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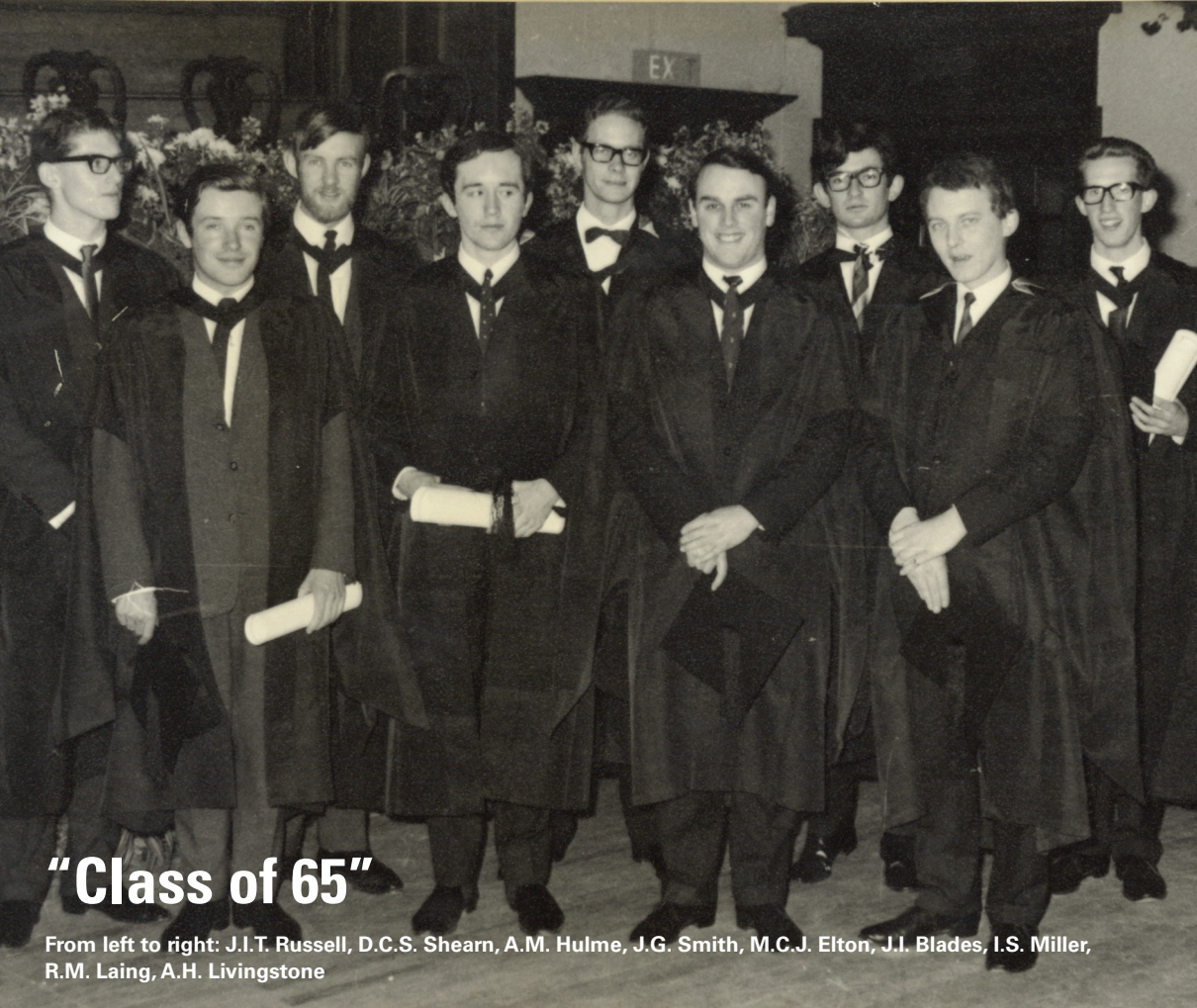


skein **news**

Number 24 – May 2013

Department of Management Science

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"Class of 65"

From left to right: J.I.T. Russell, D.C.S. Shearn, A.M. Hulme, J.G. Smith, M.C.J. Elton, J.I. Blades, I.S. Miller, R.M. Laing, A.H. Livingstone

**See inside for information about
the Department's 50th anniversary celebration**

News from the Head of Department

Richard Eglese

In August 2012, I took over from Mike Pidd and again took up the reins as Head of Department. I'd like to thank Mike for the great job he has done over the last few years. Mike has now reduced his time with the Department to 50% and that will reduce further to 20% from around the end of the year. Mike will be chairing the Business and Management subpanel for the REF in 2014. This is the research review exercise carried out every few years in UK universities and involves assessing the research outputs and impact for all disciplines, so Mike will not be short of things to do with his time.

This year there are a lot of comings and goings to report among the staff to bring you up to date with the people who currently work in the Department.

Paul Devadoss has now taken on a five-year secondment to GD Goenka in India as Director of Partnership Development. The University and GD Goenka have been in partnership together since 2009, providing a range of programmes at the GD Goenka World Institute campus in Gurgaon, near Delhi in India. However we still expect to see Paul in Lancaster from time to time.

Stein Wallace is now back in Norway where he has a position as Professor of Operational Research at the Norwegian School of Economics in Bergen. However he is retaining a link with our Department and is continuing to supervise some of our PhD students.

On the administrative side, we said goodbye to Doreen Silman at the end of the last academic year and have welcomed Jackie Hughes in her place. Jackie has worked in the University for some time and you may have come across her when she was working in Accounting & Finance or in University House. Another Jackie, Clifton, is now looking after our Master's programmes. It's very confusing!

We have been able to welcome several new academic staff. Gokhan Yildirim arrived in November 2012. Originally from Turkey, he received his Ph.D. from Carlos III University in Madrid and his research focuses on marketing productivity. His wife gave birth to their first child, a boy named Aras, in March. We were able to join in celebrating by feasting on chocolate and Turkish delight.

Professor Konstantinos Zografos arrived in January having previously been Professor of the Department of Management Science and Technology, Athens University of Economics and Business where he was Director of the Transportation Systems & Logistics Laboratory (TRANSLOG). Konstantinos is hoping to build our research capacity in Transportation and Logistics at Lancaster.

Professor Matthias Ehr Gott is the latest new arrival. He joined the Department in April having been Professor and Head of Department at the Department of Engineering Science, University of Auckland, New Zealand. Matthias



has a particular research interest in multi-objective optimisation where he has worked on real-world problems arising in transportation systems, transportation scheduling, medicine and radiation oncology, location planning, and portfolio optimisation.

Linked with LANCS-Initiative, Xinan Yang has now replaced Arne Strauss as Post-doctoral researcher. She gained her PhD in Edinburgh in the field of stochastic optimization, with an application in a telecommunication traffic routing problem. She is now working with Arne Strauss (Warwick), Christine Currie (Southampton) and me on industrial research linked to revenue management and vehicle routing.

Peter Jacko was appointed this year as a research associate on the LANCS-Initiative and now has a permanent post as lecturer. He was working in the Basque Center for Applied Mathematics in Spain and also has interests in stochastic modelling in OR.

In the Lancaster Centre for Forecasting, which continues to be directed by Robert Fildes and Sven Crone, we have welcomed Fotios Petropoulos as a Senior Research Associate. He worked previously at the Forecasting and Strategy Unit of the National Technical University of Athens. Devon Barrow, a recent PhD from Lancaster, also has a research position linked to the Lancaster Centre for Forecasting.

Edmund Burke, who has been closely involved with the Department through the LANCS-Initiative, has been appointed as a new Visiting Professor. Edmund is now Deputy Principal for Research at the University of Stirling.

There are other new appointments that have been made that we are expecting to arrive in time for the beginning of the next academic year, but I shall save news of them until the next edition of the Newsletter.

