**Biography of Professor Piyushimita (Vonu) Thakuriah**

**Piyushimita (Vonu) Thakuriah** is the Dean of the Edward J Bloustein School of Planning and Public Policy, and Distinguished Professor of Transportation and Urban Informatics. Her research interests are on smart, socially-just and sustainable transportation and traveler behavior. She is particularly interested in automation, AI and the use and effects of Information and Communications Technology on our jobs and our daily lives, and the consequent effects on infrastructure and mobility services. Her work in the area of Urban Informatics span analytics of emerging sources of data for knowledge discovery regarding cities and data-intensive analysis for improved planning, service delivery, livability, learning, engagement, and business and policy innovations. In doing so, she considers issues of privacy, responsible innovation, and emerging power structures associated with data.

She has published over 170 journal papers, conference proceedings and technical reports on these topics. Some examples of books and edited work include *Transportation and Information: Trends in Technology and Policy* (Springer 2013), *Proceedings of 4th ACM SIGSPATIAL International Workshop on Computational Transportation Science* (ACM Press 2011)*, Seeing Cities with Big Data: Research, Methods and Applications in Urban Informatics* (Springer, 2017), and *Proceedings of the ACM First International Workshop on Understanding the City with Urban Informatics* (ACM Press, 2015). Her papers have been published in Future Generation Computer Systems, PlosOne, Journal of Transport Geography, Transportation Research Part C, Journal of Transportation Engineering, Transportation Research Part D, and other highly ranked journals. She is currently an Associate Editor of the Harvard Data Science Review, and serves on the editorial boards of Journal of Big Data Analytics in Transportation and Environment and Planning B. She was previously the Editor-in-Chief of the Journal of Urban and Regional Information Systems Association.

Vonu has been Principal Investigator of several significant grants in both the US and UK funded by Research Councils UK, European Commission, National Science Foundation, US Department of Transportation, Department of Labor, and other leading state and local research sponsors. To date, she has been Principal Investigator of grants valued at approximately $25 million and has been involved in research grants of $63 million in total (as PI, Co-I or Investigator) in the US and the UK.

Vonu was previously the Ch2m Endowed Chair Professor of Transport in the University of Glasgow, UK, and Professor of Urban Planning and Policy in the University of Illinois at Chicago. She was the founding Director and Principal Investigator of the Urban Big Data Centre funded by Research Council UK's Economic and Social Research Council that includes a national data service to inspire innovations for sustainable and socially just cities.

Vonu was previously a European Commission Marie Curie Fellow. She was also a Fellow of the Committee on Institutional Cooperation (CIC) – Academic Leadership Program (ALP) of the Big Ten Academic Alliance. Her postdoctoral work at the National Institute of Statistical Sciences was funded by a fellowship program of the National Science Foundation’s Division of Mathematical Sciences.

Vonu is a member of the Advisory Board of the UK Office of National Statistics Data Science Campus, as well as a member of European Commission/Eurostat’s New Techniques and Technologies for Statistics. She is a co-chair of the Urban Data Interest group of the Research Data Alliance, a joint initiative of the European Commission, National Science Foundation, National Institute of Standards and Technology, and the Australian Government's Department of Innovation. She is past (and founding) co-chair of the joint subcommittee on Computational Transportation and Society of the Transportation Research Board, National Academy of Sciences, (now called Urban Big Data joint subcommittee), and a member of the Intelligent Transportation Systems World Congress Program Committee for North America.

Vonu was a long-time member of the Chicago Metropolitan Agency for Planning’s Transportation Committee and the Advanced Technology Task Force, due to which she was extensively involved in large-scale regional and metropolitan transportation planning matters. She also gained local and state transportation planning and operations expertise through PI-ship of research grants funded by the Illinois Department of Transportation, Chicago Department of Transportation, CMAP, and other local and state agencies.

Vonu has consulted on or otherwise collaborated on transport or data projects in Malaysia, China, India, Australia, Colombia, the Dominican Republic, and several European countries. She has provided testimony to US Congress and has given input to the UK Parliamentary Office of Science and Technology as well as to the US Government Accountability Office. Selected recent non-university keynotes were in the European Commission (Brussels), Royal Society of Edinburgh (Scotland), European Commission (Luxembourg), Royal Academy of Engineering (London, UK), Leibnitz Center for Informatics (Germany), Statistics Netherlands (Herleen, Netherlands), Tongji University (Shanghai, China), and Helsinki City Hall (Finland).

