

PROFILE

Southampton Business School explores new credit scoring technologies to aid small business growth

SPOTLIGHT ON:

50 years of interdisciplinary research between Management and Mathematics

RESEARCH:

Encouraging sustainable lifestyles in the Hair and Beauty sector

LATEST NEWS:

Southampton Business School awarded international accreditation by AACSB

WELCOME TO PROFILE



I am thrilled to share with you the news that we have been accredited by the prestigious Association to Advance Collegiate Schools of Business (AACSB). This recognises our constant endeavour to be at the forefront of business education through outstanding teaching, research with impact and close connections with stakeholders and partners in the region and beyond. There is more on this exciting development for our School elsewhere in this edition of Profile.

We swiftly shared the news of our accreditation through social media, an increasingly popular way of communicating with our students, partners and stakeholders around the world. Our Facebook page has over 2,900 likes and over 1,500 people follow us on LinkedIn. If you want to keep up with the latest news from Southampton Business School, I would recommend you connect with us online.

Many business people value their links with the Business School through our popular series of evening seminars. Each month, leading experts examine topics such as leadership, ethics and Brexit; our last session on the neuroscience of engagement and productivity was so popular we had to find a larger venue.

In this edition of Profile we celebrate the 50th anniversary of world-leading analytics at the Centre for Operational Research, Management Science and Information Systems. We partner with colleagues in Mathematics here at the University of Southampton to carry out research with public and private sector companies around the world. Our postgraduate programmes, each featuring a three month summer project, have produced skilled and talented graduates for many years.

Research at Southampton Business School has impact. Read on for an insight from Dr Denise Baden into how hairdressers are encouraging sustainability, and an indication of how Dr Cristián Bravo is making funding more accessible for small businesses.

Professor Martin Broad
Head of Southampton Business School

TALK TO US

Have you worked with Southampton Business School?
Share your experience with us and you could feature in a future edition of Profile.

Contact: enterprise@southampton.ac.uk

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CULTIVATING OPPORTUNITIES FOR BUSINESS GROWTH

Southampton Business School research explores how artificial intelligence technologies could lead to new credit scoring processes, making funding more accessible for Small and Medium-size Enterprises (SMEs).

The Credit Scoring group at Southampton Business School, part of the Department of Decision Analytics and Risk, is leading the development of new artificial intelligence technologies to help SMEs access funding. They are analysing big data sets to aid lenders to reduce the cost of evaluating creditworthiness.

Small businesses are key to the UK economy. According to the Department of Business, Energy & Industrial Strategy, they represent 99.3 per cent of companies and provide 60 per cent of all private sector jobs¹. Small and Medium-sized Enterprises (SMEs) are extremely dynamic and, even with the current economic uncertainty, two thirds of them expect to grow. To fund this growth, a quarter will approach one of the traditional lenders but many will not be successful in getting what they need. At present, 64 per cent of small businesses cannot access funding from banks and some resort to expensive credit lines to secure finance².

The Credit Scoring group at Southampton Business School, part of the Department of Decision Analytics and Risk, is leading the development of new artificial intelligence technologies to help SMEs access funding. They are analysing big data sets to aid lenders to reduce the cost of evaluating creditworthiness.

For banks, the key issue in calculating the risk of lending to small businesses is the high cost of their systems. Currently, an evaluation requires a one-to-one interview, plus a series of financial analyses to determine the cash flow of the entrepreneur. This process, much more expensive than a traditional loan evaluation, leads to increased interest rates, and reduced credit availability.

However, research currently underway at Southampton Business School focuses on using unstructured data, which includes audio, text, or images, to create completely new models to support lending.

Our first ongoing project, in collaboration with KU Leuven University in Belgium and a global business partner with companies in

Argentina, Mexico and the US, uses social network analysis to understand how the risk of not paying back a loan spreads across a network. Connections made through phone calls or bank transfers can be used to understand how borrowers are related, and this information can be used in evaluations with little alternative data, especially for borrowers with no previous credit history.