Prof Mark Smith arrived from Warwick at the beginning of last year to be the 6th VC of the University. He has been making a good impression, as we hope we did when he recently visited the Department. It may, or may not, be coincidence, but the University was delighted to hear that we are ranked 10th in the recently published Times Higher Education Student Experience Survey.

In the Department, we are pleased to note an increase in the number of students taking our programmes. At the undergraduate level 26 students graduated last year, including 7 firsts, and we expect 26 to graduate this year, but in the second year we have 55 majors registered. We have revamped our undergraduate offerings. Our well-established Single Majors in Management Science, Operations Management and Project Management have given way to a new suite of programmes: Business Analytics and Consultancy (three linked programmes, including variants that offer a year on industrial placement or studying abroad at an American university) and Management Mathematics (a Combined Major, run in conjunction with the University's Department of Mathematics and Statistics). On the MSc programmes we have 76 students this year, up from 50 last year, and for the first time the numbers taking MSc Logistics and Supply Chain Management exceed those taking MSc Operational Research and Management Science. Mike Wright has taken over responsibility for running the MSc programmes, and their admissions, from Graham Rand.



*Professor
Konstantinos Zagoras*



Matthias Ehrhoff

Congratulations

Richard Eglese



*Dr Stefan Ravizza and
Pedro Crespo Del
Granado*

Some congratulations are in order. Mike Pidd has been welcomed as a new Academician to the Academy of Social Sciences. Mark Westcombe has been awarded the University's Pilkington Teaching Award. This well-deserved award recognises Mark's excellent and innovative teaching, particularly with regard to the delivery of transferable and employability skills. Pedro Crespo Del Granado received the best presentation award at the 3rd student conference on OR, held at Nottingham in April 2012, for his paper "Optimization modelling of distributed energy systems for a smart grid". The photo shows him receiving the award from Dr. Stefan Ravizza, the chair of the conference. We also congratulate Mark Stevenson on his promotion to Senior Lecturer.

Finally, I was present at a table of representatives from LUMS at a London hotel in November for the Times Higher Education Awards ceremony. This was the inaugural year

for the presentation of the Business School of the Year award. We were very pleased to hear Lancaster announced as the winner of the award for 2012. LUMS was commended by the judges for its "demonstrable, consistent and considerable impact locally, regionally, nationally and internationally". Sue Cox received the award on behalf of the School from the Master of Ceremonies, David Walliams, and you can read more about this on <http://www.lums.lancs.ac.uk/news/26897/business-school-of-year/>

As we look forward to celebrating the 50th anniversary of the Department, we can see that the Department has grown in numbers and in the international diversity of the staff. We hope that you will continue to value your links with us and that you will keep us up to date with your news.

Richard Eglese
Head of Department

Honour for Prof. Peter Checkland

Professor Peter Checkland was recently awarded a Honorary Fellowship by the University in recognition of his distinguished service. The Chancellor Sir Christian Bonington presented the fellowship at a dinner hosted by the Vice-Chancellor Professor Mark E. Smith. The announcement of this honour said "Following a successful career with ICI, Professor Checkland became Professor of Commercial Systems at Lancaster in 1969. He pioneered impact-led research, and with colleagues developed Soft Systems Methodology which enables managers to engage with real life situations. His SSM based approach to problem solving in organisations is now taught around the world, in the public, private and voluntary sectors. An eminent scholar, his publications are now classic texts and the International Council for Systems Engineering named him as one of the most influential people in the field. He also served as Chairman of Lancaster University Management School."



Department's 50th anniversary

On 1st October 1963, Pat Rivett took up his chair at Lancaster University, the first professor in the University to do so. So we are celebrating 50 years of Operational Research at Lancaster with an event on September 27th from 10.30am–5.00pm. Please put the date in your diary, and plan to come.

The programme that has been arranged will be in three sessions.

The first will cover the start of the University and the Department (Genesis?) with some concluding remarks by Peter Checkland.

After lunch, a second session will look at the developments in the Department over the 50 years (Chronicles?), with specific reference to research, teaching and external links. Some concluding remarks will be given by Geoff Royston (former external examiner and President of the Operational Research Society).

A final session will focus on former students, one from each decade, talking about what it was like for them (Revelation?). The five alumni are travelling from Canada, New Zealand, Scotland and England to be with us. The day will be wrapped up by Alan Mercer (even more revelation?)

You can register your participation by using the EventBrite site (<http://mansci50th.eventbrite.co.uk/>)

If you have any queries please contact Graham Rand (g.rand@lancaster.ac.uk; 01524 593849)



Early PhDs: M C J Elton, G C King and J I T Russell, graduated in 1968

10 years of Robinson scholars



Eddie Robinson and Paul Wellings



Siddharth Singh

Eddie Robinson took the MA (as it then was) in Operational Research in 1971–72. After leaving Lancaster he has had a successful career in the United States with Mars Inc. Since 2003 he has generously sponsored a scholarship for an MSc student from a developing country, and visited us several times. Eddie comments “I benefited personally from the presence of overseas students on the course, as I know they did from the experiences they gained.” He is pictured with the former Vice-Chancellor Paul Wellings.

We have been in touch with the Robinson scholars, to find out what has happened to them since they left Lancaster.

2003–04 Siddharth Singh (India) joined Barclays, after leaving Lancaster, on their graduate intake, and found himself working in the Group Strategy & Planning team; it was here that he learnt how to apply the analysis of large amounts of data to test business hypotheses, evaluate proposals and develop strategic business recommendations on the basis of the results. He subsequently moved to Deutsche Bank, where in the Corporate Development / Corporate Investments team, he executed principal M&A transactions for the bank across the EMEA region.

In 2009, he moved to CognitoLink, a primary research firm serving institutional investors, where, “keen to expand my skills set, I moved into a senior management role at an entrepreneurial firm, leading a team of relationship managers across New York, London and Shanghai”. He is currently on sabbatical, and evaluating his next career move.

“Do I use my O.R. degree regularly? I’d say I use the analytical skills and mindset on a regular basis – especially to analyse my running performance, such as when I ran the London Marathon in 2012!”

2004–05 Jorge Mendez Morales (Mexico) moved back to Mexico City after graduating, and worked there for ING for about 11 months, before moving to Dallas in 2006. Since then he has been working for a private equity firm (family office). He says “It’s been over 6 years now that I’ve been living here, doing all sorts of financial analysis mostly in oil and gas projects. I am in charge of our energy investments portfolio. Haven’t done a lot of OR at work for a while (except for all the spreadsheets).”

2005–06 Lisha Zhu (China/HK), moved back to China after graduation, and is currently working in the Global Decision Science team in GE Capital, based in their Shanghai office. She comments that “I still benefit a lot from the OR techniques I learned at Lancaster, as one of my main job responsibilities is to provide analytical support to the GE consumer and commercial finance business globally. I recently recaptured what I learned in the Forecasting course, and used ARIMA to help improve call volume prediction for the call center.”

2006–07 Sheryar Tareen (Pakistan) started his career in London at ‘YouGov Plc’ in 2008 to work in their financial services and consulting division. After a couple of years he moved to ‘Network Research’ in 2011 as a Senior Research Executive and was in charge of their biggest multi million pound project for the Lloyds Banking Group. He has recently been offered a new position and a promotion at the ‘Ipsos Mori’ in their Loyalty division and starts working there in July 2013. “Really excited about that!”

Since Lancaster he has also been engaged in a few business enterprises of which most have been learning experiences rather than successful businesses. “But more importantly I haven’t given up and my enterprises have led me to meet a lot of interesting, important and



Lisha Zhu



Sheryar Tareen

intelligent people from around the world. Two ventures that have succeeded and that I am particularly proud of are a property business in central London and a Political enterprise to understand and solve the problems in the Afghanistan Pakistan region. Also, I am still determined to set something up in within Pakistan and I will make sure you are the first to hear about it when it happens!”

