

**INTERESTED IN... BIG DATA**  
**SIMULATION OPTIMISATION**  
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**PREDICTIVE MODELLING ADVANCED ANALYTICS**  
**DATA MINING DATA SCIENCE**  
**CUSTOMER INSIGHT FORECASTING**  
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## Developments in Analytics and Big Data – Adding Value

**Operational Research – adding value in analytics.** Over the last 75 years, Operational Research (O.R.) professionals have developed mature methodologies to analyse and use data that can **add significant value** in big data analytics. The aim of this event is to show how developments in Analytics are leading to **increased competitive advantage** in these challenging times.

**CHAIRS:**

**Morning – Geoff Royston** President, The OR Society

**Afternoon – John Ranyard** former President, The OR Society

**SPEAKERS:**



**Gearóid Madden** Accenture Analytics Innovation Centre, Dublin. Gearóid joined Accenture in 2006, working on strategic and delivery initiatives at a range of insurers before taking a leading role in the establishment and operations of the Analytics Innovation Centre in Dublin. Prior to joining Accenture he was a manager in the claims department of a large insurer in Ireland

**The use of Analytics to detect insurance fraud**

The Dublin Centre is Accenture’s global Centre of Excellence for Fraud & Compliance Analytics. Gearóid leads the Insurance Team in Accenture’s global Centre of Excellence for Fraud & Compliance Analytics. The talk will be illustrated with some case examples



**John Hopes** Lead Partner, Business Modelling, Ernst & Young, Vice President, The OR Society, Chair, Analytics Working Group. John leads Ernst & Young’s Business Modelling practice of over 100 consultants in the UK and over 400 globally. He has worked in the area of analytics, modelling and Operational Research for over 30 years, first in industry with Shell and then, for over 20 years, as a consultant.

**How O.R. and Analytics skills can be mutually beneficial**

The O.R. community has a long history of using analytics on big data to add value, including the development of effective methodologies that ensure implementation. There is much potential synergy from collaboration between O.R., Data Science and Analytics, which will be illustrated via case studies.



**Colin Shearer** SPSS. Colin has a background in Computer Science and Artificial Intelligence at the University of Aberdeen and, since 1984, has been involved in applying advanced software solutions to business problems. He co-founded Integral Solutions Ltd in 1989. A pioneer of data mining in the early 1990s, he was the creator and architect of ISL’s award-winning Clementine system (now IBM SPSS Modeler) and led a team which tackled numerous predictive analytics projects in areas including finance, broadcasting, market research and defence.

**The ‘Analytical Revolution’: the Industrialisation of Advanced Analytics**

It’s a given that the cloud helps businesses of all sizes overcome infrastructure constraints. This is extremely pertinent to the uptake of advanced analytics by a broader range of organizations. Advanced analytics can be the key to better decision making in virtually any area of business.



**Aaron Sugarman** Head of Commercial Analytics, TUI UK & Ireland. Aaron has been with TUI UK & I for 12 years out of a 14 year career in operational research. A key element of his current role is leading the development of the automated yield systems which dynamically manage the price of up to 10 million holidays; responding to fluctuations in demand, capacity and costs in order to maximise margin. His team also supplies an analytical service to the UK business which tackles a range of topics from the prioritisation of web search results to the configuration of aircraft.

**The application of analytics in Tour Operating**

TUI UK and Ireland, which is part of TUI Travel PLC and includes the brands of Thomson and First Choice, takes over five million customers on holiday each year. Aaron will give an overview of the application of analytics in different areas including that of yield management, web analytics and customer relationship management and then take a look at the opportunities in the future roadmap.

