POMS

International Conference

2 - 4 September 2019

Jurys Inn Brighton Waterfront Hotel
Brighton, UK, BN1 2GS

Connecting the Operations Management & Supply Chain Management World in Divided Times

US | BUSINESS SCHOOL
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Programme overview

Sunday 1st September
Pre-conference social meeting

Time	Activity	Location
17.15 - 18:30	Flight on the i360 - Complimentary	British Airways i360, Lower Kings Road, Brighton, BN1 2LN
18:30 - 19:00	Welcome reception, i360 - Complimentary	
19:00 - 21:00	Informal dinner - Optional, own payments	Regency Restaurant, 131 Kings Road, BN1 2HH

Monday 2nd September

Time	Activity	Location
07:00 - 07:45	Morning yoga	La Noblesse Room
08:15 - 09:00	Registration and coffee	Renaissance Foyer
09:00 - 09:20	Welcome address	Renaissance Room
09:20 - 10:00	**Keynote: Transformative Innovations in Healthcare Delivery: Opportunities for High Impact Research** Kamalini Ramdas (London Business School)	Renaissance Room
10:00 - 10:30	Coffee break	Renaissance Foyer
10:30 - 12:00	Parallel sessions	Various - see detailed programme
12:00 - 13:00	Lunch	Atrium Restaurant
13:00 - 14:30	Parallel sessions	Various - see detailed programme
14:30 - 15:00	Coffee break	Renaissance Foyer
15:00 - 16:30	Parallel sessions	Various - see detailed programme
16:40 - 18:00	**Conference Theme Panel. Plenary** Christoph Loch, L. Alan Winters and ManMohan Sodhi. Chaired by Bart MacCarthy.	Renaissance Room

Tuesday 3rd September

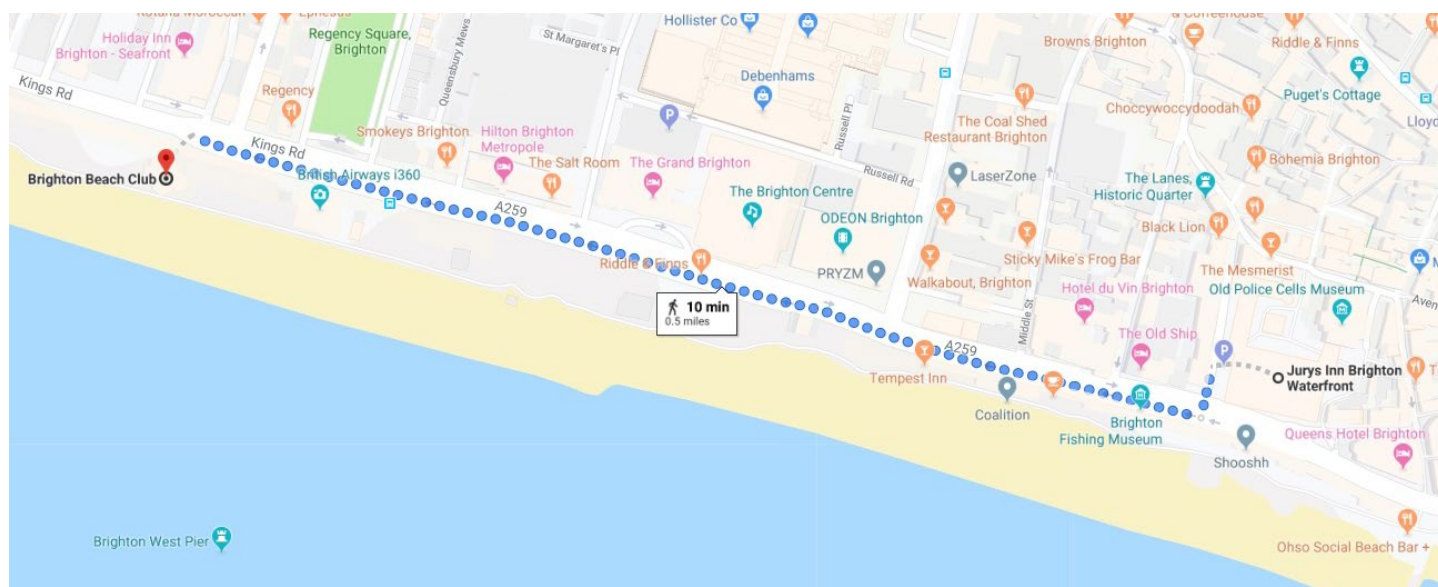| Time	Activity	Location
07:00 - 07:45	Morning jog along the seafront	Jury's Inn reception desk
08:30 - 09:00	Registration and coffee	Renaissance Foyer
09:00 - 09:45	**Keynote: An Overview of POM Research on Disaster Management** Sushil Gupta (Florida International University)	Renaissance Room
09:45 - 10:30	**Keynote: The impact of Analytics in Pricing: From Theory to Practice** Georgia Perakis (M.I.T.)	Renaissance Room
10:30 - 11:00	Coffee break Supply Chain 4.0 Hub - break out session	Renaissance Foyer
11:00 - 12:30	Parallel sessions	Various - see detailed programme

Tuesday 3rd September (continued)

Time	Activity	Location
12:30 - 13:15	Lunch	Atrium Restaurant
13:15 - 14:15	**Meet the Editors panel** Stefan Scholtes, ManMohan S. Sodhi, Suzanne de Treville, Louise Knight, Reza Zanjirani Faharani, Vedat Verter. Moderated by Constantin Blome and Feryal Erhun.	Renaissance Room
14:20 - 15:50	Parallel sessions	Various - see detailed programme
15:50 - 16:10	Coffee break	Renaissance Foyer
16:10 - 17:25	Parallel sessions	Various - see detailed programme
17:30 - 18:15	**Keynote: Re-organizing Hospitals: An Operational Perspective** Stephan Scholtes (University of Cambridge Judge Business School)	Renaissance Room
19:00 - 22:30	Conference dinner	Brighton Beach Club, 26 Kings Road, Brighton, BN1 2LN

Conference dinner venue

The Brighton Beach Club is a 10 minute walk along the promenade.

A group will leave the Jury's Inn Waterfront hotel at 18.50. Please meet at the entrance to the hotel if you would like to join the group. Alternatively, please make your own way to the venue.

Wednesday 4th September

Time	Activity	Location
09.00 - 09:30	Registration	Renaissance Foyer
09:30 - 11.00	Parallel sessions	Various - see detailed programme
11.00 - 11:30	Coffee break	Renaissance Foyer
11:30 - 12:45	Parallel sessions	Various - see detailed programme
12:45 - 13.00	Conference closing	Renaissance Room

Welcome

A very warm welcome to the POMS 2019 international conference in Brighton (a.k.a. London by the sea).

The theme of this year's conference is connecting the operations and supply chain management world in divided times. We are living in an era of trade tensions, political uncertainty, and economic insecurity. There is a pressing need to identify ways for firms and supply chain actors to remain connected in the face of political and social upheaval. We call on you as operations and supply chain scholars to use this conference as an opportunity to share knowledge and build lasting networks. We offer in return keynote speeches from leading scholars in our field including Sushil Gupta (Florida International University), Georgia Perakis (MIT Sloan School of Management), Kamalini Ramdas (London Business School) and Stefan Scholtes (University of Cambridge Judge Business School). You will also have the opportunity to join inspiring debates during our special panels and tracks on topics as diverse as Industry 4.0 and Disaster Relief Operations. We look forward to your participation in a thought-provoking and intellectually stimulating conference!

Finally, we would like to thank our sponsors for facilitating an exciting conference.

Best wishes,

The Organising Committee

Conference Chairs:

Constantin Blome, University of Sussex

Feryal Erhun, University of Cambridge

Reza Zanjirani Farahani, Kingston University

Associate Conference Chairs:

Sam Roscoe, University of Sussex

Martin Schleper, University of Sussex

Manish Shukla, Durham University

Steering Committee:

Constantin Blome, University of Sussex

Feryal Erhun, University of Cambridge

Reza Zanjirani Farahani, Kingston University

Sushil Gupta, Florida International University, and Executive Director, POMS

Nagesh Murthy, University of Oregon, and Associate Executive Director, Global Initiatives & Outreach, POMS

Nada Sanders, Northeastern University, and President, POMS

Sponsor:

Connectivity

Keynote Speakers

Sushil K. Gupta
Florida International University

Dr Sushil Gupta is a Professor in the Department of Information Systems and Business Analytics at Florida International University. His research interests include production scheduling, mathematical modeling, computer applications, and educational administration. Dr Gupta is one of the founding members of the Production and Operations Management Society (POMS) and has played a key role in its initiation, development and growth. He is the executive director of POMS since 1997 and he also serves on the advisory board of the *POMS* journal.

Georgia Perakis
MIT Sloan School Management

Georgia Perakis is the William F. Pounds Professor of Management, a Professor of Operations Research/Statistics and Operations Management, and the Co-Director of the Operations Research Center at the MIT Sloan School of Management. In her research, she investigates the theory and practice of analytics. She is particularly interested in how to solve complex and practical problems in pricing, revenue management, supply chains, logistics and energy applications among others. She currently serves as an associate editor for the flagship journals of the field.

Kamalini Ramdas
London Business School

Professor Kamalini Ramdas is Professor of Management Science and Operations at London Business School, and Deloitte Chair in Innovation and Entrepreneurship. Professor Ramdas is an expert in the innovation arena. Her current research examines new ways to create value through innovation, including: service innovation, operational innovation and business model innovation. Her expertise has seen her consult on innovation and operations management in a variety of industries, including healthcare, telecoms, consumer packaged goods and assembled products.

Stefan Scholtes
University of Cambridge Judge Business School

Stefan Scholtes is the Dennis Gillings Professor of Health Management and Director of the Centre for Health Leadership & Enterprise (CCHLE) at University of Cambridge Judge Business School. Stefan studies healthcare management and has specific interests in the transformation of local health ecosystems and in the determinants and consequences of clinical decisions in patient flow systems. He is the founding director of the Cambridge Centre for Health Leadership & Enterprise, chair of the board of Granta Medical Practices in Cambridgeshire and holds honorary appointments at Cambridge University Hospitals and the Royal Papworth Hospital.

Special Sessions

Monday 2nd, 16.40 - 18.00 *Renaissance Room*

Conference Theme Panel

Connecting Supply Chains in Divided Times: Supply Chains, Trump-Effect and Brexit

Christoph Loch (University of Cambridge Judge Business School), **L. Alan Winters** (Director of the UK Trade Policy Observatory, University of Sussex), **ManMohan S. Sodhi** (Cass Business School). Chaired by **Bart MacCarthy** (University of Nottingham).