“During my MSc I was a big fan of Soft OR techniques and I apply them at work, business and in my daily life almost every day. Apart from working I enjoy spending time with my beautiful little daughter ‘Mahnoush’ who is 18 months old. I hate leaving her in the morning and can’t wait to see her on my way back from work!”

2007–08 not awarded

2008–09 Changchang Xue (China). Cherry first worked as a credit risk analyst in the personal current account credit risk team in Lloyds Banking Group. After nearly three years in Lloyds, she moved to Equifax, working as a senior risk analyst. Her current role in Equifax and previous role in Lloyds “both involve heavy data manipulation and analysis, applying what I learnt during the MSc OR programme, such as SAS programming, Spreadsheet modelling, Statistics, Problem solving, Credit Scoring, etc. to my day to day job.”

2009–10 Nnamdi Nnadozie (Nigeria) says that “my time at Lancaster remains an unforgettable experience. At Lancaster, I found the ideal learning environment – a cosmopolitan campus atmosphere and hands-on teaching methods geared towards solving real life problems. As a graduate Mechanical Engineer who opted to study for an MSc. in Operational Research & Management Science, I had hoped the knowledge I would garner would give me

the much needed skills to build a career in multi – disciplines. I was right!” On his return to Nigeria, he worked in the Internal Control division of one of the biggest banks. Now he is a Mechanical Engineer with the National Petroleum Corporation and a proud alumnus of Lancaster University.

2010–11 Ifeoma Nwakwesi (Nigeria) joined Iroko partners as one of the senior managers. The company received several international awards and funding as one of the most innovative companies in Africa in 2011. She left the company late last year to another start-up, Slimtrader, as the country head for Nigeria, because “after about 3 years as a consultant, I want to build a good reputation as an executer before I start thinking of heading to Government “. Ifeoma went to the Nigerian Lancaster University reunion in May 2012 and met Nkemdilim Ugochukwu Anigbogu who had studied here for an MBA. They got engaged on Christmas Eve and were married on May 18!

2011–12 Diana Nyambura Kung’u (Kenya) returned to Kenya after completing her degree last summer. She is hoping that now the elections have taken place it will be easier to find a job.

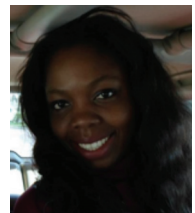
2012–13 Muthukumar Madhusubramanian (India) is our Robinson scholar this year. He grew up in Kumbakonam, known as the ‘temple town’ of Tamilnadu in the Southern part of India. He has an undergraduate degree in Biotechnology, but then joined Standard Chartered – Scope International as a Test Analyst, where he had the opportunity to work in a data warehousing domain project. His day to day work was concerned with analyzing the voluminous amount of data available in the data warehouse thereby deriving previously unknown patterns of useful, value added information.



Changchang Xue



Nnamdi Nnadozie



Ifeoma Nwakwesi



Diana Nyambura Kung’u



Muthukumar Madhusubramanian

Graham Rand's special relationship



The editor asked me to write about what I've been getting up to in the States. Apparently he was having difficulty persuading other people to write articles, so how could I refuse?

The latest activity in which I've got involved is as a member of the committee which chooses the winner of a prize for the teaching of OR Practice. The purpose of this award is to recognize a teacher who has succeeded in helping his or her students to acquire the knowledge and skills necessary to be effective practitioners of operations research or the management sciences. It's been interesting to see what others do.

As I write, I am recently back from an INFORMS meeting in San Antonio, just half a mile from the Alamo. Do you "Remember the Alamo!"? My role there was to be on the jury for the Edelman award. The Franz Edelman award rewards outstanding examples of the practice of OR: the first prize is \$10,000. This year we were choosing between the application of LP in Chevron to optimize their refineries, Simulation-Optimization being used to improve pharmacy inventory management for Kroger (a huge US retail corporation), OR transforming Baosteel's operations at their Shanghai plant, the determination of economically efficient standards to protect the Netherlands from flooding, the creation of a DSS for McKesson Corporation's Supply Chain, and Dell's channel transformation. After a long debate, which meant being late for dinner at the Awards ceremony, we awarded the prize to the Dutch, the third time in six years that the award has gone to a Dutch team.

The process which ends up with the dramatic announcement "and the winner is..." is a long

one. The first stage of the process involves a large committee determining whether a submission should be verified, a process that involves talking to the submitting team and also to senior people in the organisation. Are the results valid, particularly the financial benefits that have been quoted? Will senior managers, perhaps even the CEO, make public statements, either in person or on video, that the OR work is highly valued by senior management team? The verifier then writes a report and the Edelman committee come together, mostly by conference call, to decide the six finalists. This is a fascinating and detailed process: as a result of some excellent submissions the call this year lasted three hours. The finalists are allocated a coach to help them in their preparation of a paper for Interfaces and their presentation to the jury. I have been involved in all these stages, including coaching a winning team, the Dutch Railways.

Last year I was honoured to be asked to host the Awards Ceremony in Huntington Beach, the first non-American to have this responsibility. I had never seen myself as the Ricky Gervais of OR, though maybe Stephen Fry would be a better exemplar. You can see my performance, and hear the "jokes", on YouTube <http://www.youtube.com/watch?v=W8TwWVcaXOM&playnext=1&list=PL2A44124244DDD9CE>

I'm also involved with one of INFORMS' journals: Interfaces. My role as Book Review editor also places me on the editorial board. I'm currently publishing at a rate of 50 reviews a year. I've just reviewed my first book since taking over as editor: Blackett's War is a really good read for those interested in the creation of OR during World War II.

At last, but not least, I'm a quarter way through a two-year office as President of Omega Rho, the international honour society for OR and management science. This involves chairing an annual meeting, complete with gavel, and quite a bit of work during the year to keep things ticking over.

Kingsman Prize 2012

The Kingsman Prize for 2012 has been jointly awarded to Management Science PhD graduates Mahmut Boz and Colin Paterson. The prize was established in memory of the long-standing scholar of Management Science, Professor Brian Kingsman.

Mahmut Boz joined the Department's PhD programme at the end of 2005 direct from Daimler Benz where he was a Global Lead-Buyer. He developed outstanding relationships with more than 80 suppliers worldwide and was responsible for global sourcing strategies. He was a key contributor to strategic supplier development projects especially with SMEs. An engineer by training, Mahmut holds an MSc and Diploma in Engineering and Operations Management from University of Applied Sciences Esslingen and an MSc Purchasing and Supply Management from Aberdeen University. An Erasmus Scholar he undertook exchange programmes in the US, UK and Singapore.

Reflecting on his experience Mahmut positioned his research at the interface between IS and OM, and involved mastering three areas of literature: the relevant work on Quality Management, Information Systems strategy, and the underpinning theory in capabilities. His supervisors were Dr Martin Spring and Professor David Brown. Mahmut's core contribution is to provide an explanation as to how SMEs in a developing country context develop their IS capability to meet externally imposed international quality standards. Technically, this is an alignment related problem and his work is a comprehensive development

of the Levy & Powell (2005) model. To do this he first had to conceptualise a new form of capability – a semi-dynamic capability – which is a contribution in its own right. Achieving this quality of output involved a daunting amount of painstaking empirical work with SME automotive suppliers in Turkey. The work was of a complex longitudinal nature and was only made possible through his extensive professional contacts. Seven cases were studied. The fieldwork involved novel methods of engagement with managers using graphical data-collection tools.

Mahmut completed an exceptionally ambitious study, both in practical terms (companies located across Turkey) and theoretically (the synthesis of three areas of literature in the context of capabilities) and there are significant papers under development. The first of these was presented at the international Decision Sciences Institute Conference 2012 in San Francisco. In 2012 Mahmut took up a post as advisor to the Oman Government on industrial strategy and SMEs.