MORNING PROGRAMME	
8.30 – 9.10	Coffee on arrival
9.15	<b>Welcome from the Chair</b> <i>Dr Geoff Royston, President, The OR Society</i>
9.20 – 10.00	<b>The use of Analytics to detect insurance fraud</b> <i>Gearóid Madden, Accenture</i>
10.00 – 10.40	<b>How O.R. and Analytics skills can be mutually beneficial</b> <i>John Hopes, Ernst &amp; Young</i>
10.40 – 11.00	Morning tea and coffee
11.00 – 11.40	<b>The ‘Analytical Revolution’: the Industrialisation of Advanced Analytics</b> <i>Colin Shearer, SPSS</i>
11.40 – 12.20	<b>The application of Analytics in tour operating</b> <i>Aaron Sugarman, TUI UK and Ireland</i>
12.30 – 13.30	Lunch



**Sanjit Atwal** - CEO, Squawka

### Analysing Premier League Player Value using Big Data

Football is a global behemoth when it comes to business. English Premier League clubs, especially, receive huge amounts of television revenue on an annual basis and even clubs getting relegated from the top flight will, the following season, receive parachute payments of approximately £12million. But how much analysis actually goes into the expenditures of these clubs when compared to their on-field performance? Squawka has developed its own unique player performance index, which analyses over 14 million on-ball actions in real time to display the performance of each player, enabling managers to compare team/player performance and value for money.



**Detlef Nauck**, BT - Chief Research Scientist. Detlef is a Chief Research Scientist with BT's Research and Innovation Division. He is leading a group of international scientists working on Intelligent Data Analysis and Autonomic Systems. He is a Visiting Professor at Bournemouth University and a Private Docent at the Otto-von-Guericke University, Magdeburg, Germany.

### Predictive Analytics and Proactive Service – their impact on BT and new research developments

The presentation will cover a number of projects at BT that have used predictive analytics in order to improve service performance and to pre-empt service failures. It will also give a brief overview of their current research programme in autonomies and its relation to big data.



**Fintan Galvin** Founder and CEO, i01, a leading Open Source consultancy which he formed having spent 20 years delivering systems into some of the largest organisations in the world (including, Home Office, Cabinet office, NBC, Nike and TUI). He is passionate about the future of the web and was listed in the Semantic web Top 100 thought-leaders and visionaries discussing the future of the web. He believes that the web is dramatically changing as the relationship between people and content evolves and becomes more directly and permanently connected.

### Search Engines and Analytics

Analytics and search engines are natural bedfellows as shown by the changing way in which search engines are using user action based Analytics to drive their algorithms in order to get the best answers delivered back to the users. The focus will be on combining three key areas, Search Engines, Analytics and Semantics using open source tools. The session will look at a case, examining how to put these areas together to best effect to gain a competitive advantage and give an insight into the tools that can be used to achieve this.



**John Lord**, Head of Data Analytics, HM Revenue and Customs. John has been a civil servant since completing a Masters in O.R. at Lancaster University. He is now Head of the Data Analytics Team in HMRC, Manchester.

### Analytics in Tax Collection

Predictive analytics has been used for some time in HMRC to target scarce resources. Recent developments in technology and a recent benchmarking exercise have helped HMRC understand how to embed predictive models better. The talk will cover a couple of example models and other applications using the mass of data HMRC holds.

## AFTERNOON PROGRAMME

13.30	<b>Welcome back!</b> <i>Dr John Ranyard, The OR Society</i>
13.30 – 14.10	<b>Analysing Premier League Player Value using Big Data</b> <i>Sanjit Atwal, Squawka</i>
14.10 – 14.50	<b>Predictive Analytics and Proactive Service – their impact on BT and new research developments</b> <i>Detlef Nauck</i>
14.50 – 15.10	Afternoon tea and coffee
15.10 – 15.50	<b>Search Engines and Analytics</b> <i>Fintan Galvin, i01</i>
15.50 – 16.30	<b>Analytics in Tax Collection</b> <i>John Lord, HMRC</i>
16.30 – 17.00	<b>Questions and Answers</b> Speakers' panel
17.00	<b>Chair's closing remarks</b>



**The OR Society has recently established an Analytics Network to provide support to all working in Analytics and Big Data.**

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**BY JOINING THE ANALYTICS NETWORK**

**AT [www.analytics-network.co.uk](http://www.analytics-network.co.uk)**