Tuesday 3rd, 11.00 - 12.30 *La Noblesse Room*

The Future of Research in Humanitarian Operations

In this panel discussion we will have a conversation with leading researchers in humanitarian operations to set future research directions for this field. Potential topics will include appropriate methodologies, gaps in literature as well as newly developing areas such as public-private partnerships and the involvement of the commercial sector in humanitarian aid.

Nezih Altay (Driehaus College of Business Depaul University), **Rameshwar Dubey** (Montpellier Business School), **Mahyar Eftekhar** (Arizona State University), **David Grant** (Hanken School of Economics).

Tuesday 3rd, 14.30 - 15.45 *Wordsworth Room*

Performance-based contracting

In parallel with the increasing application of performance-based contracting (PBC) in practice, research has started to explore some relatively new and problematic aspects of implementing PBC. One of these aspects pertains to mitigating and accounting for the influence that buying firms and/or final customers have on the delivery and performance of services. Other aspects include the application of new technologies, such as remote diagnostics, which can help plan maintenance of assets and monitor performance – but at the same time create dilemmas around intellectual property and privacy.

Wendy van der Valk (Tilburg University), **Kostas Selviaridis** (Lancaster University), **Finn Wynstra** (Erasmus University Rotterdam).

Tuesday 3rd, 13.15 - 14.15 *Renaissance Room*

Editorial Panel: How to foster bold, future guiding research?

Editorial panel of leading international journals.

Stefan Scholtes (SE, Management Science), **ManMohan S. Sodhi** (Deputy Editor, POM), **Suzanne de Treville** (EIC, Journal of Operations Management), **Louise Knight** (EIC, Journal of Purchasing and Supply Management), **Reza Zanjirani Faharani** (AE, Transportation Research: Part E), **Vedat Verter** (EIC, Socio-Economic Planning Sciences). **Moderated by Constantin Blome** (EIC, IJOPM) and **Feryal Erhun** (AE, M&SOM).

Wednesday 4th, 09.30 - 11.00 *Renaissance Room*

How OM PhD students publish when doing their dissertation?

This panel intends to train Operations Management (OM) PhD students regarding publishing in OM journals. PhD students' journey in the OM field is described. The editor-in-chief of IJOPM shares the journal views on writing qualitative research papers. A senior editor from POM/MSOM explains these journals' views on quantitative research papers.

Constantin Blome (Univerity of Sussex Business School), **Feryal Erhun** (University of Cambridge), **Reza Zanjirani Farahani**, (Kingston University).

Wednesday 4th, 11.30 - 12.45 *Renaissance Room*

Practice-based research: Lessons learned for external research funding

The panel intends to familiarize academics with grant writing insights. Some exemplar finding bodies are introduced (including impact of Brexit on joint research proposals between UK and other European countries are explained). Operations Management experts share their experience with funding journey. Questions are answered through a panel discussion.

Nagesh Murthy (University of Oregon), **Michael Bourlakis** (Cranfield Management School), **Lenny Koh** (University of Sheffield Management Schoo), **Malgorzata Gosia Czerwiec** (UK Research Office).

Special Tracks

Artificial Intelligence and Data Analytics in Supply Chain Management

Alexandra Brintrup - University of Cambridge

Artificial Intelligence is making an impact in various supply chain functions from forecasting demand with machine learning to automated pricing algorithms with agent-based systems. While large multinationals are showing signs of early adoption, academic discussion on the use and impact of AI technology in supply chains has been lagging behind, partly due to the interdisciplinary nature of the domain. This track aims to bring together researchers to discuss how AI is changing supply chains, novel applications and opportunities, as well as challenges and barriers to the adoption of AI technology.

Strengthening Supply Chains Using Blockchain Applications

Yavuz Gunalay - Bahçesehir University
Samir Dani - University of Huddersfield

In this special track we aim to discuss the impact of new information technologies, specifically block chain applications, on supply chain and logistics operations. Both theoretical and practical papers on the implementation of blockchain in supply chain and operations management are welcomed.

Operations Management in Emergencies

Tobias Andersson Granberg - Linköping University

This special track encompasses operations management for emergencies, ranging from daily accidents and emergency medical events, to larger events, like medium-sized forest fires and storms, to disasters. Particularly encouraged are contributions covering both daily emergencies and disasters, using the same or similar theories, models or methods.

The Application of Industry 4.0 Technologies in the Supply Chain

Yu (Jack) Gong - Southampton University
Fu (Jeff) Jia - The York Management School, University of York

This special track intends to advance the Production and Operations Management field through understanding the effects of the application of Industry 4.0 technologies (additive manufacturing/3D printing, intelligent manufacturing, internet-of-things, big data and etc.) on operations and supply chains.

Servicizing and OM

Hamid Noori - Lazaridis School of Business & Economics, Wilfrid Laurier University

'Servicization' has been gaining traction both in OM literature and in practice as a novel approach to promote environmental sustainability. However, the message regarding the potential of servicizing as a business model can seem to be muddled in a large amount of definitions and different contexts (see, e.g., Agrawal and Bellos, 2016). This special track focuses on leveraging technology, best practice business processes and decision making models that would lead to more profitable and sustainable servicizing business model.

Managing Supply Chain Risk in Divided Times

Abhi Ghadge - Cranfield University
Nachiappan Subramanian - University of Sussex

This special track will discuss how firms are managing supply chain risks in an era of geopolitical instability including international trade disputes (USA-China), labour disruptions (Gilets Jaunes) and political disruptions (Brexit). Other supply chain risk topics will also be discussed from a range of conceptual, theoretical and empirical papers.

How Social Media are Transforming Operations Management

T. C. E. Cheng - The Hong Kong Polytechnic University
Hugo K. S. Lam - University of Liverpool
Andrew C. Lyons - University of Liverpool
Andy C. L. Yeung - The Hong Kong Polytechnic University

Social media have been transforming politics, social norms, and the way we communicate, but do they have a similar transformative effect on operations management? This special track welcomes submissions that advance our understanding of how social media transform various aspects of operations management such as innovation management, new product development, quality management, demand forecasting, inventory management, healthcare management, disaster management, risk management, and supply chain management.

Supply Chain and Operations Management in Emerging Economies

Adegoke Oke - Arizona State University

Increasing attention and focus on developing countries calls for the need to effectively include these countries in global supply chains. Developing countries are not only target markets for products but are fast becoming producers. We invite empirical studies and submissions that investigate supply chain and operations management practices in developing countries with particular focus on the influence of contextual factors.

Detailed programme

Managing Supply Chain Risk in Divided Times (1)
Session Chair: Nachiappan Subramanian

Renaissance Room

Investigating the impacts of Brexit on manufacturing supply chain location decision

Political and economic uncertainty related to Brexit forces companies to prepare for unknown outcomes. Reconfigurations of supply chains are likely to affect the UK. Through a Delphi approach utilizing the insights from domain experts, this study illuminates the driving factors, relationships, and likely consequences on manufacturing supply chain location decisions.

Hamid Moradlou (Cranfield School of Management), Hendrik Reefke (Cranfield School of Management), Heather Skipworth (Cranfield School of Management), Wendy Tate (University of Tennessee)

Achieving Supply Chain Resilience: An Empirical Perspective

The impact of logistics capabilities (LCs) on supply chain resilience (SCRES) was examined in the UK logistics industry using an online survey questionnaire (n=175) to collect data. Results using structural equation modelling (SEM) show that certain LCs positively affect SCRES whereas risks associated with supply chains have negative effects on SCRES.

Shehzad Ahmed (University of the West of Scotland), **David Menachof** (Florida Atlantic University)

Social network analysis for investigating the impact of supply chain disruptions

In order to investigate how different supply chain relationships effect disruption management, mixed methods social network analysis is applied to study the impact of the 2016 Kumamoto earthquake on Toyota. This research uses annual reports and news articles to assess how Toyota's supply chain network responded to this incident.

James Whiteside (University of Huddersfield), **Samir Dani** (University of Huddersfield)

Behavioral Operations (1)
Session Chair: Sam Kirshner

Shelley Room

Measuring Demand Chasing

Previous research recommended using correlation of orders with lagged demand to measure chasing behaviour, claiming that regression approaches are prone to false positives. Using a numerical study and two empirical datasets, we demonstrate that regression outperforms correlation in classifying demand chasing and capturing the costs of this behaviour.

Sam Kirshner (University of New South Wales Business School), Brent Moritz (Penn State Smeal College of Business)

How Observed Queue Length and Service Times Drive Queue Behavior in the Lab

We study join and renege decisions by subjects from a single server, observable queue via lab experiments. We explore the role observed queue length and observed service times play on these decisions. We provide evidence for a queue length effect, and faster or slower than expected progress rate on patience.

Zeynep Aksin (Koç University), Busra Gencer (HEC Lausanne), Evrim Gunes (Koç University)

The behavioural knapsack problem: Evidence of a fundamental bias in project selection

Project selection is arguably the most important application of the knapsack problem in management. Governments, businesses and consumers across the world allocate huge amounts of money on projects under a fixed budget. We study cognitive biases for the underlying knapsack optimisation problem.

Tom Pape (University of Cambridge), Stylianos Kavadias (University of Cambridge), Svenja Sommer (HEC Paris)

Sustainable Operations and SCM (1)
Session Chair: Tao Lu

Tennyson Room

Sourcing from a Self-Reporting Supplier? Strategic Communication of Social Responsibility in a Supply Chain

We examine whether supplier's social responsibility (SR) risk can be credibly self-reported through unverifiable communication (i.e., cheap talk). We prove that truthful communication can occur when the buyer can audit (imperfectly) the supplier and the buyer's end market is sensitive to SR violations, and that a cheaper or more accurate audit capability may not benefit the buyer.

Tao Lu (Rotterdam School of Management), Brian Tomlin (Dartmouth College)

Sustainable or Not? Role of Valuation Uncertainty and Operational Flexibility on Product Line Design

Increasing consumer interest in healthy foods and eco-friendly food production (i.e. sustainability) has led food companies to rethink their product line design and balance products' taste and sustainability quality dimensions. This paper investigates the optimal product line design under uncertainty about consumer's willingness-to-pay for sustainability and reveals the associated trade-offs.

Iva Rashkova (Washington University in St Louis), Lingxiu Dong (Washington University in St Louis), Weiqing Zhang (Washington University in St Louis)

The effect of the consolidated supply chain sustainability management of buyers on the market value of suppliers

This research uses an event study sample of 746 suppliers to analyze financial performance when buyers consolidate supply chain sustainability management (SCSM) in groups. We find that the consolidated SCSM has a more negative impact on suppliers as does long buyer-supplier relationship and high inventory slack.

