Professor Cathal M. Brugha

Professor Cathal M. Brugha, is Director of the Centre for Business Analytics in the School of Business, University College Dublin. He has a BSc and MSc in Mathematical Science from UCD, an MBA from TCD, and a PhD in Combinatorial Optimisation from UCD. As President of the Analyics Society (formerly the Management Science Society) of Ireland since 1992 he has represented Ireland annually at council meetings of the European Association of Operational Research Societies (EURO) and the International Federation of Operational Research Societies (IFORS). He was Editor of the IFORS Journal, International Transactions in Operational Research from 2000 to 2006.

He is a Fellow of the Marketing Institute of Ireland, and was for many years Chair / Member of the Institute's Education Committee, and an Extern Examiner.His main theoretical research is in Nomology, the study of the decision processes of the mind, the structures or "covering laws" that frame people's thinking and provide commonalities between different fields and cultures. He is currently testing these structures through empirical surveys of business relationships and inter-cultural trust between China and Ireland. His applied work is focused on generic decision methodologies and on multi-criteria measurement www.mcdm.com.

He is a member of international societies and working groups for European and Global conferences since 1992 including: Multi-Criteria Decision-Making, and Complex Societal Problems, and has participated in East-West conferences since 1998 including Knowledge and Systems Science, the International Society for Systems Science, Meta-Synthesis and Complex Systems.He has been a Visiting Professor at the China Academy of Science in Beijing in 2006 and Xidian University, Xi'an in 2009. He is carrying out research in China with Professors Rong Du and Shizhong Ai of Xidian University, Xi'an, who spent 2007 researching with him in UCD Business School, funded by the Chinese Scholarship Council.He is also doing research into Irish Business in China with Dr. Liming Wang and Dr Lan Li of UCD's Institute for Chinese Studies and Confucius Institute. Together they have recently published a book: "Doing Business in China: The Irish Experience". http://www.blackhallpublishing.com/index.php/doing-business-in-china-the-irish-experience.html

Talk 9: Business Analytics: Integrating Business Intelligence with Data Analytics

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Abstract:

Although OR/MS techniques are powerful, and increasingly accessible and usable because of advances in IT, they are often not used to rigorously analyse a problem, model its solution, and produce as exact a solution as possible. We show that a mainly quantitative approach to analysing data should be described as Data Analytics. Business Analytics is the greater innovation in analysing company decision-making, and is generating new forms of Analytics, including Descriptive (including Social and Visualisation), Forecasting (including Predictive and Estimation), Decision (including Business Intelligence), Marketing (including Advertising and Customer), Logistics (including Supply Chain and Distribution), Strategy (including Business Change), and Management Analytics (including Financial and Fraud). We interpret these aspects of Analytics within a comprehensive structure, and show the need for a balanced integration of Business Intelligence and Data Analytics. This extends to combining Quantitative and Qualitative points of view, and to the need for Academic Researchers to work with Management Practitioners.

We describe the collaboration between the UCD Masters in Business Analytics and Distinct, an Irish Analytics Consultancy in projects on Data Mining for Marketing Analytics, Credit Scoring, Fraud, and Algorithms for Predictive Modelling.

We illustrate how Analytics extends to managing sport, such as football, and to healthcare, showing how it can help with training doctors to diagnose Dementia. Here Decision Analytics discovers the generic structures that drive the factors that mediate success in sport or explain the onset of illness, while quantitative tools such as data mining and algorithms, provide the links from the generics to the case applications. We also show how Analytics can help to understand cultural differences between Europe and Asia, giving the example of Ireland and China; and to help understand the problems of bureaucracy in the public service, and how to bring about reform.