A second project, funded by the Economic and Social Research Council (ESRC) and the British Academy, examines how text data can be used quickly to obtain credit risk evaluations of microentrepreneurs. We are creating artificial intelligence methodologies, using a technique called Deep Learning, to transform written evaluations made by credit officers into a score that is objective and unbiased. The preliminary results of this process already suggest that text evaluations could completely replace current complex – and expensive – financial evaluations for small businesses.

Finally, and opening up completely new opportunities in risk management, is the use of audio. This project, now in its initial stages, aims at improving the collection of data by using recordings of automated calls to decide when, or if, to escalate the process and involve bank staff.

Unstructured data and Artificial Intelligence (AI) provide an exciting new avenue for the development of risk models. At Southampton Business School we are leading the development of new methods and business processes to maximise both the value of our partners' data, and the chances for SMEs to access funds.

To find out more about his research into credit scoring, please contact Dr Cristián Bravo:
c.bravo@southampton.ac.uk

¹ DBEIS. Business Population Estimates for the UK and Regions 2017.

² DBEIS. Longitudinal Small Business Survey, Year 2 (2016).

BUILDING SUSTAINABILITY INTO HAIR AND BEAUTY



Dr Denise Baden explores how professionals in the Hair and Beauty sector can influence their customers to adopt more sustainable practices, a project which has been nominated for an Impact Regional Business Award.

Did you know that a ten minute shower, powered by an electric immersion heater, uses the same amount of energy as leaving your TV on for 20 hours? Running hot water is typically our most energy-intensive activity in the home and much of that hot water goes to wash our hair.

Thinking about our carbon footprint, if we wash our hair daily with two shampoos and rinsed-out conditioner, leaving the water running for ten minutes, it all adds up to ten kilograms a week.

Exchange that for two shampoos a week with leave-in conditioner, supplemented by dry shampoo as required and our footprint goes down to half a kilo – a difference of 2,000 per cent. With a quarter of UK carbon emissions being domestic, this is a significant saving.

Hairdressers have the potential to play an important role in combating climate change. As they chat to their clients while styling their hair, they have an ideal opportunity to highlight practical ways that individuals could adopt a more sustainable lifestyle.

As part of her research into Corporate Social Responsibility (CSR), Denise has been investigating how hairdressers can be influential in encouraging their customers to save energy and water, together with reducing the amount of detergents and other chemicals they use. Her Ecohair project to encourage hairdressers to embrace sustainability, sparked by a grant from the Economic and Social Research Council, is a finalist for this year's Impact Regional Business Awards. If she is successful, Denise will take the initiative worldwide, focusing initially on English-speaking countries facing water shortages such as South Africa, Australia and the USA.

Sustainability consultant David Fell is enthusiastic: "When a politician says that you should do something about the environment, nobody pays attention, but when a hairdresser asks 'Have you considered using less hot water?' and tells you about the benefits of leave-in conditioner or dry shampoo, then that's going to sink in." Clients are convinced, not just by the environmental aspects, but by recent evidence that shampoo can be as harmful for us as car fumes. Denise has found these are win-win arguments – the planet, our energy bills and our hair do not respond well to too much hot water, heat and chemicals.

For the last five years, Denise has been working with the industry organisations VTCT and Habia to embed sustainable practices across the hairdressing sector. Sustainable Salon certification has been created, more than 40 salons have registered and over 800 individuals have gained the sustainable stylist certification. Salon owners find making changes to their systems saves them money too; a typical hairdressing salon can save over £5,000,

24,150 kWh energy and over 286,000 litres of water per year by adopting the principles.

Ecohair tips for clients

- Shampooing hair once rather than twice is better for the environment – and your hair
- Tepid water is better than hot water to save energy and be kind to hair and skin
- Leave-in conditioner saves another rinse, time, energy and money. It also gives extra body and weight to the hair and reduces colour fade
- Dry shampoo makes hair easier to style and is a quick fix between shampoos. Try it once a week and see what you think
- Ask if your hairdresser works for a certified sustainable salon. If not point them to the Ecohair website, it is free to obtain

To find out more about the project, visit www.ecohairandbeauty.com

Dr Denise Baden:

Denise is an Associate Professor in Sustainable Business at Southampton Business School. Her first degree was in Politics with Economics, and she has experience in a variety of roles in industry including script writing, sales, and running her own business. Denise completed her doctorate in Psychology in 2002, before joining Southampton Business School in 2005. Since then she has been engaged in research and teaching in ethics, entrepreneurship and corporate social responsibility.