Colin Paterson started his doctoral studies at Lancaster in October 2007 immediately following his MSc. year here. Colin was initially co-supervised by Ruud Teunter and Kevin Glazebrook and latterly by Kevin alone, following Ruud's appointment at the University of Groningen. Colin passed his oral examination on December 12th 2011 with no need for subsequent revision. He now works for the Royal Bank of Scotland.

The transshipping of stock from one inventory holding location in a retail network to another is a device which can be used to achieve good levels of service (meeting demand in a timely fashion) with modest levels of stock.



Mahmut Boz



Colin Paterson

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PhD Awards

10 students have been awarded the degree of PhD since the last newsletter.

Bulut Aslan, from Turkey, “Enterprise Resource Planning Systems: An Assessment of Applicability to Make-To-Order Companies”

Mahmut Boz, from Turkey, “The Genesis of Initiative Formation in Medium-Sized Enterprises: A Capability-Based Perspective on Quality Management Standard-driven IS Development in the Turkish Automotive Industry”

Andrey Davydenko, from Russia, “Integration of Judgment and Statistical Approaches for Demand Forecasting; Models and Methods”

Adrian Fletcher, from the UK, “Generic Simulation modelling of Accident and Emergency patient flows in acute hospitals in England”

Andrew MacPherson, from the UK, “On the design of policies for the inspection, repair and replacement of 2-phase systems subject to ageing. When can error-prone sensors help?”

Gabriel Mandujano Garcia, from Mexico, “Operations Strategy in Start-Up Organizations”

Colin Paterson, from the UK, “Hybrid Lateral Transshipments: Reactive Stock Rebalancing in Supply Networks”

Jiani Qian, from China, “Fuel Emission Optimization in Vehicle Routing Problems with Time-Varying Speeds”

Lixian Qian, from China, “Essays on forecasting demand and preferences for cars in emerging markets: The case of China”

Jochen Schurr, from Germany, “On Assortment Optimization under Active Learning”

Continued from page 9

It is particularly useful in cases where the maintenance of high inventory levels at every location in the network is either very expensive or simply infeasible. Colin’s work has looked at using transshipments not only to meet any shortages which occur but also as a device for rebalancing stock around the network and hence improving future performance. He produced an outstanding literature review which was subsequently developed into a review paper (European Journal of Operational Research, 210, 125–136, 2011). This has already received 50 or so citations (GoogleScholar). He also developed a simple approach to the

management of such enhanced transshipments based on a quasi-myopic approach which deployed dynamic programming policy improvement. A paper set in the context of the continuous review of stock levels has appeared in European Journal of Operational Research, 221, 317–327, 2012 while work geared towards situations (including the supply of car parts) involving the periodic review of stock is being further developed by doctoral student Sandra Rauscher. A paper is currently under review at the FT listed journal Production and Operations Management.

News of former students

Many thanks for all the responses and contributions that have been received since the last newsletter in 2012. Some of the offerings have been cut for reasons of length, not taste or decency!

Justice Akpan (PhD, 2006) accepted a tenure-track faculty position as Assistant Professor of Management and Information Systems at Kent State University, USA.

Adelaide Carvalho (PhD, 2006) has published a book on her memories as a PhD student at Lancaster University. Unfortunately there is no English version at this time, but see http://www.chiadoeditora.com/index.php?page=shop.product_details&flypage=flypage.tpl&product_id=750&category_id=14&option=com_virtuemart&Itemid=171

Massoud Bazargan (MA, 1980) After finishing his MA and seeing OR in action, he worked in different capacities mainly as OR analyst leading multi million \$ projects for 10 years. Currently he works at an aviation university teaching OR and leading projects. He has authored a book titled Airline Operations and Scheduling, which has been translated into Chinese and Turkish. He is professor of OR and Dept. Chair, and from August will be the Associate Dean for Research!

Ricardo Cassel (PhD, 2000) moved from Unisinos last year to join UFRGS, Rio Grande do Sul's federal university.

Dominic Duckett (PhD, 2010) has emigrated north to take up a position as a social researcher in risk at the James Hutton Institute in Aberdeen. The JHI is an HEI

focused on land use research. He is working in a Scottish Government Centre of Expertise looking at livestock diseases. He's conducting qualitative research with farmers and livestock stakeholders. He is also organising scenario planning workshops with key informants. The objective is for the Scottish Government to have a resource to call upon in the event of the next serious disease outbreak. He's working with veterinary epidemiologists, statisticians, mathematical modellers and a variety of researchers in different disciplines and different Scottish HEIs. He reports that he's enjoying the opportunity to put his Management Science PhD to good use.

Rachel Figelstone, formerly Robinson (MSc, 1988) is Head of Service Strategy and Communications in Information Systems Services here at Lancaster, and Principal of The County College.

Amitava Ghose (MA, 1975) called in to the Department two years ago, when he visited the UK for his daughter's PhD convocation at the University of Kent. He is returning to the UK in July for his son's post grad convocation at LSE. He says "it is impossible to forget the days at Lancaster and particularly playing cricket for Heysham with Graham Rand". He was Chairman of a number of subsidiary companies of a well known industrial group, with Head Quarters at Mumbai, and employing 30000 employees. He headed their medical division and received a National Award from the Government of India for manufacturing the first artificial knee implant in India. After retirement, he is acting as an Advisor to the hospitals located at Kolkata of the Fortis Group, who have a chain of over 75 hospitals in India and Asia.

Pin Pin Mary Ho (formerly Yiu) (MSc, 1986) has been in touch from Hong Kong to let us know that her children Joyce, Samuel and Rachel have just turned 20, 19 and 15 years old! Joyce and Samuel are now at University while Rachel is at Year 10. Mary is still working in administration in capital works planning at the Hospital Authority Head Office. The department has grown from just over 10 colleagues to nearly 40! Mary was promoted in July 2012, meaning a lot more responsibility, challenge and hard work. She is involved heavily in the major redevelopment and expansion projects of hospitals in the coming 10 years. Husband Daniel is professor of the Mathematics Department at City University of HK. All the family are very involved in their church, with Mary serving as a church committee member and involved in the Sunday worship and children ministries. She leads singing sometimes with either Joyce or Samuel playing the piano.

Patrick Hynes (BSc, 1988) attended the LUMS Alumni "Meet the Employer" event last year. On entering Gillow House (as he describes it) he had a brief encounter with 1984 when he spotted a sign for a Stochastic Processes lecture. He decided to stick with the planned Alumni event! A wise choice, as he received a very warm hearted welcome. After graduation he gained extensive expertise in the financial sector with a career in retail banking within risk management, marketing and business management functions. Seeking a more social endeavour he also worked in academic research and teaching and later led a social enterprise providing employment and social care for people with a learning disability. Building on his enduring interest in social investment and development, he joined

Oikocredit in 2007 as their representative in the UK and Ireland. Oikocredit offers loans to microfinance institutions, cooperatives, fair trade organisations and small-to-medium sized enterprises in developing countries. Social investment funds are raised from across Europe and North America. His dream is that Fair Finance will one day become as well known as Fair Trade is today. Further information on Oikocredit may be found at www.oikocredit.org.

Adrian Jonas (MSc, 2008) recently moved to the Foreign Office as a Head of Management Information, and climbed Aconcagua in Argentina (at 6962m the highest mountain in the world outside the Himalayas). The two are unrelated!

Gordon Jones (BSc, 1986) has been with Reeves, a firm of chartered accountants based in Kent & London since 1987. He said "Knowing that I wished to go into a practice like this the management science degree was spot on – Economics, Marketing and Beano. Our work is not just accounts and tax, it is thinking outside the box." Reeves, now in the Top 30 in the UK, collect awards, be it Accountancy Age, Lexus Nexus, Taxation and Employer locally.