**Selected Refereed Publications and Edited Work since 2015**

Anejionu, O. C. D., P. Thakuriah, A. McHugh, Y. Sun, D. McArthur, P. Mason, and Rod Walpole (2019). *Spatial urban data system: A cloud-enabled big data infrastructure for social and economic urban analytics*. In Future Generation Computer Systems, Vol 98, pp. 456-473.

Sila-Nowicka, K. and P. Thakuriah (2019). *Multi-sensor movement analysis for transport safety and health applications*. In PLoSONE 14(1):e0210090.

Chen L., Sun Y., Thakuriah P. (2020) *Modelling and Predicting Individual Salaries in United Kingdom with Graph Convolutional Network*. In: Madureira A., Abraham A., Gandhi N., Varela M. (eds) Hybrid Intelligent Systems. HIS 2018. Advances in Intelligent Systems and Computing, vol 923. Springer.

Chen, L., K. Ampountolas and P. Thakuriah (2019). *Predicting Uber Demand in NYC with Wavenet*. Proc. SMART ACCESSIBILITY 2019: The Fourth International Conference on Universal Accessibility in the Internet of Things and Smart Environments, pp. 1-5.

Paule, J. D. G., Y. Sun and P. Thakuriah (2018). *Beyond Geo-Tagged Tweets: Exploring the Geo-Localization of Tweets for Transportation Applications*. In Transportation Analytics in the Era of Big Data, Editors: Ukkusuri, Satish, Yang, Chao, Springer. ISBN 978-3-319-75862-6, pp. 1-21.

Hong, J. and P. Thakuriah (2018). *Examining the relationship between different urbanization settings, smartphone use to access the Internet and trip frequencies*. In Journal of Transport Geography, Vol 69, pp 11-18.

Thakuriah, P., N. Tilahun and M. Zellner (2017). *Big Data and Urban Informatics: Innovations and Challenges to Urban Planning and Knowledge Discovery*. In Seeing Cities through Big Data: Research, Methods and Applications in Urban Informatics, Springer, NY, pp. 11-48.

Thakuriah, P., L. Dirks, and Y. Keita Mallon (2017). *Digital Infomediaries and Civic Hacking in Emerging Urban Data Initiatives*. In Seeing Cities through Big Data: Research, Methods and Applications in Urban Informatics, Springer, NY, pp. 189-208.

Wu, G., J. Hong and P. Thakuriah (2017). Role of the Internet in Shaping Young Adults’ Attitude, Travel Choices, and Sustainable Lifestyles: Longitudinal Perspective. Proc 2017 Transportation Research Board Annual Conference.

Paule, J. D. G., Y. Moshfeghi, J. Jose and P. Thakuriah (2017). On Fine-Grained Geo-Localization of Tweets. Proc ACM SIGIR conference, Amsterdam, Netherlands, 2017 (ICTIR’17)

Thakuriah, P., N. Tilahun and M. Zellner (2017). *Seeing Cities through Big Data: Research, Methods and Applications in Urban Informatics*. Edited volume of selected papers presented in workshop sponsored by National Science Foundation on Big Data and Urban Informatics. Springer, NY.

Hong, J. and P. Thakuriah (2017). Effects of Residential Locations and Mobile Technologies on Trip Generation: Focusing on Mediating Effects. Proc 2017 Transportation Research Board Annual Conference.

Thakuriah, P., K. S. Nowicka and J. D. G. Paule (2016). *Sensing Spatiotemporal Patterns in Urban Areas: Analytics and Visualizations using the Integrated Multimedia City Data Platform*. In Journal of Built Environment, Vol. 42(3), pp. 415-429.

Lido, C., Osborne, M., Livingston, M., Sila-Nowicka, K., and Thakuriah, P. (2016) 'Big Data' techniques to improve learning access and citizen engagement for adults in urban environments. In: Scott, L., Watson, C. and Wu, A.T. (eds.) *Quality of Life in Adult Learning.* Series: Adult learning in professional, organizational, and community settings. Information Age Publishing, Inc.