Denise can be contacted on d.a.baden@southampton.ac.uk



SOUTHAMPTON BUSINESS SCHOOL HIGHLIGHTS

INTERNATIONAL HONOUR FOR SOUTHAMPTON BUSINESS SCHOOL



The University of Southampton Business School has become an accredited member of the Association to Advance Collegiate Schools of Business (AACSB)

This respected US-based professional organisation connects the world's leading universities and institutions who are dedicated to sharing knowledge and best practice to accelerate innovation in business education.

"This is a tremendous accolade for Southampton Business School which confirms our highest commitment to rigorous quality-led research and learning for the benefit of all our stakeholders and society. We are proud to receive the AACSB accreditation and we will continue to develop the next generation of future leaders with this added global recognition," says Professor Martin Broad, Head of Southampton Business School.

Stephanie M. Bryant, Executive Vice President and Chief Accreditation officer of AACSB International, added:

"We congratulate the University of Southampton and Dean of School, Professor Martin Broad on earning accreditation, and applaud the entire Southampton Business School team – including the administration, faculty, directors, staff, and students for their roles in earning this honour. Southampton Business School's commitment to earning accreditation is a true reflection of their dedication – not only to their students, alumni network, and greater business community, but to the higher education industry as a whole."

The Association connects leading business schools to inspire quality and innovation within the education and business communities and ensure they are a force for good across the world. For Southampton Business School students and staff, accreditation is a global recognition of quality and a commitment to continuous improvement in education and the student experience.

Southampton Business School is in good company; fewer than five per cent of the world's business schools have gained AACSB accreditation. We also hold accreditation for our MBA from the Association of MBAs (AMBA).



EGYPTIAN ENTREPRENEURS LEARN THE LATEST IN DIGITAL MARKETING

An Egyptian couple who run a marketing consultancy in the port city of Alexandria have relocated to the UK for a year to study for postgraduate degrees at University of Southampton Business School. Ghadir and Wessam Aly have even brought their three year old daughter Roro with them and she is already learning a few words of English in a local nursery.

"Digital marketing is still a new concept," explains Ghadir. "We wanted to build on our experience and knowledge to grow our business and found the University of Southampton was the only place that offered a choice of courses in this subject. My husband and I are studying two different Masters degrees, so we can learn a range of topics that will benefit us back home," says Ghadir.

Ghadir has enrolled on MSc Digital Marketing and Wessam is studying MSc Marketing Analytics.

She explains, "In our classes there are people from Arab countries, from Europe and from Asia. There is a lot of group work and we are benefiting from working with other cultures. It is early days but

everything is well planned and we are enjoying our modules. In media and Marketing Communications in the Digital Age, we start off with theories, then apply them to real-life problems involving a real client; just as you would in an agency."

Ghadir and Wessam aim to build on their time at Southampton Business School by seeking internships to give them practical insights into digital marketing in the UK before they return home.



SOUTHAMPTON BUSINESS SCHOOL HOSTS SELL-OUT TEDx EVENT

TED Talks offer a platform to the world's most exciting speakers with thought-provoking ideas worth spreading in the field of business, education, science, technology and creativity.

Students, staff and external guests packed a lecture theatre at the University of Southampton for a successful evening addressing the theme of 'Breaking Barriers'. It involved contributions by four speakers and was also live-streamed to hundreds of people who had missed out on tickets.

Taking part were entrepreneur Bridget Jane Long, tech start-up CEO John Narraway from Bermuda, New York finance CEO Marcia Favale and Dr Pathik Pathak from the University of Southampton. Both John and Marcia flew into the UK especially to deliver their talks.

