), Die Spiegel (DE), El Pais (ES), RT, The Hill, Telegraph (UK), Scientific American,New Scientist, Five Thirty Eight, Gizmodo, Fast Company, Computer World,ZDNet, Tom's guide, Popular Mechanics, Motherboard, US News, NBC,CNBC, Huffington Post (US), IEEE Spectrum, Phys.org, Radio Canada (FR), Le Vif (FR), Slate (FR), Trends-Tendance (FR), Science et vie (FR).

- Rutgers CommInfo Public Relations, **Appellate Court Cites Vivek Singh's Study in Decision Against the NSA,** https://comminfo.rutgers.edu/news/appellate-court-cites-vivek-singhs-study-in-decision-against-the-nsa.html; Link to the court judgement (page 9), 2015.
- ACM Tech News, University Receives Grant to Prevent Cyberbullying, 2015. http://cacm.acm.org/news/185388-university-receives-grant-to-prevent-cyberbullying/fulltext.