Jason X. Wang (University of Huddersfield), Lincoln C. Wood (University of Otago), Karin Olesen (University of Auckland), Torsten Reiner (Curtin University)

Operations Management in Emerging Economies (1)
Session Chair: Adegoke Oke

Wordsworth Room

Sharing economy in organic food supply chains: A pathway to sustainable development

Due to the nature of their farm holdings, smallholders in developing economies face significant challenges. We examine how agricultural cooperatives can employ Sharing Economy (SE) to facilitate collaboration across Organic Food Supply Chains. Using cooperative game theory, we propose an SE approach that helps smallholders share and cooperatively use production and transportation resources.

Sean (Sobhan) Asian (La Trobe Business School), Ashkan Hafezalkotob (Islamic Azad University), Jubin Jacob John (La Trobe Business School)

Re-thinking Boundary Management and the Make or Buy Decision: the Case of Electric Sports Cars

The proposed paper looks at the relationship between boundary management and the "make and buy" decision in the electric sports car supply chain. The work adopts a "mixed method" approach combining: three longitudinal case studies (2016-2019), a workshop panel of suppliers and 10,000 executive tweets between OEM, OES, tier 2's.

Gary Graham (Leeds University Business School), Patrick Hennelly (Royal College of the Arts, London)

Drivers of port gate congestion at a developing country seaport

This qualitative study presents findings of seaport gate congestion on the land side in sub-Saharan Africa. The study relied on survey of truck flows and interviews of truck drivers to the port. The study highlights an aspect of global logistics and other causes of port congestion beyond increased cargo throughput.

Frank Ojadi (Lagos Business School)

Fostering sustainable supply chains through supplier development: a qualitative study on South African FMCG grocery manufacturers

This qualitative study explored sustainable supplier development (SSD) practices in FMCG firms operating in an emerging economy. Global firms engage in SSD due to pressures from international headquarters, while local firms view sustainability as a financial burden. Direct and indirect methods were discovered to facilitate SSD practices.

Assilah Agigi (University of Pretoria), Kelvinne Mocke (University of Pretoria), Sibongiseni Masemane (University of Pretoria), Sibongiseni Skosana (University of Pretoria)

Technology Management (1)
Session Chair: Minhao Zhang

La Noblesse Room

Trapped in the Supply Chain: The Digital Servitization Dilemma of a Tier 1 Supplier

The purpose of this paper is to investigate which obstacles suppliers face when introducing digital product service systems and which strategic initiatives they undertake to address them, considering their position within the supply chain. We apply case study method by conducting multiple interviews with experts and managers from a tier-1-supplier.

Philipp Mosch (University of Passau), Stefan Schweikl (University of Passau), Robert Obermaier (University of Passau)

The Impact of Big Data Analytics Capability on Firm's Operational Efficiency: The Moderating Role of Micro and Macro Environments

This paper aims to address the inconsistency of the findings for the mechanism behind the relationship between big data analytics capabilities and operational performance. We operationalised the big data analytics capability through a rigours coding process and verified the theoretical model by a sample of Chinese high-tech enterprises.

Minhao Zhang (University of Bristol), Yichuan Wang (University of Sheffield), Mike Tse (University of York), Jeff Jia (University of York)

The Evolution of Strategy in the Digital Era

The research idea arose from the observation that many com-panies are failing to upgrade their digital capabilities, while still maintaining business strategy choices that are justifiable using a conventional framework like Porter. Basing the analysis on the digital transformation framework, we postulate that the lack of agility specific to Porter's view of strategy may hamper companies' growth or even survival in a context of both technlogical and market uncertainty combined with high innovation rate.

Wassim Mbarki (UCLouvain, CORE), Per J. Agrell (UCLouvain, CORE)

OM & Marketing Interface Session (1)
Session Chair: Disha Bhanot

Coleridge Room

Are Strategic Consumers Bad for Product Quality?

We investigate firm's joint dynamic pricing and quality decisions in a two-period setting with possible supply constraints and demand from both myopic and strategic consumers. We present an analytical model and employ game theory method. We find either capacitated Target Both policy or uncapacitated Target Myopic policy can be employed.

Wen Chen (Guangzhou University), Li Zhou (University of Greenwich)

Double Utilization of Consumer Appreciation: Is the Seamless Connection the New Monopoly Leverage?

We consider the release of a new product category when two asymmetric firms engage in price and quality competition. Ecosystem firm has the leverage of previous market coverage while the rival is new to the market. We investigate if ecosystem leverage keeps the rival at bay and decreases the innovation.

Esma Koca (Imperial College London)

Keep the Buzz and Binge On: Optimal Content Release Strategies?

We discuss release strategies of online content providers, such as streaming services and e-learning platforms, to maximize the viewer engagement. We cover three aspects of the release strategy: (1) release of an individual series, (2) order of multiple series across the subscription periods, and (3) personalization of the content.

Esma Koca (Imperial College London (ICL)), Wolfram Wiesemann (ICL)

Modelling likelihood of distress selling: Comparative study of agri-marketing channels in India

This study models the occurrence of distress sale by tomato farmers in India. Using primary data, we ascertain how various agri-marketing channels influence the distress selling of farm produce. Further, a probability function is developed to determine the likelihood of a farmer selling his/her produce through a particular marketing channel.

Disha Bhanot (SP Jain Institute of Management and Research), Vinish Kathuria (IIT Bombay)

Healthcare Operations (1)
Session Chair: Claire Pixton

Keats Room

Evidence and Consequences of Black-Swan Distributions in Hospital Costs

The precariousness of NHS finances points to an urgent need to devise and adopt a better tariff system. Currently, tariffs are set based on past year's average cost per-patient, which is unreliable as hospitals are exposed to heavy-tail cost distributions. We propose a more robust scheme and examine its validity.

Harshita Kajaria (University of Cambridge), Paul Kattuman (University of Cambridge), Michael Freeman (INSEAD Singapore), Stefan Scholtes (University of Cambridge)

When Nurses Walk: Optimized Drug Distribution Location in a Large Hospital

A large hospital distributes drugs through 170 automated dispensing cabinets (ADCs). Many drugs in each ADC have infrequent and sporadic use. We consider methods for pooling inventory within geographic clusters of ADCs. The inventory cost savings are traded off against the need for nurses to walk to adjacent ADCs.

Clark Pixton (Brigham Young University), Scott Sampson (Brigham Young University)

On Reducing Medically Unnecessary Cesarian Deliveries: The Design of Payment Models for Maternity Care

This data-driven study focuses on design of financial incentives to reduce unnecessary C-sections, resulting in enhanced birth quality with alleviated economic burden for health care payers. In this context, we propose an analytical framework to study (i) base reimbursement models, and (ii) performance based complementary payments, in maternity care setting.

Beste Kucukyazici (Michigan State University), Cheng Zhu (Texas State University)

Monday 2nd September
13:00 - 14:30 - parallel sessions

How Social Media are Transforming Operations Management
Session Chair: Hugo Lam

Renaissance Room

Digital volunteerism: The role of social media during disaster relief operations

We examine how social media acts as a coordination mechanism for local volunteers when responding to natural disasters. Using a multiple case design we examine the 2015 Chennai floods and the 2018 Gaja cyclone. We find social media influencers can coordinate local volunteers because they have pre-existing followers that rapidly respond to disasters.

Sam Roscoe (University of Sussex), JothiBasu Ramanathan (Sethu Institute of Technology), Saileshsingh Gunessee (Nottingham University Business School China), Nachiappan Subramanian (University of Sussex)

The Adoption and Utilization of Management-Oriented, Small-Scale Social Media in NGOs: An Empirical Study of the key Factors Influencing Crowdfunding Outcomes

At the organizational level, we see how NGOs using management-oriented, small-scale social media, such as Ding Talk influences NGOs' crowdfunding. We employed seemingly unrelated regression models. The results supported that using these tools will affect whether NGOs initiates crowdfunding but will not affect the NGOS' crowdfunding amount.

Yilin Yang (University of Science and Technology of China), Jibao Gu (University of Science and Technology of China), Rongting Zhou (University of Science and Technology of China)

Integrating Social media and warranty data for fault identification in automobile sector

This research addresses the fault identification during warranty by proposing a methodical framework that integrate data from multiple datasets (Facebook and weblogs). The combined dataset is used to explore the large amount of hidden fault-related data by adopting content and sentiment analyses. The research methodology used is qualitative.

Syed Imran Ali (Cranfield University), Abdilahi Ali (University of Salford)

Supply Chain Management (1)
Session Chair: Maryam Lotfi

Shelley Room

Depicting Collaborations in Microbrewery Supply Chains

We empirically explore, via interviews and focus groups, the preconditions, motivations and potential areas for collaboration in a national region of the UK microbrewery industry. Findings suggests microbreweries are very open to collaboration especially in knowledge transfer and internal operations, procurement, NPD, quality assurance, sharing market channels and logistics.

Maryam Lotfi (Cardiff Business School), Maneesh Kumar Vasco Sanchez Rodrigues, Irina Harris, Mohamed Naim (all - Cardiff Business School)

Is "Free-Lunch" a Good Lunch? Performances of Zero Wholesale Price Based Supply Chain Contracts

Motivated by real world practices, we analytically explore the application of zero wholesale price (ZWP) based contracts in supply chain systems. Under both the retailer-ordering and manufacturer-ordering scenarios, we uncover how the ZWP-revenue-sharing-plus-side-payment (ZRS) contract can achieve win-win coordination for both single-product and multi-product supply chains. Managerial insights are derived.

Tsan-Ming Choi (The Hong Kong Polytechnic University), **Shu Guo** (University of Liverpool)

Financial metrics that predict Supply Chain Effectiveness

This research aims to fill the significant gap for integrated financial metrics to evaluate the effectiveness of the Supply Chain as well as to predict the failures by designing, testing and revealing the viability of financial metrics that predict the supply chain effectiveness.

Diep Ly (The University of Auckland), Tava Olsen (The University of Auckland), Timofey Shalpegin (The University of Auckland)

Finding the common (inefficient) ground: An examination of the downstream Pharmaceutical Supply Chain (PSC)

This research explores the PSC and provides insight to the delivery process of medicines and associated operational inefficiencies within two European contexts. Findings demonstrate that finance, communication, waste and complexity were the major issues. This research contributes to academic literature by adding further theoretical insights to supply chain strategy development.

Marina Papalexi (Manchester Metropolitan University), David Bamford (Manchester Metropolitan University), Liz Breen (University of Bradford)

Sustainable Operations and SCM (2)
Session Chair: Maria Montes-Sancho

Tennyson Room

Social welfare in green supply chain

How optimal pricing, investment, and product manufacturing decisions in the presence of government interventions under various social welfare objectives are not extensively scrutinised in the existing literature. In this study, multi criteria decision-making approach is used to determine optimal incentives under different power structures.