Nanthakumar Karuppiah (MSc, 2009) left teaching 2 years ago and is now working for the Malaysia Building Society Berhad (MBSB), one of the subsidiary of Employees Provident Fund, similar to the building societies in the UK. He heads the Analytics and Market Risk Department. Part of his job is to develop new scoring systems for new retail products as well as enhance existing models. He recently attended the Lancaster University Senior Alumni Dinner with Sir Christian Bonington, the University's Chancellor.



Ann and Gilbert photographed in 1972 (Ann is third from right, Gilbert centre) and in 2013. Please let us know who else is on the photograph. David Smith takes centre stage on the back row.

Ann Langley (MA, 1972) and **Gilbert Laporte** (MA, 1972) met at Lancaster while they were doing MAs in Operational Research in 1971–1972. They got married in Bristol on August 3rd 1974. Their story has been featured in the Alumni Newsletter.

Ann was born in the UK and did her first degree in Mathematics at Oxford and then on to Lancaster in the hope of learning something that might make her highly abstract mathematical training more useful. While Gilbert was doing his PhD they lived in London and she worked at Mars Ltd in Slough. When they moved to Montreal she learned French, worked in the health care sector, obtained her own PhD in Management and became a faculty member, first at the Université du Québec à Montréal and then at HEC Montréal where she is now. Members of her family still live in Bristol.

Gilbert had graduated with a BSc (Hons) in Mathematics from McGill University, in Montreal, in 1971. He went on to do an MA in Operational Research at Lancaster, partly due to its reputation and partly because of the mystique side of England which he had discovered through the television series 'The Avengers'. After the MA he went to the LSE to do a PhD in Operational Research and graduated in 1975. Since 1976 he has been Assistant, Associate and full Professor at HEC Montreal.

Yuanfeng Li (MSc, 2007) earlier this year visited Paris and visited Chateau de Versailles for the second time. Standing in the grand garden,

he remembered the moment when he picked up his phone and saw his project supervisor's name, with a discussion about his draft report. He is now an equity analyst in an asset management firm, "where OR techniques do not help to make a lot of profit, but its systemic and proactive thinking is definitely a requisite for future success."

Jacob Noble (BSc, 2007) has been running his own company, with four others, for just over two years. After working for a short period for a web company and as a freelance web developer he set up his own web agency.

John Stewart (BSc, 1980) is still working in the financial services sector. After almost 10 years in two spells at KPMG he joined RBS in March 2011 as Head of Outsourcing. He says that the downturn in the Eurozone economy has made life even more interesting over the last year and his new role as Head of Supply Chain Strategy looks like it will be a very challenging one.

John married his Lancaster sweetheart Gillian (Dobbie: Lonsdale 1977–81) in 1983 and they have a daughter, Eleanor, who has graduated from Cambridge and has an MSc from Coventry. Ellie is an Environmental Officer for a company in Warwickshire. Phil, their son, is studying Business Management in Bath Spa University. Gillian teaches piano and looks after him when he is at home. He would like to hear from any old friends on his home email: johnjstewart@blueyonder.co.uk.

Lunch for Class of 1965/6

In 1965, at the start of the University's second year, a group of young men joined the Operational Research Department, which was then located in Skein House in central Lancaster. They were postgraduates on the MA in OR course; some had recently completed undergraduate degrees at much older universities but others had worked for a few years and were being sponsored by their employers.

After completing their degrees the sixteen went their separate ways (although five initially stayed in Lancaster to complete doctorates in the Department) but most stayed in touch with at least one or two others from the year group. Several subsequently worked overseas



Note: Present were Keith and Angela Aldred (Angela is the BA graduate), Julian and Sadie Cutland, Alan and Norma Halder, Peter and Pam Hewson, Martin and Kineeta Mitchell, George Reah, Philip and Sally Sutton. [George's wife Alma died in 2007.]

and three now live abroad permanently (in respectively the USA, Canada and South Africa).

Having missed celebrating the 25th anniversary of our entry to the Department, an enterprising trio (Alan Amphlett-Lewis and Philip and Sally Sutton) arranged for us, with wives, to meet in Lancaster in 1997 for a weekend, organised around a dinner attended by past and present staff, to celebrate 32 (=2⁵) years. There was universal agreement that we should 'do it again' but with our respective commitments to work and families it was some time before the idea resurfaced.

Then in 2009 the Department organised a networking event in London and a few of us, now retired, took the opportunity to attend and (with wives) to have dinner together afterwards. This was followed up by an enjoyable lunch in London last year, which concluded with agreement that we should aim to get together on a regular basis. Hence it was that we met on 10 October for a private lunch at No 4 Clifton Village, Bristol. The date was chosen to enable Julian and Sadie Cutland from South Africa to attend. On this occasion 13 were present (7 MA graduates and 6 wives, one of whom is a Lancaster BA graduate). Several of those who were unable to attend had sent good wishes. The conversation flowed and it was after 4pm when we eventually rose from the table.

Our plan is to continue to meet regularly. And if all goes well we will celebrate our 50th anniversary with a weekend in the Lancaster area in 2015 – perhaps an opportunity to revisit one of the Morecambe hotels, the Headway (where many of our course lectures were held) or the art deco Midland (where the Department held dinner dances).

George Reah

News from the MSc class of 2004–05

Xi Chen is living in North London, has married a Lancaster alumnus and has a 18 month old baby girl. Works in the city doing data crunching.

Katherine Cole (now Kent) initially worked at ECGD in Docklands, London as a Government Operational Researcher. She stayed there 15 months and then, in January 2007, made a move out of London to work in South Wales at the Office for National Statistics where she was employed as a labour market analyst, writing articles of trends in employment, inactivity, workless households and mothers in the labour market. She then switched to the UK National Accounts area in October 2009, where she is responsible for the team compiling export and imports of services estimates, and managing a change process to comply with updated European regulation on trade statistics. There's only a small OR community, approximately 8, spread over all areas of the office. "I'm really enjoy the work and the people here! Recently Sky came in to film how GDP statistics are produced and I got on camera walking down the room (see <http://news.sky.com/story/1002371/gdp-boasted-by-olympics-but-outlook-gloomy> – click on the olympics video and look out for me in the orange dress!)". She married Jon Kent in July 2007, and lives in Lydney in the Forest of Dean. She got to take part in the Olympic Opening Ceremony last summer "which was a dream come true! I was a Pandemonium drummer in the industrial revolution scene and managed to get on camera approximately 22 minutes in, if you have the recording".

Lloyd Dobson is still in the Army, and recently returned from his third tour of Afghanistan, having also served in the UK, Germany and NI.

Laura Duncan is currently working as a freelance stage manager, nominally based in Kent, but she takes jobs everywhere around the country.

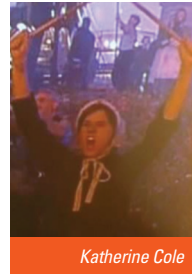
When she wrote she was in Exeter, about to tour a play to Oxford, Southampton, Peterborough, Huddersfield and Basingstoke. She is wondering which direction she would like her career to go and wondering if her OR knowledge and skills can come into play again. Maybe something to do with theatre management. Who knows!

Jimmy Keake is currently teaching at the University of Papua New Guinea.

Amy Marsland now lives nr. Ross-on-Wye and is on renovation project number 2 with her partner of 7 yrs (Karl)... no ring yet but she continues to live in (vain!) hope. "If you're bored and can ignore the poor grammar here's the project; <http://hammersandtongs.wordpress.com/>." She has been learning blacksmithing at Hereford College in the evenings (it's just coincidental this house had a forge but lovely all the same). "My long term ambition is to quit the 9–5 and take this up." She still needs her 'fill' of Manchester; its nightlife and the shops though. "It's a bit like 'Hot Fuzz' in the village and it's nice to see normality up North every now and again." The rest of her time is spent at a Munitions factory in Usk, Monmouthshire, which she loves, working for BAE Systems-Munitions as a Programme Manager running a number of projects encompassing a number of products – mainly Artillery and Tank. Karl is an Artillery Engineer "so it's great being the boss at home and at work!"