Lido, C., Osborne, M., Livingston, M., Thakuriah, P., and Sila-Nowicka, K. (2016) *Older learning engagement in the modern city*. In International Journal of Lifelong Education, Early online: 03 Oct 2016.

Tilahun, N., Thakuriah, P., Li, M., and Keita, Y. (2016) *Transit use and the work commute: analyzing the role of last mile issues*. In Journal of Transport Geography, Vol 54, pp. 359–368.

Sila-Nowicka, K., and Thakuriah, P. (2016) The trade-off between privacy and geographic data resolution. a case of GPS trajectories combined with the social survey results. In: XXIII ISPRS Congress, Prague, Czech Republic, 12-19 Jul 2016, pp. 535-542. (doi:10.5194/isprs-archives-XLI-B2-535-2016).

Hong, J., and P. Thakuriah (2016) *Relationship between motorized travel and time spent online for non-work purposes: an examination of location impact*. In International Journal of Sustainable Transportation, Vol. 10(7), pp. 617-626.

Cottrill, C. D., and P. Thakuriah (2015) *Location privacy preferences: a survey-based analysis of consumer awareness, trade-off and decision-making*. In Transportation Research Part C: Emerging Technologies, 56, pp. 132-148.

Wu, G., J. Hong and P. Thakuriah (2015). Effect of Employment Status on the Relationship between Time Spent on the Internet and Activity Engagement. Proc 14th International Conference on Travel Behaviour Research, Windsor, UK, July.

Moshfeghi, Y., Ounis, I., Macdonald, C., Jose, J., Triantafillou, P., Livingston, M., and Thakuriah, P. (2015) UCUI'15: *Proceedings of the ACM First International Workshop on Understanding the City with Urban Informatics*. ACM. ISBN 9781450337861

**Selected Keynotes and Invited Talks Since 2015**

European Commission, Eurostat New Techniques and Technologies for Statistics 2019, Brussels, Belgium. *Urban Informatics and Smart Cities: Prospects and Challenges with New Forms of Data*. Keynote speech, March 13, 2019.

Royal Society of Edinburgh and the Engineering and Physical Sciences Research Council (EPSRC) Digital Economy Theme. *Social and Economic Aspects of Urban Informatics*. Keynote speech, May 30, 2018.

4th Conference on Sustainable Urban Mobility – CSUM2018, Skiathos Island, Greece. *Exploring social and economic implications of big data for mobility*. Keynote speech, May 24, 2018.

University of Leeds, New and Emerging Forms of Data in Policy Making: Transport, Health and Air Quality Management. *New Forms of Data and Mobility Analysis*. Keynote speech, April 24, 2018.

Joint meeting of the Directors of Methodology and Information Technology, National Statistical agencies of member countries of the European Union and associated countries, and the statistical agency of the European Commission, Eurostat, Luxembourg. *Urban Big Data Centre: Key Lessons for Smart Statistics*. Keynote speech, Feb 23, 2018.

Georgia Tech, Atlanta, Georgia. Invited speaker on *Urban Informatics: Examples, Prospects and Challenges* in Planning Future Lecture Series, Oct 20, 2017.

Statistics Netherlands, Heerlen, Netherlands. Invited speaker on *Transport Planning and Operations with Big Data* in Big Data Matters Towards Smart Statistics workshop. Sept 27, 2017.

Guild of European Research-Intensive Universities, Brussels, Belgium. Panelist and Speaker on *Big Data and Urban Informatics*, May 10, 2017.

Chinese University of Hong Kong. *Emerging Data Sources and Urban Informatics: Examples, Prospects and Challenges*. Keynote in Advanced Workshop of Urban Studies and Smart Cities, April 28, 2017.

U.S. National Science Foundation Workshop on Acquiring and Sharing Data Within the CMMI Research Community*.* Invited speaker on *Urban Data Infrastructure and Urban Informatics*. Also Member of Steering Committee. Feb 5-6, 2017.

Helsinki City Hall, Reboot Helsinki, Tampere and Finland with Big Data. Keynote Speaker. *An Overview of the Urban Big Data Center*, January 26, 2017.

Big Data Analysis for Transportation Engineering Systems, Indian Institute of Technology, Chennai, India. Indo-US Workshop. Dec 5-6, 2016. Program Committee Member.