Subrata Saha (Aalborg University), Izabela Ewa Nielsen (Aal-borg University)

Is it good to be like your supplier? Empirical evidence on environmental and social asymmetries

Using a fixed-effects regression model, we examine the environmental and social asymmetries between buyers and suppliers and their effect on performance. Results are analyzed using Legitimacy theory (normative and cognitive), and demon-strate that the effect on buyer performance depend largely on the type of asymmetry considered.

Maria Montes-Sancho (Universidad Carlos III), Elcio M. Ta-chizawa (Universidad Politecnica de Madrid), Constantin Blome (University of Sussex)

Implications of new technologies for supply chain transparency: mapping links between deforestation and commodities.

A range of state-of-the-art technologies for supply chain map-ping and risk assessment using satellite observation and trade data are now available. These meet a demand from consumers, investors and governments for deforestation to be halted. The research studies a range of these platforms and discusses implications for supply chain governance.

Anthony Alexander (University of Sussex), Izabela Delabre (Sussex)

Healthcare Operations (2)
Session Chair: Soheil Davari

Wordsworth Room

A hybrid forecasting-simulation-optimisation model for healthcare resource allocation of an entire hospital services

Hospital managers need to better understand their resource needs now and, in the future, to ensure effective and timely delivery of care. We have developed an innovative approach that combines simulation, forecasting and optimisation techniques to establish the exact resource requirements (i.e. beds, staff and clinics) of an entire hospital, including inpatient, outpatient and A&E services.

Muhammed Ordu (University of Hertfordshire), Eren Demir (University of Hertfordshire), **Soheil Davari** (University of Hertfordshire)

Optimal Balance between Temporary and Permanent Staff in Healthcare Systems

Given pros and cons of temporary staffing, we develop an optimization framework capturing the main drivers of the balance between temporary and permanent staff in healthcare delivery systems. Using representative scenarios, instances of the proposed optimization framework are solved numerically, thus illustrating how it can support recruitment decisions in healthcare.

Saha Malaki (Cass Business School), Navid Izady (Cass Business School), Lillian De Menezes (Cass Business School)

Access to Care: Impact to Horizontal and Vertical Integration in Healthcare Markets

We consider a market in which a payer (e.g. a government agency) applies a compensation contract to two competing healthcare service providers to

achieve a certain level of patient access to care. To curb ever-increasing costs, many healthcare payers have taken drastic actions by merging competing hospitals vertically or horizontally. We explore the impact of these integrations on access to care under performance-based contracts.

Houyuan Jiang (University of Cambridge), Zhan Pang (Purdue University), Sergei Savin (University of Pennsylvania)

Donor Funding for Drug Availability

We present a model of donor budget allocation for drug procurement in developing countries. The donor funding can be a lump-sum disbursement, per-unit subsidy, or both. We show that that the two types of funding exhibit a risk-hedging synergy and apply the model to 48 African countries using real data.

Iva Rashkova (Washington University in St Louis)

Retail Operations (1)
Session Chair: Bart MacCarthy

Incentive Design for Operations-Marketing Multitasking

A firm hires a store manager to exert operational and marketing efforts. We show it is optimal to pay a bonus when a threshold inventory level is cleared, or sales meet an inventory-dependent target. Under such a structure, the manager can receive better compensation for achieving a seemingly worse outcome.

Tinglong Dai (Johns Hopkins University), Rongzhu Ze (Hong Kong Baptist University), Christopher Ryan (University of Chicago)

Is Free Delivery Wise? Impact of The Omni-Channel Shipment Charge on Demand, Pricing, And Profitability

We developed a stylised model to understand how Omnichannel shipment charge impacts consumer's channel choice; evaluate whether retailers should charge Omnichannel service; and maximise profit by deciding the optimal delivery fee. The result suggest that free delivery is not necessary as it's not always increasing the customer demand and profitability.

Fan Cleverdon (Northumbria University), **Gendao Li** (Northumbria University)

The optimal order window for online retail with in-store fulfilment

Omni-channel retailers often promise a fulfilment service deadline for customers who place orders before a specific deadline. We develop an analytical model to determine the optimal length for the order receipt window, the minimum picking rate, and the time to commence picking for in-store fulfilment with a promised service deadline.

Lina Zhang (Nottingham University Business School), Bart MacCarthy (Nottingham University Business School), Luc Muyldermans (Nottingham University Business School)

Pricing Decision with Retailer's Online Secondary Market in the Presence of Hybrid Consumers

Considering both strategic and myopic consumers, in this paper, a game theory model is built to explore the optimal pricing decision for retailers when there exists online secondary market following primary market. Different pricing decisions under the conditions of centralized and decentralized supply chain system are proposed and compared.

Lu Wang (Peking University, Lihua Chen (Peking University)

The Application of Industry 4.0
Session Chair: Yu Gong

Revolutionising Supply Chains with Industry 4.0 concepts to attain sustainability

Supply chains (SC) are progressing towards a smart, automated, and digitized one with the advent of Industry 4.0 revolution. This article aims to integrate the sustainability goals with the concepts of Industry 4.0 which will lead to a Smart SC or SC 4.0 which has been presented in a framework.

Swayam Sampurna Panigrahi (Institute of Public Enterprise, Hyderabad), Debasish Mishra (IIT Kharagpur), Purna Chandra Panigrahi (National Institute of Technology, Rourkela)

Industry 4.0 technologies application and performance in the logistics sector: A contingency perspective

The key stimulus for adopting industry 4.0 technologies is the expected improvement in performance and return on investment. Yet, several contingencies influence to what extend firms can attain these benefits. This study investigates internal and external contingency factors the influence the adoption of industry 4.0 in logistics sectors in Oman.

Zainab Al-Balushi (Sultan Qaboos University), Anwar Al Sheyadi (Rustaq College of Education), Jawaher Al Balushi (Rustaq College of Education)

Supply Chain in the Dawn of Industry 4.0

Industry 4.0 is driving the emergence a new stream of technologies including: Artificial intelligence, Machine Learning, 3D Printing, and recently blockchain amongst others within supply chain management. How these digitalisation enablers influence supply chain performance remain unclear, which is the focus of our research through a global survey.

Zahra Seyedghorban (The University of Melbourne), Danny Samson (The University of Melbourne)

Virtual value chains: how Airbus managed innovation concerns

Our longitudinal case study of tier-2 and tier-3 Airbus suppliers describes SMEs prior to implementation of Industry 4.0 in its nascent supply network. We apply thematic analysis to derive new collaboration requirements, barriers, benefits and foundations of new theory. The resultant Casual loop diagram describes potentials of Industry 4.0 development.

Nikolai Kazantsev (University of Manchester), Nikolay Mehandjiev (University of Manchester), Pedro Sampaio (University of Manchester)

Sustainable Operations and SCM (3)
Session Chair: Mahsa Bouroushaki

Balancing emergence and control: using the Cynefin decision model in sustainable supply chain and opera-tions management.

The adoption of sustainable supply chains and operations by companies in different sectors are assessed using Snowden's Cynefin framework for decision analysis. This shows how structured and unstructured contexts and related epistemology link with organisational culture. Implications for SCM/OM as a means to meet environmental and social challenges are considered.

Anthony Alexander (University of Sussex)

Environmental sustainability trade-offs in a products' supply chain

While profitability remains the main goal, firms attempt to de-crease their environmental impacts to retain their quality and competitiveness. However, environmental improvements are not free and will not necessarily reduce costs or increase demand. This paper will discuss the supply chain environmental trade-offs and the strengths and weaknesses of different options.

Mahsa Boroushaki (University of Auckland), Tava Olsen (University of Auckland)

Institutional Pressures and Environmental Management: A Literature Review and Future Research Agenda

Review how institutional pressures affect environmental management adoption. Keywords are "institutional pressure", "coercive", "mimetic", "normative", "stakeholder pressure", "envi-ronmental legitimacy/management", "institutional theory" and "stakeholder theory". Identified 35 papers. Future research to address: (1) how multiple institutional pressures interact and affect adoption; (2) the joint effects of competitive pressure and isomorphism processes; (3) distinguish the effects of insti-tutional pressures on proactiveness versus symbolic adoption.

Chee Yew Wong (Leeds University Business School), Wenbo Jiang (Northwestern Polytechnical University, Xi'an)

Mixture operators in the calculation of the average green supply chain management practices

In this study we propose the mixture operators as a new aggregation system to analyse the average selected green supply chain management practices. This article proposes different operators and besides, through an illustrative example we try to clarify better the application of this methodology.

Keivan Amirbagheri (Escola Universitària Salesiana de Sarrià), José M. Merigó (Universidad de Chile, University of Technology Sydney)

Monday 2nd September
15:00 - 16:30 - parallel sessions

Servicizing and OM
Session Chair: Hamid Noori

Pricing Scheme Design in a Servicizing Business Model

In this study, we design contract schemes in a servicizing business model. The service provider (SP) offers two types of schemes, a two-part tariff and a subscription, to the customers. We show which scheme is more desirable for the SP to offer under different conditions through a game theoretic model.

Hamed Vafa Arani (Rotterdam School of Management), Morteza Pourakbar (Rotterdam School of Management), Erwin van der Laan (Rotterdam School of Management)

Product-as-a-service: A decision framework for supply chain based circular business models

Circular business models present opportunities for value creation in resource-constrained supply chains. Yet beyond environmental impact, financial feasibility of product-as-a-service models is not well understood. Based on the impact of supply chain strategy on financial/strategic goals we develop a framework that leads to more profitable and sustainable servicizing decisions.

Marina Mattos (Massachusetts Institute of Technology), Godfrey Mugurusi (Norwegian University of Science and Technology), Sigurd Vildåsen (Norwegian University of Science and Technology)

Upgradable Products: Addressing technology obsolescence risk under Servicizing

Servicizing transfers two major risks to firms and environment, product misuse and technology obsolescence. As the continuation of our first study on mitigating the former risk, this study aims to analytically evaluate under what condition it is more profitable for manufacturers to produce upgradable products to decrease the latter risk.

Tina Arabian (Wilfrid Laurier University), **Hamid Noori** (Wilfrid Laurier University)

Product Design & Delivery
Session Chair: Christoph G. Schmidt

Mediating role of trust and power in new product development project team

Product development projects characterized by knowledge integration minimize duplication of knowledge resources and leads to overall project and product success. Empirical studies in this area have investigated causal effect of trust and power on knowledge integration effort. In the current paper we test mediating effect of trust and power on knowledge integration of team that affects project and new product success outcomes.

Rupak Rauniar (University of Houston- Downtown), Greg Rawski (University of Evansville)

Product line expansion research for the middle market

This paper explores the product line expansion of high-end enterprises and low-end enterprises in the middle market. High-end enterprises and low-end enterprises can occupy the middle market by producing more mid-end products. Under different parameters and different game sequences, the two enterprises Product line expansion strategies are put forward.