Stuart Mealing on graduation moved into Health Economics, initially working at Exeter University (two and a half years as a research fellow) and is currently in the consultancy sector (Oxford Outcomes – remainder of the time). Earlier this year he became Director of Health Economics.

Jorge Mendez Morales – please see the article on Robinson scholars on p6.



Katherine Cole

Pipat (Pete) Phankhumpa has worked for several companies including ACNielsen, Unilever, Danone and currently has the position of Commercial Finance Manager at AB Foods based in Bangkok.

Hazel Pilgrim (now Squires) has been enjoying healthcare modelling at ScHARR at the University of Sheffield since graduation and is now a Senior Research Fellow. She has used many of the OR skills from the course, in particular discrete event simulation and Markov modelling. She is in the last year of a PhD developing a conceptual modelling framework for Public Health economic modelling. She got married in 2010 and has just run a marathon! And she is on the ORS Council.

Camille Quenut is the mother of 2 year old twins (Thomas and Louise). She is currently living in Le Mans and working for Claas Tractor. This company belongs to the Claas Group and are developing and assembling tractors. As a part of financial department she is in charge of controlling the profitability of serial machines and on-going projects.

Kevin Taylor is working in London as a IT Project Manager for Marks and Spencer: specifically working on their new website which will launch in early 2014. "We are probably undertaking the largest Ecommerce project in Europe currently, as we are replacing the entire website infrastructure not just what the customer sees".

Simon Taylor has sent a great deal of information. Here are the edited highlights! He is still working at BT, where he's been since graduating. He's not using many OR skills, which disappoints him, but the upside is that he can work in the north, from home most of the time, in normal 9-5 working hours – "cushy lifestyle trumping engaging work!" On odd occasions he has been able to be some OR, "though never in a terribly academic way, since our unit's senior management value

quick answers in preference to meaningful ones, sadly. But I've been able to do a bit in terms of working out productivity measures with limited data, and forecasts of natural attrition of people leaving the business of their own volition". He has used OR skills on helping the admin/designer of an online computer game develop new features, for example making sure stats for dwarves are balanced with those of elves, and whether one route to victory is too easy compared to others. He married Natalie in 2007, and they have two fluffy bunnies who are very cute and a lot happier than they were when we got them from the rescue centre.

Panos Tsiantoulas says that "apart from the economic crisis in Greece, everything is fine. I am not grumbling, I have fun (I am trying to travel a lot) and I love my job". He still works in Hellenic Telecommunications Organisation SA (OTE SA – member of Deutsche Telekom group), now in a managerial position, in the HR Project Management Office, reporting directly to OTE Group Chief Human Resources Officer (OTE Group employs approximately 32,600 people in 5 countries). He has a Certification in Change Management and is also a member of Deutsche Telekom Talent Pool.

Xiaoyan Wang is currently working in a real estate firm back in China after spending 5 years in Goldman Sachs in London.

Dana Wessely moved back to Israel and started working for Teva Pharmaceuticals. She has had several different roles in the company, one of them being material planning and logistics: "exactly what we learned on the course". She is currently finishing a two year relocation to the US and is about to return to Israel to work in business development.

Heng Wu is back in China, has married and "doing what I like to do (maybe not exactly but very close)".

News from the MSc class of 2005–06

Rafael Fernando Campo Curiel worked as a Forecasting Analyst for Waitrose with the system in charge of predicting sales. However, in January 2011 he fell ill with M.E. (Myalgic Encephalomyelitis), lost his job and is still ill and disabled. He says “Hopefully I will recover with time and by living my life with low stress”.

Emmanuel Chinweze currently works as a Compliance and Quality Assurance Analyst at Etisalat Nigeria, a Telecommunications firm. He says that misses the Lancaster weather!

Yaacov David has settled at home in Bombay, and has been working with one of India’s finest Airlines, Jet Airways, since Aug 2007 as part of Network Planning. He says “I see so many opportunities to have OR applied here but it is really difficult to build a consensus amongst decision makers to use it”.

Rachel German is on her second job since Lancaster. She works for Capita Consulting as a consultant within the Health Advisory team (formerly Tribal), mostly with the NHS, which, she says, “is quite challenging at the moment and my role is highly analytical mostly looking at benchmarking and activity, capacity and income modelling for providers and commissioners.” She has recently relocated back to the North West.

Melpo Gkofa worked for 3 months in Barclaycard – Northampton during her MSc project, and then got an offer from Barclays in London from the “Consumer Loans Credit Risk” Team where she worked for 3 years (until August 2009). She then decided to move back to Athens and since September 2009 has worked at National Bank of Greece (NBG) in the “Group Risk Control and Architecture” Department. She is now married, with a 2 year old daughter.

Galina Gouneva is currently working as a Project Manager for BAE Systems.

Dan Hill is still at Expedia, working as a manager of decision support. They use a variety of modelling approaches to support Expedia’s sales teams worldwide in prioritizing their work. For example they have a multivariate regression model which predicts a hotel’s potential for sales for hotels not in their portfolio (for prioritizing hotel acquisition), and a time series based model which predicts where they are most likely to stock out of rooms, which is used to direct efforts to improve availability for their customers.

Qasir Hussain has, since leaving Lancaster, learned Arabic in Egypt in six months, worked as a senior transformational consultant for British telecom, and is now working as a senior programme manager for Cleveland clinic Abu Dhabi. He is in charge of programme managing all the procurement of 35,000 pieces of state of the art medical equipment; managing multiple vendors; designing and building applications for all the medical equipment with applications and creating a model of high quality as per the Cleveland clinic campus in Ohio.

George Krontiris returned to Athens in 2008, after a short work experience in UK and the Netherlands. He is currently working in an insurance company (AIG) as the auto manager, fully exercising his OR skills.

Christos Kyliakoudis is a web entrepreneur.

Tom Monks and **Stephanie Lord** got married last September. Tom has recently co-authored a paper with Mike Pidd and David Worthington, and Paitosh Agarwal (MSc 2009–10): Martin Pitt, Thomas Monks, Paritosh Agarwal, David Worthington, Gary A Ford, Kennedy R Lees, Ken Stein, Martin A James, ‘Will delays in treatment jeopardise the population benefit from extending the time window for stroke thrombolysis?’, *Stroke*, to appear, doi: 10.1161/STROKEAHA.638650.

Continued on page 20

The class of 2010–11

Thank you for all the news updates from the MSc in Operations Research and Management Science cohort that graduated in 2011.

With such a strong contingent from cricket playing nations represented in our cohort, Simon Pegg says “It is impossible for me to refrain from mentioning England’s successful test tour of India recently. It doesn’t happen very often so you can’t blame me for gloating”.

A number of the cohort have remained in education and are currently studying for their PhD’s.

Farooq Habib has recently completed an MRes and is now a full time PhD student in Logistics and Supply Chain at Cranfield University. He is responsible for two research projects: The first project is the Development of a Sustainable Northern European Food Supply Chain and is sponsored by the European Union, whilst the second is analysing the Service Economy of Cataract Surgery Equipment and is funded by the NHS.

Farooq is also working as a visiting Lecturer at a number of universities where he is teaching Supply Chain Management and Business Operations at undergraduate and MSc levels. He has acted as an article reviewer for the prestigious “Supply Chain Management Journal”.

Farooq says “I have found the Lancaster University MSc course extremely useful for my teaching and research purposes. The faculty and course content is of world class standard”.