The event was organised by Project Management postgraduate students Pedro González, Kamryn Minors, Joycelyn Slaw-Asamoah, Nikki Achilleous and Imane Jnini. "We wanted to do something challenging that would leave a legacy," explains Pedro. "Barriers are constraints which prevent you from achieving your goal. This theme attracted engaging guests to take part and captured the imagination of the university community."

The five students started planning the event in autumn 2017; it was also their entry for the Association of Project Managers (APM) Wessex branch contest. Despite not winning, the team agreed that it was worthwhile to compete.

"Taking part in the challenge was a perfect complement to our education in project management. We got the opportunity to put all the theories we have learned in the seminar room into practice through staging a professional event," adds Pedro.



INSIGHTS INTO INNOVATION FOR FINAL YEAR STUDENTS

Southampton Business School undergraduates are gaining unique insights into innovation in action thanks to visits from leading entrepreneurs and business people.

Rob Shaw, the co-founder of clothing company Jack Wills, spoke to Project Management students recently about how staff scheduled store openings in the UK and around the world. He is now involved in several other initiatives including Shindigger lager and the eco-friendly company, Beco Pets.

Ministry of Sound chairman and former CEO, Lohan Presencer, talked to Marketing students about his experiences in the music industry after graduating from Southampton with a degree in Acoustical

Engineering. He has now returned to the University to mentor students with good ideas through the Futureworlds initiative.

Farming specialist Clive Buckland from Smith and Williamson outlined to Accounting and Finance students how country landowners are getting increasingly involved in diversification projects. For example, farmers are letting surplus buildings for commercial use or setting up solar farms.

"Our relationship with key individuals in business helps students connect what they are learning at Southampton Business School with career opportunities," says Head of Southampton Business School Professor Martin Broad.

CELEBRATING 50 YEARS OF MULTIDISCIPLINARY RESEARCH

The Centre for Operational Research, Management Sciences and Information Systems (CORMSIS) celebrates its 50th anniversary of a pioneering research collaboration.

A groundbreaking collaboration at the University of Southampton between Management Sciences and Mathematics, supporting businesses to make sense of their data, is celebrating 50 years since its foundation. The milestone was marked by an alumni event, addressed by Formula 1 strategist Neil Martin who has worked for McLaren, Red Bull Racing and Ferrari.

Operational Research (OR) began in 1968 in the University of Southampton's Department of Maths and now includes colleagues in Southampton Business School through the Centre for Operational Research, Management Sciences and Information Systems (CORMSIS).

The Centre conducts high level multidisciplinary research into how advanced analytics helps leaders make better decisions and its staff also teach seven popular postgraduate programmes:

- Business Analytics and Management Sciences (Business School)
- Business Analytics and Finance (Business School)
- Operational Research (Mathematics)
- Operational Research and Statistics (Mathematics)
- Operational Research and Finance (Mathematics)
- Knowledge and Information Systems Management (Business School)
- Supply Chain Management and Logistics (Business School)

All of the MSc programmes include a challenging three month summer project at a leading company or organisation such as Barclaycard, Boeing, Ford, the Royal Bank of Scotland and the National Health Service.

Professor Sally Brailsford leads for CORMSIS in the Business School: "Combining mathematics with management sciences makes the Centre unique. More than a thousand students have graduated up to now from our Masters programmes and many are in senior positions in companies and organisations around the world."

CORMSIS is determined to respond to industry needs. Its Business Advisory Board brings together academics with representatives from major companies to ensure the MSc programme is always fresh and relevant to employers.

Among the research highlights at CORMSIS was the development of credit scoring and risk by the late Professor Lyn Thomas, which is still used today by financial institutions. The 2008 LANCIS grant was the largest-ever awarded by the Engineering and Physical Sciences Research Council (EPSRC) in OR and included five new joint posts between Maths and Business. More recently, Dr Tri-Dung Nguyen has been awarded a five-year fellowship by the EPSRC to focus on his work on co-operative game theory.

Looking ahead, CORMSIS is focused on growing its capacity in research and the teaching of business and decision analytics. There is a surge in demand from students for taught programmes in these areas and many opportunities for projects with companies.