Rui Zhao (Peking University), Lihua Chen (Peking University), Huaqing Hu (Peking University)

Knowledge distribution in inter-organizational new product development projects: The role of knowledge acquisition

We examine the effects of NPD project partner knowledge distribution on focal firm knowledge acquisition and project performance. We find that high ratio of external knowledge drives knowledge acquisition but limits product design quality. Highly dispersed knowledge also hinders design quality. Further, we uncover a mediating role of knowledge acquisition.

Christoph G. Schmidt (ETH Zürich), Tingting Yan (Wayne State University), Stephan Wagner (ETH Zürich), Lorenzo Lucianetti (University of Chieti and Pescara)

Sustainable Operations and SCM (4)
Session Chair: Suwarna Shukla

Impact of Information Technology use in Agricultural Supply Chain: Mitigating Uncertainties at Bottom of Pyramid

In this paper, we investigate the impact of Information technology use in agricultural supply chain at the Bottom of Pyramid. Using survey based methodology, we study how digitization can lead to better collaboration between supply chain partners. Further, we investigate whether digitization and collaboration lead to higher supply chain performance.

Suwarna Shukla (Indian Institute of Management, Indore), Rohit Kapoor (Indian Institute of Management, Indore), Narain Gupta (Management Development Institute, Gurugram)

Spare Parts Management for Sustainability: A Systems Dynamics Approach

This study looks at the spare management and considers the trade- off and the conflicts which are apparent as the transition happens from the economic decision making to sustainable decision making. This study adopts a system dynamic approach to simulate the above problem and suggests different options available.

Mohita Gangwar Sharma (Fore School of Management)

Green newsvendor model: a game-theoretic approach

By integrating both greenness and stochasticity into a two-echelon supply chain, we generalise traditional newsvendor model to support decision-making with regard to greening, pricing, and ordering. After investigating the game structural properties, we propose a three-phase solution procedure to solve the stochastic model. We find that demand uncertainty does not always hinder green practices.

Kailan Wu (Delft University of Technology), Bart De Schutter (Delft University of Technology), Jafar Rezaei (Delft University of Technology), Lóránt Tavasszy (Delft University of Technology)

Healthcare Operations (3)
Session Chair: Vedat Verter

Technology Assessment for Blood Pressure Measurement

Applanation Tonometry (AT) is more accurate than the tradi-tional blood pressure measurement technique. Since it is also more invasive and costly, the value of the provided infor-mation is scrutinized by physicians. Employing machine learning, we assess the value of AT from the patients' perspective, based on real life data.

Vedat Verter (McGill University), Manaf Zargoush (McMaster University), Mehmet Gumus (McGill University)

Comparing surgeons' risk attitudes in an English hospital

We seek to complement subjective survey-based methods to measure surgeons' risk attitudes with a method using data from their decisions under uncertainty, namely, their ex ante requested time vis-à-vis the ex post actual duration for proce-dures. The situation is modelled as multiple newsvendors fac-ing different and multiple demand distributions, and analysed using data from 3,698 procedures from an English hospital over a six-month period.

ManMohan S. Sodhi (Cass Business School)

Which stage of the industry lifecycle do Clinical Re-search Organizations (CROs) currently reside in? An exploratory analysis using clinical trials data

Applying Bass diffusion methodology on an extensive dataset assembled from the AACT (Aggregate Analysis of ClinicalTri-als.gov) database and other publicly available data, we aim to answer the following: Which stage of the industry lifecycle do CROs currently reside in? We further study the dynamics of CRO adoption.

Lidia Betcheva (Cambridge Judge Business School), Feryal Erhun (Cambridge Judge Business School)

Risk/ Resilience (1)
Session Chair: Joerg Ries

Supply chain collaboration in the presence of disrup-tions

The supply chain collaboration has gained significant attention in the presence of disruptions. This paper presents findings from a systematic literature review to investigate how collabo-ration helps supply chains respond and recover from disrup-tions. Two themes (supply chain contract, information sharing) are categorised and provide insights and future research direc-tions.

Linh Duong (University of Lincoln)

Risk propagation in supply chains: An analysis of sol-vency spillover effects

Aim: The study analyses the propagation of risks throughout the supply chain. Methods: Using network and financial data, it explores the effect of changes in the creditworthiness on related supply chain companies. Theoretical framing: Network theory and supply chain risk management. Early results: Changes in creditworthiness propagate and the effects are more pronounced for deteriorating solvencies.

Joerg Ries (Cass Business School), Florian Kiesel (Grenoble Ecole de Management)

Modelling resilience in Indian Food Grain storage & Distribution Problem

The paper proposes a mathematical program to optimize the grain storage and movement which is a part of Indian food security system. The objective is to propose location for new storage facilities, minimize the food loss and increase efficiency of grain movement even during disaster scenarios.

Harpreet Kaur (Indian Institute of Management Amritsar), Mahima Gupta (Indian Institute of Management Amritsar)

Modelling disruption ripple effect in supply chains: A simulation perspective

Supply chain (SC) disaster/risk ripple effect has been studied conceptually, but the phenomenon has not been quantified following empirical approaches. Due to the complex structure of SC networks, holistic approaches are needed to capture dynamic behaviour of influencing variables. Systems thinking-driven simulation model is developed and analysed to draw inferences.

Abhijeet Ghadge (Cranfield School of Management), Merve Er-Kara (Marmara University), Atanu Chaudhuri (Aalborg University), Jayanth Jayaram (University of South Carolina)

Disaster Management (1)
Session Chair: Byung-Gak Son

Supply Management for the Immediate Relief Period of Rapid-Onset Disasters

Focusing on rapid-onset disasters, we define a model to de-termine the optimal prepositioning stock level, for both single and multiple items, considering demand, budget, and local supply uncertainties, and budget limitation. We derive proper-ties of the optimal solution, and identify methods to find exact and approximate solutions.

Mahyar Eftekhar (Arizona State University), Jing-Sheng Jean-nette Song (Duke University), Scott Webster (Arizona State University)

Operations Management Applications in Faith Communities

To have an efficient and productive service delivery in faith communities, concepts, tools and techniques of Operations Management should be used. We managed a literature review to find out how operations have been applied by faith commu-nities especially churches. Most of the applications are related to logistics and disaster management areas.

Nasrin Asgari (University of Roehampton), Sheikh Muham-mad Zahid (University of Roehampton)

Justice and social capital in supply chain disruption recovery: Buyer-supplier dyadic perspectives

By adopting justice and social capital theory, we aim to explain how firms can quickly recover from the disruption by use of their collaborative relationship. We found that justice percep-tion helps firms to accumulate social capital, and social capital contributes firms in achieving timely disruption recovery by promoting collaborative action.

Chang-Hun Lee (Cass Business School), Byung-Gak Son (Cass Business School), Sinéad Roden (Trinity College Dublin)

Role of Social Media in Disaster Relief Supply Chain

This research paper objectively explores how social media could be deployed as an effective tool in disaster-relief supply chains to enhance the visibility of critical information and have it disseminated quickly, to a targeted/broader audience, thus bringing about near-perfect, real-time coordination. It discusses the potential disadvantages of social media that affects opera-tional efficiency.

Johanan Asirvatham Daniel Ephrimamos (Bharathidasan Institute of Management), S. Jaya Krishna (Bharathidasan Institute of Management)

Supply Chain Management (2)
Session Chair: Iain Reid

Omni-Channel Retailing – a decision making map

The research aims to provide a systematic analysis of the operations, supply chain, and logistics issues that arise in omni-channel retailing. Based on an extensive review of the aca-demic and practitioner literatures, we present a conceptual map of key decisions from both the front-end customer and the back-end retailer perspectives.

Lina Zhang (Nottingham University Business School), Bart MacCarthy (Nottingham University Business School), Luc Muyldermans (Nottingham University Business School)

Fast-fashion consumers and their behaviour online: Revealing new consumer groups and their touchpoints

Sought after by fast-fashion retailers, attribution models segment consumers and identify touchpoints to conversion. Existing consumer segmentation focus on consumer offline behaviour. Constantly changing consumer online behaviour, multi-platform and multi-device use make standard segmentation obsolete. We aim to reveal new consumer groups based on online behaviour, device and platform used.

Ewelina Lacka (University of Edinburgh)

Dual serving problem: What is the right supply chain strategy?

We study the dual serving problem, where a supplier faces two channels of demand, i.e., from individuals who order small quantities but very frequently and from merchants who order large sizes but sporadically. We mathematically analyse the problem while discussing two particular strategies, namely, aggregation and protection, for managing inventory.

Mojtaba Mahdavi (The University of Auckland Business School), Tava Olson (The University of Auckland Business School)

Balancing the Legal Service Operation and Value Prop-osition: The case for AI

This paper debates the perceptions of 8,192 users of legal services. Our study examines the value proposition and survey data through 29 sub-classes of legal activity reporting on per-ceived performance encountered. We also investigate the advancements of legal-Tech in relation to enhancing customer expectations through semi-automated the decision support systems.

Iain Reid (Manchester Metropolitan University), David Bam-ford (Manchester Metropolitan University), Rob O'Neil (Univer-sity of Huddersfield), Marina Papalexi (Manchester Metropolitan University), Murray Dalziel (University of Baltimore)

Tuesday 3rd September
11:00 - 12:30 - parallel sessions

Managing Supply Chain Risk in Divided Times (2)
Session Chair: Abhijeet Ghadge

Renaissance Room

The impact of product and supply complexity on supply chain robustness and resilience

The objective of this paper is to understand how contextual factors, i.e. product and supply complexity affect application of mitigation strategies to manage supply chain vulnerabilities in a developing country. The study uses contingency theory as a lens to build theoretical foundation and multiple case study as a methodology to conduct the empirical investigation.

Jelena Vlajic (Queen's University Belfast), Jack G.A.J. van der Vorst (Wageningen University), Dragan Djurdjevic (Belgrade University)

Using real time information of natural disasters to manage supplier portfolio: A big-data mining framework

It is almost impossible for the procurement managers to keep track of the natural disasters and its impact the on their thousands of suppliers. We proposed a big-data mining framework to help these managers efficiently manage the supplier portfolio in real-time. The proposed framework was tested on a case-company.

Manish Shukla (Durham University Business School), Aditi Sharma (Durham University Business School)

Collaborative Response to IT Service Disruptions under Risk Aversion

We study the collaborative response of an IT service provider and its client to service disruption where the threat of disrup-tion is continual and each party's investment in response capability is practically unobservable. Surprisingly, the vendor's investment is lower under risk aversion even when facing a penalty-based contract.

Feryal Erhun (University of Cambridge), Marc Jansen (Gousto), Aris Oraiopoulos (University of Cambridge), **Danny Ralph** (Univer-sity of Cambridge)

Supply Chain Management (3)
Session Chair: Javad Feizabadi

Shelley Room

Designing an ambidextrous supply chain

Three supply chain design elements: product; sourcing, manufacturing and distribution; SC relationships along with contextual variables: environmental uncertainty and managers' cognitive ability are considered in this research. An NK simulation model is developed to analyse the interdependency pattern among the design and contextual variables to manage the trade-offs in an ambidextrous SC.