Prasanna Kumar is well underway with his PhD at Edinburgh Business School, specializing in vehicle routing type problems. In the first week of May, Prasanna presented a new mathheuristic at a conference in Montreal. The advantage of

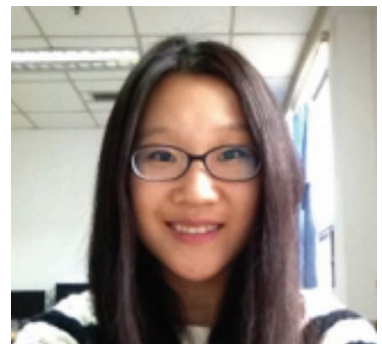
this method is that intelligence of mathematical programming based algorithms can be used to guide the solution to an optimum. In the second week of July he is in Rome, presenting a paper on commodity flow based formulations.

After the MSc, **James Edwards** joined the STOR-i Doctoral Research Programme at Lancaster and has now started a PhD. This aims to bring together methods from both Operational Research and computational Statistics to improve solutions for stochastic sequential decision problems.

Other former students went into the world of business in a variety of roles across the world.

Kamara Simpson has returned home to beautiful Barbados and is a Senior Research Analyst with the Summit International Bank. She has decided to further branch into finance, and pursue a certification in Financial Risk Management. Over

Xin Yu has returned to Jiangsu, her home town in China and is now working as an international officer for the International Institute of Urban Systems Engineering (IIUSE) and the South East University School of Civil Engineering.



a year after graduating Kamara says “I’m really glad I decided to come to LUMS. I now get to apply what I learnt, which is fantastic. Both hard OR and soft OR are relevant to my daily tasks and projects”.

Sachin Rastogi is living in the “great” city of London, working with McKinsey & Company as an Analyst. He is working primarily in the Healthcare domain focusing on UK and European countries. Sachin says “Life post Masters has been great. The experience I have gained working alongside people from such diverse backgrounds has taught me a lot”.

Congratulations are the order of the day for **Bilal Khan** who got engaged last October. He is currently living in Woking and is working as a Supply Planner for Procter and Gamble.

After completing her MSc, **Mrudula Venkatachalam** moved to London and dabbled in her passion for dance and Kathak practice. She was selected to perform in the London Paralympics Closing Ceremony. Returning to India late in 2012, she is now working for Zinnov, short for zeal for innovation, a consultancy providing services for R and D companies. Mrudula says “The best part of my job is the sheer opportunity to learn. Projects are anywhere between 2 weeks to 3 months long and broadly

include maturity assessment benchmarking, learning and development initiatives in R and D organizations and market expansion. At present I am working on a project for Metlife. The objective is to offshore more work from Metlife US by providing value-add services like analytics and six sigma process improvement techniques amongst others. All projects in Zinnov are quite novel and require a very structured approach for going about execution. I have found the problem structuring and consulting module to be invaluable in this regard. It has helped me to breakdown the problem statement and to understand the various issues, options and strategies to arrive at a solution to support the end goal. I believe I would not have been able to deliver great work without these tools.”

Deva Srinivasan is at present working as an Associate Insight Consultant in a Market Research company called Brandscapes Worldwide, based in Mumbai. The job involves working with the Data Mining & MR teams conducting social media research used for brand tracking purposes.

Arun KrishnanKutty is back in Bangalore, the Silicon Valley of India. He is an Analyst with the Business Analytics Consulting group in TATA Consultancy Services. The role involves working for various clients across verticals and

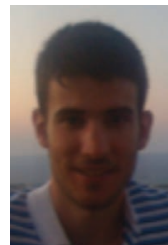


Mrudula Venkatachalam

Ilias Zikopoulos is now living in Antwerp, Belgium working as an S & OP consultant, mainly doing forecasting and demand planning at Solventure, a small consulting company with international clients. In general, Ilias is splitting his life between Antwerp, London (where his girlfriend works) and Athens.

Ilias says “I got this job because of the reputation that the Lancaster Centre of Forecasting had amongst my colleagues”.

Ilias is now planning to take some modules for the APICS certification in Supply Chain.





Arun KrishnanKutty

geographies, covering the areas of customer analytics, risk analytics and financial analytics. Working with other consultants across the globe, Arun is charged with providing best in class solutions and recommendations to help clients meet their financial/organizational targets and goals.

Arun says “I come across various challenges in my daily professional life and I fall back on the skills I was able to master as a part of my post graduate degree at Lancaster. Working as a consultant with the analytics group in TCS, I still look back into my post graduate notes and slides to help me solve some of the problem that my clients face”.

After working for an American consultancy based in Singapore, **Anuj Gupta** is now employed as an SAP Managing Consultant working for HCL Axon Ltd in Australia. Anuj says “The degree has been widely recognized among employers across the globe which made it easier for me to get a job. The funny part is that I am not really using the concepts and methodologies learnt during the course. My focus has been mostly data logistics and data

standards within the SAP work space. However, I must admit that studying at Lancaster has helped me shape my career at a professional level and someday I would like to come back to the university and maybe do another course.”

David Brailsford is now enjoying life in London and occupies a flat overlooking the Oval cricket ground. He is employed by IBM as a Business Process Consultant and has ironically spent large amounts of time back in the North West on his first assignment at BAE Systems in Barrow in Furness.

Last but not least, **Simon Pegg** left the course in May 2011 to establish a new business unit for Liberata Ltd, a privately owned business process outsourcing company based in the UK. He successfully completed his dissertation in May 2012 whilst working for Liberata. Since graduating Simon has continued to develop the theme of his dissertation, by writing vba code to simplify the creation of a bill of materials in Excel. Having been unable to find anything similar in the marketplace, he is now considering marketing the software as a commercial enterprise.

Continued from page 17 – News from the MSc class of 2005–06

Ehsan Rehman is working as an Analyst in Quant Marketing Company in London.

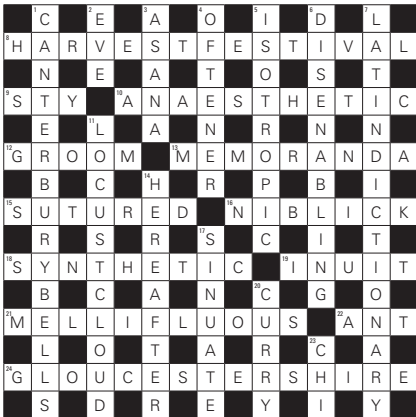
Sofia Souli after Lancaster first worked for 3 years for SSL managing Scholl and moved to Reckitt Benckiser managing brands such as Veet, Clearasil, Scholl, Finish. Now she has just moved to Bucharest, taking over a regional role in managing Dettol for South Eastern Europe. She says that it is a “very demanding role but at the same time I’m exposed to different markets which for sure will broaden my experience in strategic marketing management”.

Srikanth Sankaran is working with HM Revenue & Customs as a Senior Operational Researcher in London. Before that he worked as a Quantitative Analyst at the NHS for 3 years.

Andrew Westmoreland is still with AG Barr soft drinks, where he did his MSc project, and is currently Supply Planning Manager.

Lisha Zhu – please see the article on Robinson scholars on p6.

Previous Crossword



My thanks and congratulations to the following for sending me solutions to last year's puzzle (and apologies to anyone else who sent a solution which vanished into the ether whilst in transit).

Ron Adelson, Roy Blackwell, Richard Eglese, Jon Glanville, Paul Goodwin, Jon Jolliffe, Gilbert Laporte, Christine McCree, Dennis Rutter, David and Tina Smith, Ken Turner and Michael Wright.

Twelve received solutions is only two fewer than last year's record number of fourteen which is very good seeing that the complete omission of any lights with their first letters checked was generally agreed to add an extra degree of difficulty to the puzzle.

