

Dominique Haughton

Professor Dominique Haughton's (dhaughton@bentley.edu, www.dominiquehaughton.com) research interests include applied statistics, business analytics, global analytics, data mining, and model selection. Professor Haughton's work concentrates on how to best leverage modern analytics techniques in order to address questions of business or societal interest.

Working with colleagues in Australia and Vietnam, Professor Haughton helped develop improved techniques for estimating living standards in Vietnam at disaggregated levels such as communes. This is important for poverty targeting and relies on multilevel models, where the effects of each geographical level on local living standards are taken into account.

With a team of colleagues at Epsilon, her PhD student Changan Zhang and in the context of an NSF project, she worked on the problem of optimizing the marketing mix, notably in the pharmaceutical industry, and on methods for estimating unknown competitor marketing activity. Recently the same team has worked on improved models of physician prescribing behavior which utilize properties of the social network formed by the co-publication of research medical papers by physicians.

With Changan Zhang and two colleagues in India, she has worked on investigations of the social networks formed by financial help seeking, advice seeking and companionship relationships in two villages in Tami Nadu, South India.

She recently published, jointly with economist Jonathan Haughton, a well-regarded monograph on Living Standards Analytics (Springer-Verlag). She is currently working on monographs on causal business analytics and movie analytics.

Professor Haughton is a co-founder of the research team DART (Data Analytics Research team) at Bentley University, and is affiliated to research laboratories at Paris I and Toulouse I universities.

Professor Haughton has published over sixty articles in journals such as The American Statistician, BizEd, Telecommunications Policy, Journal of Higher Education Management, Computational Statistics and Data Analysis, Journal of Interactive Marketing, Economic Development and Cultural Change, Studies in Family Planning, Journal of Population Economics, Journal of Biosocial Science, Annals of Statistics, Sankhya, Journal of Statistical Computation and Simulation, Communications in Statistics, Statistica Sinica. She has served as a Principal Investigator for three NSF research grants. She is a Fellow of the American Statistical Association and the United States co-editor for the Journal CSBIGS (Case Studies in Business, Industry and Government Statistics). She has graduated 4 PhD students and is currently supervising three PhD candidates in Business Analytics.

Recent publications

"Reciprocity in social networks - A case study In Tamil Nadu, India", Case Studies in Business, Industry and Government Statistics, 5(2), 126-131 (with S. Arumugam, B. Vasanthi and Changan Zhang) (2014)

"Imputing unknown competitor activity with Hidden Markov Models", *Journal of Direct, Data and Digital Marketing Practice*, 15, 276-287 (April/June 2014) (with Guangying Hua, Danny Jin, John Lin, Qizhi Wei, and Changan Zhang) (2013)

"Optimization of the marketing mix in the health care industry, with a view to reducing consumer costs", under revision, to appear *Journal of Pharmaceutical and Healthcare Marketing* (with Guangying Hua, Danny Jin, John Lin, Qizhi Wei, and Changan Zhang) (2013)

"Kohonen Self-organizing maps as a tool for assessing progress toward the UN Millennium Development Goals", *Journal of Human Development and Capabilities*, 14(3), 393-419 (with Joel Deichmann, Charles Malgwi and Olomayokun Soremekun) (2013).

"Living standards analytics: development through the lens of household survey data", Springer-Verlag, (with Jonathan Haughton) (2011).