Erasmus University Rotterdam, Netherlands. September 16, 2016. *Big Data, Urban Informatics and the City*. Invited Lecture, Erasmus Paviljoen, Campus Woudestein of Erasmus University.

University of Manchester DACAS Summer School, September 12, 2016. *Seeing Cities with Big Data: Emerging Topics in Urban Informatics*. Keynote Speaker.

Carnegie Mellon University, Pittsburgh, Sept 6, 2016. *Emerging Data Sources and Urban Informatics: Examples, Prospects and Challenges*. Invited speaker, Heinz College of Business.

First International Workshop on Big Data Smart Transportation Analytics in Shanghai, China, jointly organized by Purdue University and Tongji University, Shanghai, China, July 16-17, 2016. *Unstructured Data for Urban Informatics*. Invited speaker and International Advisory Committee member.

U.S. National Academy of Sciences Mapping Science Committee, Washington D.C. *Grand Challenges in Smart Cities*. April 14, 2016. Keynote Speaker.

Leibnitz Center for Informatics, Saarland, Germany, Schloss Dagstuhl Seminar on *Computational Challenges in Cooperative Intelligent Urban Transport*, Feb 28-March 4, 2016. Keynote speaker and invited attendee.

U.S. Comptroller General Forum on 21st Century Data Analytics, jointly organized by U.S. GAO and the National Academies Board on Mathematical Sciences and Their Applications. Future *Promises and Benefits of Big Data Economy*. Jan 27-28, 2016. Washington DC, Invited attendee and speaker.

12th PASCAL Observatory Conference Connecting Cities and Universities at Strategic Frontiers, Catania, Sicily. *The Future of Cities: Big Data and the Urban Economy*. Opening Keynote Address, Oct 7, 2015

Joint Statistical Meetings, Seattle. *Unstructured Social Media Data for Transportation Applications: Benefits and Challenges*. Invited presentation in JSM Transportation Special Interest Group’s Session on New Tools for Transportation Statistics, Seattle, Aug. 8-13, 2015.

University of Leeds. *Emerging Data Sources and Urban Informatics.* Keynote Speaker, Opening Event, Leeds Institute of Data Analytics. July 10, 2015.

Iowa State University, Ames, Iowa. *Smart Transportation Planning and Operations*. Colloquium Speaker, Department of Civil Engineering. April 27, 2015.

Association of American Geographers.  *Frontiers of Research on Urban Informatics*. Chair of panel organized by AAG 2015 Symposium on CyberGIS for Fostering New Frontiers of Geographic Research and Education, Chicago, IL, April 2015.

Edinburgh Science Festival. *Urban Informatics*. Chair of panel and speaker, Edinburgh, April 16, 2015.

University College Dublin, Dublin, Ireland. *Big Data for Urban Informatics: Examples from the Glasgow Urban Big Data Centre*. Colloquium Speaker, University College Dublin, School of Geography, Planning and Environmental Policy, March 26, 2015.

European Commission Joint Program Initiative Urban Governing Board. *Urban Big Data and Smart Cities*. Plenary presentation to the full governing board of the EC JPI Urban, London, UK, on March 9, 2015.

American Association for the Advancement of Science (AAAS) Annual Meeting, San Jose. *Transport Informatics*. Invited panelist and speaker in US Government Accountability Office and UK Parliament Office for Science and Technology joint special session on Social Implications of Big Data in AAAS Annual Meeting, San Jose, Feb. 13, 2015.

High Performance Computing and Big Data Conference (UKHPC), London. *Urban Big Data: Addressing the Social, Economic and Environmental Challenges Facing Cities*. Plenary Speaker, Annual HPC and Big Data Conference, London, Feb 3, 2015.

Ohio State University, Columbus. *Data-driven Modeling for Transportation: Prospects and Challenges*. Colloquium Speaker, Ohio State University’s Department of Geography, Columbus, Jan. 16, 2015.

**Selected Service since 2015**

Member, Advisory Group, UK Office of National Statistics Data Science Campus, April 2018-Current.

Member, European Commission/Eurostat’s 2019 New Techniques and Technologies for Statistics (NTTS) Scientific Committee.

Member, Scientific Committee, 3rd International Conference "Smart Data, Smart Cities", Delft , The Netherlands, October 4-5, 2018.