Javad Feizabadi (Malaysia Institute for Supply Chain Innovation)

Orchestrating supply networks to deliver service performance

This study explores how a client firm orchestrates its service supply networks (SSN). Specifically, we link ex-ante and ex-post governance of SSNs with performance. A study of a cli-ent's SSNs reveals that task complexity influences ex-ante governance choice. Furthermore, the degree of ex-post coordi-nation has inverted-U effect on service performance.

Jas Kalra (University of Bath), Jens Roehrich (University of Bath), Brian Squire (University of Bath), Andrew Davies (Uni-versity of Sussex)

Coopetitor's Entrepreneurial Orientation and operational performance: Contingency role of coopetitor's internal capabilities

We present research examining how coopetitor's strategic in-tent (SI) and absorptive capacity (AC) as distinct capabilities moderate the coopetitor's entrepreneurial orientation (EO) and its operational performance. We analyse survey data from 313 coopetitive firms using regression models. Results suggest SI negatively moderates the positive relationship between EO & operational performance whereas AC positively moderates.

Chandrasekararao Seepana (Alliance Manchester Business School), Antony Paulraj (Nottingham University Business School), Fahian Huq (Alliance Manchester Business School)

Sustainable Operations and SCM (5)
Session Chair: Debabrata Ghosh

Tennyson Room

Do Carbon Emissions Cap Drive Environmental Goals in Supply Chains? Strategic Decisions, Contract Choices, and Lessons

This paper analyzes a channel facing carbon emissions cap and proposes several supply contracts to improve channel performance. We find that the manufacturer strategically decreases carbon abatement effort in a price sensitive market; however, product greening enables it to charge a higher price in a green sensitive consumer market.

Mithu Rani Kuiti (Indian Institute of Management Calcutta), **Debabrata Ghosh** (Malaysia Institute for Supply Chain Inno-vation), Preetam Basu (Indian Institute of Management Calcut-ta), Arnab Bisi (John Hopkins University)

Managing innovation for firm growth: the quantile effects in EU countries

Scholars claim that innovation activities induce firm growth. Cross-section data and bootstrapped quantile regressions reveal key aspects of the firm's growth rate response to innova-tion activities input. We use the CIS 2012 firm level data for 11 EU countries, 11 ISIC aggregations, and controls for firm size and M&A.

Maria Del Sorbo (European Commission), Yari Borbon Galvez (LUIC, Università Cattaneo)

Creating economic and social stakeholder value through the orchestration of supply chain resources from within clusters

Whilst industrial policy in Europe continues to support cluster initiatives there is limited understanding of how SME's contrib-ute to economic and social stakeholder value. This research combines the Extended Resource Based View with Resource Orchestration to explore supply chain drivers and enablers for the (co-) creation of value in regeneration clusters.

Helen Beney (University of Sussex), Anthony Alexander (University of Sussex)

Green Product Development and Market Competition: A Study of the Fashion Apparel Industry

Motivated by the industrial practices, we analytically explore the optimal product greenness level in the fashion supply chain, and investigate how retail competition and consumer returns affect green product development in fashion products. The reasons behind the underdevelopment of green fashion products is explored and practice-relevant managerial insights are derived.

Shu Guo (University of Liverpool), Tsan-Ming Choi (The Hong Kong Polytechnic University), Bin Shen (Technical University of Munich)

Healthcare Operations (4)
Session Chair: Soheil Davari

Wordsworth Room

The Predictive Vehicle Positioning Problem for Diabetes Prevention

Currently, the British government has Diabetes prevention pro-grammes. However, the uptake of these services is not ideal in many parts of the UK. I will present mathematical models to use in order to enhance the uptake of these services among the people living in the UK and present solution algorithms.

Soheil Davari (University of Hertfordshire)

Identifying KPI's by using Text Mining of Administrative Board Documents in Norwegian Hospitals

This paper analyses 36,000 documents by using text mining from board meetings in hospitals in Norway in the period 2008-2017. The purpose is to explore which subjects are emphasized and identify changes in strategic focus during the time span.

Agaraoli Aravazhi (Høgskolen i Molde), Berit Irene Helgheim (Høgskolen i Molde), Birgithe Eckermann, Sandbæk (Høg-skolen i Molde)

Probabilistic Forecasting of Patient Waiting Times in the Emergency Department

Estimates of individual patient waiting times can improve pa-tient satisfaction and assist in staff and resource allocation. We generate and evaluate probabilistic forecasts for waiting times based on the following categories of predictor variables: (1) workload, (2) staffing, (3) calendar variables, (4) de-mographics, and (5) severity of patient condition.

Siddharth Arora (University of Oxford), James Taylor (University of Oxford)

Scheduling of Primary Care Follow-up and Risk of Long-term Opioid Use

Continuity-of-care is generally recommended for managing opioid-dependent patients; however, is this recommendation appropriate in the early stages of opioid-use? Using data mining and econometric methods, we analyzed the medical claims of new opioid users and found early exposure to a second opinion may significantly curb rates of long-term opioid use.

Katherine Bobroske (University of Cambridge), Lawrence Huan (University of Cambridge), Michael Freeman (INSEAD Singapore), Anita Cattrell (Evolent Health), Stefan Scholtes (University of Cambridge)

Panel: The Future of Research in Humanitarian Operations

La Noblesse Room

In this panel discussion we will have a conversation with leading researchers in humanitarian operations to set future research directions for this field. Potential topics will include appropriate methodologies, gaps in literature as well as newly developing areas such as public-private partnerships and the involvement of the commercial sector in humanitarian aid.

Nezih Altay (Depaul College of Business, Depaul University), **Rameshwar Dubey** (Montpellier Business School), **Mahyar Eftekhar** (Arizona State University), **David Grant** (Hanken School of Economics)

Policy
Session Chair: Kostas Selviaridis

Coleridge Room

University impact? Evidencing operations management knowledge transfer

We explore the impact of universities in transferring operations management knowledge to business; examining value and influence by reporting on outputs from 13 case studies across manufacturing and healthcare. The research assesses the impact of knowledge transfer and proposes an initial framework that could be used to evidence impact.

David Bamford (Manchester Metropolitan University), Iain Reid (Manchester Metropolitan University), Paul Forrester (Keele University), Benjamin Dehe (Manchester Metropolitan University), Jim Bamford (University of Huddersfield). Marina Papalexi (Manchester Metropolitan University)

Procurement of innovation or innovation of procurement? Insights from the UK public sector

We analyse procurement goals, incentives and practices in the UK healthcare and defence sectors and identify institutional constraints and policy incoherence as key challenges regarding the implementation of innovation-oriented public procurement. We argue that innovation of procurement policies and practices is required and suggest areas of possible intervention.

Kostas Selviaridis (Lancaster University Management School), Martin Spring (Lancaster University Management School)

Relationship between Corporate Governance and Performance: Two Stage Data Envelopment Analysis

Using the two-stage data envelopment model, the study compares the efficiency of corporate governance in Indian companies. Methodologically, the study contributes to the inherent endogeneity plaguing governance-performance relationship utilising efficiency measures.

Arunima Haldar (SPJIMR), Debabrata Das (NITIE)

Decision Sciences and Optimization Session 1
Session Chair: Anna Errore

Keats Room

Multi-objective optimal designs for discrete choice experiments

Discrete choice experiments are typically designed by optimiz-ing logistics regression models based on a number of assump-tions on prior distributions of the estimated coefficients. We construct robust designs for logistic regression that maximize the information gain of the main effects model with protection to the presence of secondary order effects.

Anna Errore (University of Minnesota), R. Dennis Cook (Uni-versity of Minnesota), Christopher J. Nachtsheim (University of Minnesota)

Reverse blending: a solution to the challenge of mass customization in continuous production (case of the fertilizer industry)

While mass customization relies on components assembly in discrete production, it consists, in the continuous one, in producing a sequence of different products batches, which limits feasible diversity and increases transportation issues. To man-age this situation, which is particularly relevant to the fertilizer sector, we propose a new approach, called reverse blending, based on a delayed differentiation performed nearby end-users.

Latifa Benhamou (EMINES School of Industrial Management), Pierre Fenies (EMINES School of Industrial Management), Vincent Giard (EMINES School of Industrial Management)

Integrating Routing with Inventory and Transshipment Decisions: A Robust Optimization Approach

We tackle the integrated problem of lateral transshipments and routing. By addressing simultaneously the mutual effect of the route and the transshipments, we minimizes the system's total cost of inventory and transportation. We take a robust ap-proach to deal with uncertainty aspects in the problem.

Hussein Naseraldin (ORT Braude College of Engineering), Shiry Varem (Technion – Israel Institute of Technology), Aharon Ben-Tal (Technion – Israel Institute of Technology)

Tuesday 3rd September
14:30 - 15.45 - parallel sessions

Logistics Operations (1)
Session Chair: Jasper Bos

Renaissance Room

A priori Vehicle Routing Problem with urgent Stochastic Customers: balancing travel distance and response time

We consider an a priori Vehicle Routing Problem for vehicles that must swiftly visit randomly appearing urgent customers in addition to customers known in advance. Distributional infor-mation on the urgent random customers is exploited to distrib-ute vehicles in time and space, minimizing response time while visiting regular customers efficiently.

Jasper Bos (University of Twente), Maartje van de Vrugt (University of Twente), Richard J. Boucherie (University of Twente)

Liner Cargo Shipping Decision with Empty Container Repositioning

An international liner cargo company is planning to open a new route in east Asia in response to the increasing shipping de-mand. The new route covers several ports from north to south with some pre-planned schedule. Demand forecast and liner programming models are applied to optimize the cargo ship-ping decisions.

Jiun-Yu Yu (National Taiwan University)

Logistics Resource Sharing and Competition Between E-commerce Companies

We study logistics resource sharing and competition of two B2C E-commerce companies by using Hotelling model. One compa-ny which has logistics resources shares them to the rival which does not have. We find that the sharing may not benefit the former company and consumers, but always benefit the latter company.

Ping He (South China University of Technology), Shanshan Zhang (Foshan University)

Behavioral Operations (2)
Session Chair: Shulin Lan

Shelley Room

Online car-hailing system performance analysis based on Bayesian Network

This paper studies the affecting factors, their relations and im-pact of online car-hailing system in an empirical way. An index system is established to evaluate user experience. The Bayesi-an Network theory is employed to model the complexity of their influence. We further construct an investment allocation model with an aim to minimize economic cost.