Businesses interested in linking with CORMSIS should contact Julie Hickman
jh1e15@southampton.ac.uk

CATCHING UP WITH ATHENA LIU



Athena studies BSc Accounting and Finance with Placement Year (2019).

She is currently on placement at Norwegian Cruise Lines as a Business Operation (Planning and Analysis) Intern.

How are you enjoying life at the University of Southampton?

As soon as I arrived here on an Open Day, I loved the campus atmosphere. It's a very diverse place and has given me a tremendous international perspective as I work alongside people from many different nationalities. There's lots to do. The Students' Union has more than 300 societies and organises so many events over the year. I even joined the Skydive Society and will become a qualified skydiver.

What are you doing on your placement?

I'm a Business Operation (Planning and Analysis) Intern at Norwegian Cruise Lines. This involves preparing daily, weekly and monthly reports for Passenger Services, across different brands and countries. I also plan rosters for the reservations and helpdesk teams and frequently assist the call centre. I have been here for several months now and learning about how an international cruise company operates behind the scenes has been an incredible experience.

How is Southampton Business School preparing you for the world of work?

During my degree, I have definitely increased my knowledge of the workings of financial services and the banking industry; my lecturers are always helpful if I have any questions. My analytical skills and report writing techniques have developed and this really helps me on my placement. I have also valued the guest lectures and employer networking events as they offer us a valuable insight into different industries and sectors.

In addition to my studies in accounting and finance, I have spent lots of time improving my employability. In my first year, I did my first internship at the Students' Union, in my second year I worked as a Halls of Residence officer supporting international students then finally I secured a placement year with Norwegian Cruise Lines with massive help from the Placements Office in the Business School.

AWARDS, HONOURS AND PAPERS

A summary of some of Southampton Business School's most recent high-profile achievements.

Achievements

Southampton Business School has achieved AACSB accreditation, which is a prestigious international recognition. The School is now a double-accredited institution (AACSB and AMBA).

Professor Mine Karatas-Ozkan has been appointed the Chair of EURAM (European Academy of Management) Doctoral Colloquium, which is one of the flagship events of EURAM aiming to serve the doctoral community.

The Southampton Business School DBA programme will graduate its first student this year. David Grady becomes the first student at the School to complete the doctorate.

Dr Andrew Urquhart has been appointed an Associate Editor of the *European Journal of Finance* (ABS 3*).

Dr Cristián Bravo has been appointed an Associate Editor of the *Journal of Business Analytics*, which is a new publication due to be released in 2018 by the UK's Operational Research Society.

Top academic papers

Professor Tolga Bektas and Professor Julia Bennell have co-authored the paper 'Multicommodity flows and benders decomposition for restricted continuous location problems' accepted by the *European Journal of Operational Research* (ABS 4*).

Dr Mina Beigi has authored the paper 'Work-family interface in the context of career success: A qualitative inquiry' published in the journal *Human Relations* (ABS 4*).

Dr Marta Degl'Innocenti has authored the paper 'Financial centre's competitiveness and economic convergence: Evidence from the EU regions' accepted by the journal *Environment and Planning A* (ABS 4*).

Dr Michail Veliziotis has authored the paper 'Local-level immigration and life satisfaction: The EU enlargement experience in England and Wales' by the journal *Environment and Planning A* (ABS 4*).

Dr Michail Veliziotis has authored the paper 'Beyond conflict: long-term labour market integration of internally displaced persons in post-socialist countries' accepted by the journal *Vocational Behaviour* (ABS 4*).

Dr Oliver Marnet has co-authored the paper 'Audit within the corporate governance paradigm: a cornerstone built on shifting sand?' accepted by the *British Journal of Management* (ABS 4*).

Grants

Dr Krishanthi Vithana, Professor Yehuda Baruch, and Professor Collins Ntim

'Investment case behind living wage accreditation', Economic and Social Research Council (ESRC), £57,000.

Professor Tolga Bektas and Professor Tom Cherrett

(Faculty of Engineering and the Environment) 'Web-based optimisation tools for collaborative planning in freight distribution', Web Science Institute (WSI), £16,000.



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