Solvers were asked to contribute alternative clues for 14 Down, viz. 'hereafter'.

From the many received, I've chosen ten. Unsurprisingly, many, like my own clue, featured scarcely concealed anagrams, e.g.

The sinful fear there!

The future causes fear there.

Earth free reform is for later.

Others used 'present' for 'here', e.g.

Present follows, not presently.

Present follows – eventually.

Present stern queen's future.

And, perhaps more abstrusely, I give the following examples:

The queen meets a terrible fate in a woman's paradise

After the ultimate in genocide, a terrible fate is in store for Mr Hitler, perhaps, in Hell.

Sounds like it could be an echo – of Heaven?

and

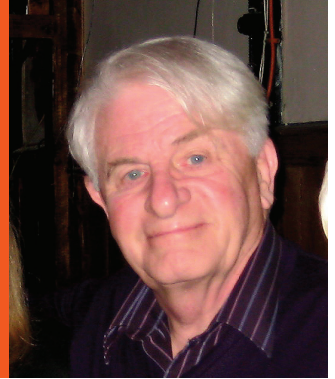
Light gas beam gains energy later.

No attempts at any clever tricks in this year's grid – just a straightforward Times-style cryptic. Enjoy, and please send complete solutions to cliff.wilkinson@talktalk.net together with alternative clues to 15 Across.

Cliff Wilkinson

Skein crossword

Cliff Wilkinson

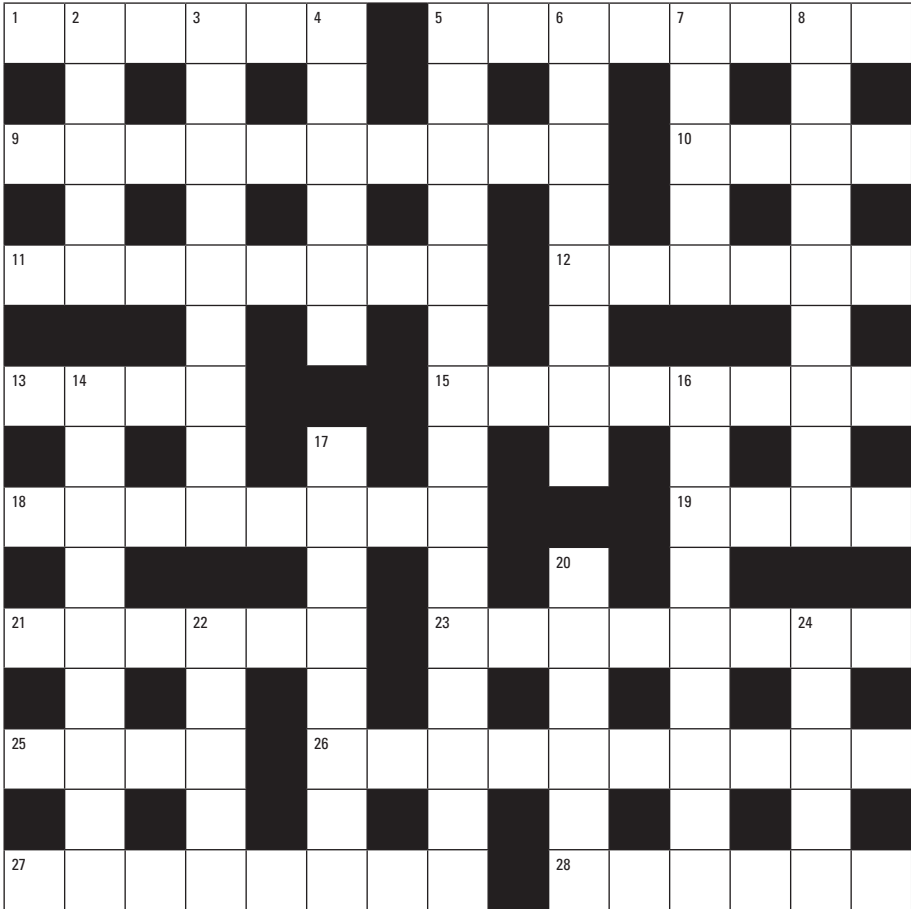


ACROSS

1. More work needed from you, say, to rebuild patio. (6)
5. Despoiled, de-energised, battered and asymmetrical. (8)
9. Pointer for match official in foreign mix-up. (10)
10. Guard abandons second team. (4)
11. Common transport in Cambridge (Circus?) (8)
12. Infer Verdi is rearranged – Ernani, initially? (6)
13. Workshy, so paid less to some degree. (4)
15. Dated old boy, single and extremely tactile. (8)
18. Formal garden for some – with ruler to follow on. (8)
19. Little time to seek job. (4)
21. Building style acquired here in ancient Rome. (6)
23. Widespread communication re – intent to reassemble. (8)
25. Brain care. (4)
26. Might a week be sufficient to provide for small deficit? (10)
27. Offensive swimming off I.o.W? (8)
28. Stop in cobbled side street. (6)

DOWN

2. Senior service pursues, in spite of pain. (5)
3. With foreknowledge this time is right to embrace Capri, not April. (9)
4. Each pastry comes in superb wrapper. (6)
5. Member in front of gate shows way out of Lords. (3,6,6)
6. 1 is seen in display. (8)
7. Accept responsibility for fashionable dog. (5)
8. Weakens, even tears apart. (9)
14. Spade, say, turned over Scot – that's harsh! (9)
16. Suite girl ordered for service procedures. (9)
17. In past times they were ready for the Greeks. (8)
20. Put aside for good man who was in debt. (6)
22. Ultimately each lady and lover go for this kind of hotel. (5)
24. Oriental musketeer, but not a character. (5)



Mark Elder (BSc 1978) awarded the ORS Beale Medal 2012



The OR Society's Beale Medal is awarded in memory of the late Martin Beale, who was a leader in the theory and application of mathematical programming in the UK. It gives recognition to a sustained contribution over many years to the theory, practice, or philosophy of O.R. in the UK. For 2012, the medal was awarded to Mark Elder, Simul8 Corporation. He is pictured receiving his medal from the President of ORS, Geoff Royston.

Mark has been a pioneer in the field of visual interactive modelling and simulation, obtaining his doctorate for research in this field from the University of Strathclyde. He spent some time as an academic teaching and conducting research on simulation at the University of Strathclyde.

Mark first studied Operational Research at Lancaster University from where he graduated in 1978 with a BSc. During his undergraduate career he undertook work that led to a publication with Graham Rand and two Canadian co-authors, Paul Dixon and Ed Silver. (A heuristic algorithm for determining lot sizes of an item subject to regular and overtime production capacities, *J of Operations Management*, 3, 1983, pp121-130).

After Lancaster he joined British Leyland, simulating the introduction of new car derivatives to existing plants. In the late 1970s he was one of the team who created SEE-WHY, the world's first Visual Interactive Simulation software. Mark then went on to help found the simulation company Insight Logistics which developed the GENETIK simulation software package.

In 1994 Mark founded SIMUL8 Corporation and was CEO until announcing his retirement in 2012, though he continues as Chair of the Board of Directors of the company. The SIMUL8 software has had a significant impact on the field of simulation. For the first time it provided readily affordable simulation software which has been widely used in industry and the public sector both in the UK and overseas. Through SIMUL8's educational licences and support for academics, simulation has been introduced to thousands of undergraduate and postgraduate students across the world. Mark's vision is that everyone working in any process should be thinking about how to improve it – by simulating their own ideas for change. He has gone a long way to achieving that vision.

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Produced and Edited by Graham Rand and Gay Bentinck



We have setup a Linked In group for Management Science Department alumni. So that you can stay in touch and share job offers etc. We already have 555 members!

The link is: http://www.linkedin.com/groups?home=&gid=4122815&trk=anet_ug_hm