Shulin Lan (School of Economics and Management in Univer-sity of Chinese Academy of Sciences), Chen Yang (School of Computer Science and Technology, Beijing Institute of Technology)

Crowd behaviour modelling developments through mixed integer programming: the case of airport queue management

Crowd behaviour is difficult to predict. A number of mathemati-cal and psychological models are proposed in the literature to investigate crowd behaviour. In this paper, we exploit mixed integer programming to model crowd behaviour with multiple time periods applied to a case study of queue management at airport security gates.

Mahdi Doostmohammadi (University of Strathclyde), Rosanna Holdsworth (University of Applied Sciences Western Switzer-land), **Emmanuel Fragniere** (University of Applied Sciences Western Switzerland)

Optimal manpower planning in a call centre considering multi-skilled workforce: Impact of reference point

In this paper, we incorporate the reference effect considering specialized versus multi-skilled workforce planning in call centres. Under the assumption of random incoming call volume, optimal workforce may show pull-to-centre effect based on the optimism level of the planner. Our findings are consistent with newsvendor models using Prospect Theory.

Dipankar Bose (XLRI – Xavier School of Management), Abhishek Chakraborty (XLRI – Xavier School of Management)

Designing Digital Rollovers: Managing Obsolescence with Release Time

The effectiveness of the release of a new version over a previous version depends on the obsolescence perception of consumers and the company can influence obsolescence by a prudent timing of the new version. We explore the impact of the timing decision in markets composed of myopic and strategic consumers.

Esma Koca (Imperial College London), Tommaso Valletti (Imperial College London), Wolfram Wiesemann (Imperial College London)

Strengthening supply chain using blockchain applications (1)
Session Chair: Samir Dani and Yavuz Gunlay

Tennyson Room

A Blockchain-Based System for Improving Supply Chain Effectiveness

Current supply chain systems suffer from the inability to accu-rately convey key supply chain information (e.g., customer demand, manufacturing capacity) across different supply chain levels, leading to inefficient resource usage. To address this problem, we propose a blockchain-based design for coordinating information flow that aims to enhance supply chain effec-tiveness.

Ahmad Ashkanani (Kuwait University), Ameer Mohammed (Kuwait University)

Co-evolution of cyber risks and blockchain: a meta-analysis and implications for supply chain risk man-agement

Academic contributions and practitioners claim that blockchain offers data and system integrity against supply chain cyber-risks. Based on a Web-of-Science extensive search, this work presents a meta-analysis of literature on cyber-risks, block-chain, supply chain and their intersections. Results offer a co-evolutionary view on supply chain cyber security systems and technologies.

Yari Borbon-Galvez (LIUC Università Cattaneo), Claudia Col-icchia (Hull University), Alessandro Creazza (Hull University), Fabrizio Dallari (LIUC Università Cattaneo)

Investigating the implications of incentivisation on the effective application of Blockchain in a supply chain

This paper aims to investigate incentivisation of supply chain transactions within a blockchain network. The difference be-tween a private and public blockchain, and the role of incentivisation is discussed. The research on applying blockchain within supply chains is still in its infancy and hence this study presents a conceptual proposition.

Abdul Jabbar (University of Huddersfield), Samir Dani (Uni-versity of Huddersfield)

Panel: Performance-based Contracting

Wordsworth Room

In parallel with the increasing application of performance-based contracting (PBC) in practice, research has started to explore some relatively new and problematic aspects of implementing PBC. One of these aspects pertains to mitigating and accounting for the influence that buying firms and/or final customers have on the delivery and performance of services. Other aspects include the application of new technologies, such as remote diagnostics, which can help plan maintenance of assets and monitor performance – but at the same time create dilemmas around intellectual property and privacy.

Wendy van der Valk (Tilburg University), **Kostas Selviaridis** (Lancaster University), **Finn Wynstra** (Erasmus University)

Logistics Operations (2)
Session Chair: Alistair Brandon-Jones

Modularisation of logistics customer service

This conceptual study aims to discuss the applicability of modularisation of logistics customer service, and the potential impact of service modularisation on logistics service performance. By particularly considering the online sales, an overview of the alternatives for the modularization of logistics customer service are provided in this study.

Metehan Feridun Sorkun (Izmir University of Economics). **Oznur Yurt** (Roehampton University)

Examining the assimilation of advanced technologies in warehouse operations: A systematic review and future research agenda

Despite increasing interest concerning the impact of emerging technologies in warehouse operations, academic research remains nascent. As a starting point, we report results from a systematic review of academic and industrial studies in this domain. In addition, we propose a future research agenda and propose theories to support explanatory analysis.

Ayse Begüm Kilic (University of Bath), **Alistair Brandon-Jones** (University of Bath), Vaggelis Giannikas (University of Bath)

Aligning e-commerce product returns through using mass transit passenger movement patterns for crowdsourcing by use of time synchronised OTP and Drop Boxes

The research work intends to reintroduce the mixing of pas-senger and freight for urban daily trips using mass transit as well as retail based urban logistics. However, as against the traditional approach of segregating freight and passenger, it intends to use the spare capacity available with the passenger while using them as crowd shippers.

Chitresh Kumar (O. P. Jindal Global University)

Exploring the Social Barriers of Information Sharing for Port Resilience Planning – a specific case from the UK's maritime ports industry

This paper explores the social barriers of information sharing to planning for resilience of maritime ports by presenting a specific case from the United Kingdom. It presents the findings from a qualitative study via interviews/observations of the collaborative efforts between UK's government and ports for port re-silience planning.

Ashutosh Sharma (University of Nottingham), Duncan Shaw (University of Nottingham)

Operations Management in Emergencies
Session Chair: Tobias Andersson Granberg

Fairness in the ambulance location problem

How to position ambulances across an EMS region in a 'fair' way? We argue that this is done by maximizing the so-called Bernoulli-Nash Social Welfare, and introduce the corresponding mathematical optimization model. Our model can be applied using a variety of performance measures, such as coverage or a survival function.

Caroline Jagtenberg (University of Auckland), Andrew Mason (University of Auckland)

Optimal incident site logistics

Using sensors to collect data at emergency incident sites can facilitate analysis of the logistic operations. This can be used to improve planning and preparedness for new operations. Furthermore, real-time information from the sensors can serve as operational decision support.

Martin Waldemarsson (Linköping University)

Management of volunteers in daily emergencies and disasters

Volunteers are used in daily emergencies such as cardiac arrest, and for major disasters such as earthquakes, but the possibility to use the same volunteer (group) for a range of emer-gencies is seldom exploited. Here, this opportunity and the challenges are discussed, focusing on resource management.

Tobias Andersson Granberg (Linköping University)

Innovative Operations Session
Session Chair: Nigel Caldwell

Dematerialisation and what it means for Operations Management

In OM dematerialisation means less intensive and visible use of physical, generally associated with shifts towards sustainability, services and knowledge intensive work. This paper critically examines the implications for operations management of the dematerialisation phenomena, where from warfare to supply chains, innovations are breaking links with locales and traditional loyalties.

Nigel Caldwell (Heriot Watt)

Do Digital Innovations Create Value? An Empirical Study of German and US Firms

The purpose of this paper is to investigate the linkage between digital innovations and shareholder value with focus on German and US companies. In total, we apply event study methodology to 685 events. We show that type of innovation, institution-al arrangement and innovation stage influence excess returns of digital innovations.

Philipp Mosch (University of Passau), Robert Obermaier (University of Passau)

Should core companies invest in innovation or help SMEs?

The innovation and loan strategies of core enterprises in the face of capital constraints for downstream SMEs (small and medium-sized enterprises) are studied in this paper. Innovation can expand the market, and loans can expand the purchasing volume of SMEs. This paper studies the operation strategies of core enterprises and SMEs.

Rui Zhao (Peking University), Lihua Chen (Peking University), Huaqing Hu (Peking University)

Tuesday 3rd September
16.00 - 17.15 - parallel sessions

Decision Sciences and Optimization (2)
Session Chair: Parichehr Paam

Renaissance Room

An energy-aware multi-product warehousing and inventory optimization model for deteriorating agri-fresh foods

In this study, we develop a mixed-integer quadratic programming model for a multi-product multi-warehouse inventory problem for agri-fresh products, with the aim to minimize the total warehousing and inventory costs. The model is tested for a case study and the results show an improvement by 8% in the total cost.

Parichehr Paam (The University of Newcastle), Regina Ber-retta (The University of Newcastle), Rodolfo Garcia-Flores (CSIRO Data61)

The Effect of Assuming a Bivariate Demand Function of Credit Period Granted and Selling Price Charged To The Customer On The Optimal Solutions of Trade Credit Models

Most Trade Credit researchers overlook that slight changes in the demand function they assume can cause significant difference in the optimal solutions devised by their inventory deci-sion models. We ask and investigate 'What happens if the true demand function turns out a bivariate function of the granted credit period and charged price to the customer, instead?'

Hasanain Ali (Alliance Manchester Business School), Joao Frota-Neto (Alliance Manchester Business School), Yu-wang Chen (Alliance Manchester Business School)

Dynamic EOQ model to include stochastic commodity prices and maritime freight rates.

A dynamic EOQ model has been developed to take into ac-count the stochastic volatility of commodity prices and maritime freight rates. The empirical analysis provides evidence that there is significant improvement in the inventory policy by consideration of price volatility. The dynamic model generates lower total cost compared to the classic model.

Ahmed Aljizani (University of Hull), Alessandro Creazza (Uni-versity of Hull), David Menachof (Florida Atlantic University), Stephen Trotter (University of Hull)

Behavioral Operations (3)
Session Chair: Debabrata Das

Shelley Room

A Modelling Framework for Recovery of Used Products in Presence of Incentive Offer

In the present study, we propose a product recovery framework which models consumer's willingness to return a used product based on the incentive offered to him/her. Further, an optimization model is developed to derive the optimum incentive plan so that the cost of acquisition of used products is minimized.

Debabrata Das (National Institute of Industrial Engineering, Mumbai), Pankaj Dutta (Indian Institute of Technology Bombay)

Investigating Optimum Length of Physical Queues at Businesses and Its Impact on Customers to Join such Queues

We examined and analyzed optimum length of physical queues in service industries to send positive signals to the customers to join such queue. The data collected from online survey and empirical findings through observation of four restaurants in London. Our findings from quantitative analyses of survey and observations show the effect and optimum length of physical queue on customers in different areas.

Ehsan Khajeh (Kingston University), Reza Zanjirani Farahani (Kingston University), Alex Hill (Kingston University)

Empirical Research Methodology in Queueing Theory: Literature Review

The purpose of this paper is to review and evaluate the current papers on empirical research methodology in queueing theory. For this purpose, we looked at the papers in top ranking operations journals from 1977 to May 2019. The existing trends and gaps identified and the opportunities for future research are provided.