Member of steering committee, NSF CMMI Data Infrastructure Workshop, Arlington, VA, Feb 6-7, 2017.

Member of program committee, Big Data and Transport workshop held in IIT-Chennai funded by Indo-US Science and Technology Forum, Chennai, India, Dec 5-6, 2016.

Member, International Advisory Committee, First International Workshop on Big Data Smart Transportation Analytics in Shanghai, China, jointly organized by Purdue University and Tongji University, Shanghai, China, July 16-17, 2016.

Chair, Workshop on Innovative Multi-modal Data on Urban Living. Sponsored by Engineering and Physical Sciences Research Council, Glasgow, UK, Feb 3-4, 2016.

Program Committee Member, Workshop on Technological and Social Limits to Future Cities. Sponsored by Engineering and Physical Sciences Research Council, Glasgow, UK, April 18, 2016.

Program Committee Member and Institutional Sponsor, 4th ACM International Conference on Information and Knowledge Management (CIKM) 2015 Workshop on Understanding the City with Urban Informatics. Melbourne, Australia, Oct 23, 2015.

Program Committee Member, International Conference on Location-Based Social Media

Data, Athens, Georgia, March 13-14, 2015.

Program Committee Member, AAAI-15 Workshop on Artificial Intelligence for Transportation, Austin, Texas, Jan 25-26, 2015.

General Chair, Workshop on Big Data and Urban Informatics. Sponsored by US National Science Foundation, Chicago, IL, August 11 and 12, 2014.

Co-Chair, Urban Data Interest Group, Research Data Alliance (RDA), a joint effort of the European Commission, the US National Science Foundation and National Institute of Standards and Technology, and the Australian Government’s Department of Innovation to build social and technical bridges that enable open sharing of data, 2013-Current.

Recent PhD, Master’s and Postdoctoral Supervision

Sila-Nowicka, K. (2014-2018). Postdoctoral Research Fellow, Urban Big Data Centre, University of Glasgow. Currently Assistant Professor, University of Auckland, New Zealand.

Sun, Y. (2015-2018). Postdoctoral Research Fellow, Urban Big Data Centre.

Chen, L. (2018). Postdoctoral Research Fellow, Urban Big Data Centre.

Venkatasubramanian, Ashwini (University of Glasgow, 2014-Current. Co-supervisors; K. Ampountolas and L. Evers). *Transport Network Analytics - Evaluating Traffic Equilibrium with Heterogeneous Urban Big Data*.

Wu, Guoqiang (Chris) (University of Glasgow, graduated 2018). *A Methodological Framework to Assess Interactions among Travel Behaviour, ICT Use and Energy Consumption. – Assistant Professor, Chongqing University, China.*

Keita-Mallon, Yaye (University of Illinois at Chicago, graduated 2017). *Mobility in the Context of Time, Space, and Economic Outcomes: Perspectives of Female Travelers*. Research Associate, University of South Florida.

Cottrill, Caitlin (Graduated Summer 2011). *Privacy Issues in Intelligent Transportation Systems and Location-Based Services.* NSF-IGERT Doctoral Fellow (2006-2008); Eisenhower Graduate Fellow 2008-2010. (Chair, Doctoral Dissertation). Senior Lecturer, University of Aberdeen, UK

Guo, Yi (University of Glasgow MSc in Urban Transport, 2018). *The Analysis of Six Selected Factors Affecting Ridership in 159 Metro Systems Worldwide*.

Stricker, Jakob (University of Glasgow MSc in Urban Transport, 2018). *Smart ticketing systems in the field of public transportation*.

Syahrial Bin Syahbani, Taufiq (University of Glasgow MSc in Urban Transport, 2018). *Analysing the Effects of Infrastructure, Traffic, and Socioeconomic Factors on Traffic Crashes and Their Fatalities in Jakarta, Indonesia.*

Rincon, Carlos Daniel (University of Glasgow MSc in Urban Transport, 2017). *Transit Oriented Development. Planning tool or conventional development?*

Sharma, Shravani (University of Glasgow MSc in Urban Transport, 2017). *Understanding Patterns in Travel Behavior due to the impacts of various mediums of ICT*.

Bhandari, Parul (University of Glasgow MSc in Urban Transport, 2017). *Impacts of the Use of Cellphones in India.*