Ehsan Khajeh (Kingston University), Reza Zanjirani Farahani (Kingston University), Alex Hill (Kingston University)

Operations Management in Emerging Economies (2)
Session Chair: Lysann Seifert

Tennyson Room

From a systematic literature review to an integrated theoretical framework of food supply chain traceability (FSCT)

The purpose of this paper is to systematically review the literature on Food Supply Chain Traceability and propose a common theoretical framework based on the logic of sustainable supply chain governance, after an analysis of 268 papers from peer-reviewed academic journals published from 1994 up to Mar 2019.

Xiongyong Zhou (Xiamen University, Zhiduan Xu (Xiamen University)

Disruptive Innovation in Emerging Economies

Disruptive innovation has been described as an innovation that drastically alters the incumbents' existing products or services. Despite the resultant benefits of disruptive innovations, the prevalence of smaller packs of consumer goods for the masses is a disruptive innovation which has cost implications for manufacturing firms in Nigeria.

Adenike Moradeyo (Augustine University) - SKYPE presentation

Sustainable performance for humanitarian operations in refugee camps

The management of refugee camps requires specific operational resources and strategies to be sustainable. Through case studies in two refugee camps in Jordan mainly informed by interviews, we investigate which configurations of resources, competences and processes lead to different types of sustaina-ble innovations in camp operations.

Lysann Seifert (University of Kassel), Stefan Gold (University of Kassel), Nathan Kunz (University of North Florida)

Sustainability Threats Are Supply-side Risks

Appropriate categorization of a risk is an important step towards its adequate mitigation. This conceptual paper emphasizes that sources of sustainability threats from suppliers in supply chains should be categorized simply as supply-side risks. This view is in contrast to the classification of supplier instigated sustainability threats dominant in extant literature.

Adenike Moradeyo (Augustine University) - SKYPE presentation

Artificial Intelligence and Data Analytics in Supply Chain Management
Session Chair: Alexandra Brintrup

Wordsworth Room

Artificial Intelligence in Professional Service Opera-tions: Insights from Law and Accounting

This paper presents early results from a study into the adoption of Artificial Intelligence (AI) in legal and accounting firms. Using in-depth case studies, we identify sector-specific enablers and barriers to adoption, and how AI can transform processes, job roles, business models and industry structure, given these sectors' particular institutional contexts.

Martin Spring (Lancaster University Management School), James Faulconbridge (Lancaster University Management School), Atif Sarwar (Lancaster University Management School)

Can Artificial Intelligent Algorithms address a Real Waste Collection Problem?

This paper addresses a waste collection problem by incorporat-ing practical constraints and real-data from a waste collection company in Durham, UK. We proposed a mathematical model and applied Artificial Intelligent algorithms to solve the proposed model. The proposed model provides significant cost savings for the company.

Manish Shukla (Durham University Business School), Chaitanya Agarwal (Durham University Business School)

Artificial intelligence and its impact on supply chains

Artificial Intelligence (AI) and its impact on Supply Chains (SC) has become a popular topic prone to hype, hope and fear. In this paper we conceptualise SC AI through the lens of a human-mimicking Intelligent SC Agent by developing its capability blocks, review studies to date, and discuss research challenges that face the field.

Alexandra Brintrup (University of Cambridge, Institute for Manufacturing)

Supply Chain Management (4)
Session Chair: Javad Feizabadi

La Noblesse Room

Supply chain strategy evolution in nascent markets

This research intends to explore the interaction between operations/ supply chain and nascent market in which there is high level of ambiguity. Little is known in the extant literature on the effect of supply chain / process innovation and strategy to mitigate the ambiguity in nascent markets.

Javad Feizabadi (Malaysia Institute for Supply Chain)

Variance Damping or Variance Amplifying? A look at Adaptive Analytics in the Supply Chain

We introduce a framework which allows for analysis of the externalities of implementing adaptive analytics. We show that when feature-based prediction becomes an input into a decision such as inventory or pricing, it may have either a positive or negative effect on upstream decisions. We discuss opera-tional and strategic implications.

Clark Pixton (Brigham Young University)

Using Secondary Data Sources to Investigate Supply Chains

There are an increasing number of information sources available to assist in understanding the configuration, behaviour and performance of supply chains. Here we categorise data sources with respect to their accessibility, validity, and type of infor-mation, and we provide guidance on their use for different types of supply chain studies.

Wafaa Ahmed (Nottingham University Business School), Bart L. MacCarthy (Nottingham University Business School), Sanja Petrovic (Nottingham University Business School)

Workforce Scheduling and Rostering of a Life Insurance Call Centre

A life insurance company is short of staff in its call centre, resulting in worsening performance and soaring customer complaints. A staff recruiting and scheduling programme is planned and begins with demand forecast of the incoming calls. Data analytics, statistical modelling, and simulation experiments are integrated to solve this problem.

Jiun-Yu Yu (National Taiwan University)

Global Operations
Session Chair: Muhammad Dan-Asabe Abdulrahman

Coleridge Room

Antecedents of Supplier's Performance Improvement: A farmer's perspective from a developing economy

In this paper, we investigate the antecedents of digitization in agricultural supply chain. Motivated by concerns from marginal-ized farmers in India, we analyze the conditions under which farmers and buyers exchange technical information through digitization. In doing so, we investigate whether marginalized farmers are better off by adopting digitization.

Suwarna Shukla (Indian Institute of Management, Indore), Rohit Kapoor (Indian Institute of Management, Indore), Narain Gupta (Management Development Institute, Gurugram)

Global manufacturing leaving China?

Risks and strategic considerations are forcing global manufacturing firms to re-evaluate locations of their key value chains, and to reshore back to headquarters (or closer) previously off-shored operations. Using Q-methodology, we investigate inter-national firms operating in China and establish key tangible and intangible factors in reshoring decision. Would they relocate?

Muhammad Dan-Asabe Abdulrahman (RMIT University), Nachiappan Subramanian (University of Sussex), Chenchen Weng (Nottingham University Business School China)

Understanding Agri-Food supply chain operations challenges under International and EU uncertain regulations

Global agri-food supply chain operations, presents several challenges, especially in adapting to the externalities, they cannot control. This research aims to provide Agri-Food Supply Chain alternatives to such challenges, through a compressive AHP study of international Agri-Food strategies dealing with uncertainties in regulations. Results considers validated criteria and alternatives from British, Spanish, Italian, Argentinian and Chilean Agri-Food supply chains.

Jorge Hernandez (University of Liverpool Management School), Rina Iannacone (ALSIA- Metapontum Agrobios Research Center), Juan Jose Rico (Valencia agri-food federation, Generalitat Valenciana), Mariana del Pino (National University of La Plata), Elizabeth Kehr (Agriculture National Research In-stitute of Chile)

How China creates Competitive Advantage in Goods Trade within the Regional Comprehensive Economic Partnership: Evidence from a Servitization based Empirical Study

A time series method is applied to test the relationship between servitization and trade competitive advantages in goods. We conclude that the use of servitization upon manufacturing industry is statistically significant in its impact on the trade competitiveness. However its economic significance needs to be discussed in different time periods.

Changping Zhao (Dalian Maritime University), Kai Kang (Dalian Maritime University), **Yu Gong** (University of Southampton), Zudi Lu (University of Southampton), Steve Brown (University of Southampton)

Risk / Resilience (2)
Session Chair: Abhijeet Ghadge

Keats Room

Mitigating facility disruptions for creating resilient and sustainable supply chains

Supply chain (SC) networks are prone to disruptions, which may reduce capacity of facilities and ultimately hamper overall performance of the entire system. This paper proposes a novel, integrated approach to achieve a resilient and sustainable SC system. Mathematical model is developed to obtain optimal solutions for different disruption scenarios.

Arijit De (Newcastle University Business School), Mohit Goswami (Indian Institute of Management, Raipur), **Abhijeet Ghadge** (Cranfield School of Management), Emel Aktas (Cranfield School of Management)

Intelligent decision systems within supply chain risk management: The potential of AI

This paper aims to investigate the role of intelligent decision support systems for supply chain risk management. The paper considers AI technologies and machine learning within the concepts of intelligent decision support systems. The research pre-sents a conceptual study which incorporates a state-of-art literature review along with conceptual modelling.

Sahar Validi (University of Huddersfield), Samir Dani (University of Huddersfield), Anastasia Zapan (University of Huddersfield)

Wednesday 4th September
09.30 - 11.00 - parallel sessions

Panel: How OM PhD students publish when doing their dissertation?

Renaissance Room

This panel intends to train Operations Management (OM) PhD students regarding publishing in OM journals. PhD students' journey in the OM field is described. The editor-in-chief of IJOPM shares the journal views on writing qualitative research papers. A senior editor from POM/MSOM explains these journals' views on quantitative research papers.

Constantin Blome (Univerity of Sussex Business School, **Feryal Erhun** (University of Cambridge), **Reza Zanjirani Farahani**, Kingston University.

Data & Technology
Session Chair: Katharina Burger

Shelley Room

Hybrid operations: a new framework for smarter decisions

The opportunities arising from big data analytics for operations management cannot be understood in terms of their technological processes alone. We propose a new framework for aiding human decision makers with developing actionable insight for strategic operations.

Katharina Burger (The University of Bristol), Leroy White (The University of Warwick), Mike Yearworth (The University of Exeter)

Impacts of IoT on Manufacturing industry 4.0 era: A conceptual Framework

The impact of IoT on a manufacturing firm's operational and financial performance is lack-ing clear theoretical bases and empirical investigation. Thus, this research provides a con-ceptual framework based on literature review, to study how connectivity, flexibility and agility of IoT devices, mediated by dynamic data and information processing, impact the firm performance in industry 4.0 era.

Tahera Kalsoom (University of the West of Scotland), Shehzad Ahmed (University of the West of Scotland), Naeem Ramzan (University of the West of Scotland)

"To ride or not to ride": Examination of critical success factors for app-based taxicab services – Evidences from India

Based on the theory of sharing economy and community-based services, we examine two app-based taxicab platforms in India. We employ a mixed method approach to identify and empirically test the critical success factors, - (i) qualitative interviews, (ii) text-mining of actual reviews, and (iii) validation of the model with questionnaire.

Baidyanath Biswas (International Management Institute, Kolkata), Rohit Gupta (Institute of Management Technology, Ghaziabad)

Evaluating the influential social media adoption factors in the logistics industry

This paper pioneers the investigation of the significant factors that influence the adoption of social media for supply chain social sustainability in the logistics sector using the Best- Worst methodology. Results suggest that customer satisfaction, sufficient security and privacy, affordability and competitive pressure are the most critical factors.

Ifeyinwa Juliet Orji (Soochow University)

Service Operations
Session Chair: Juliana Hsuan

Tennyson Room

Measuring the individuality of resources embedded in 3PL services

We conceptualize TPL resource architecture through the lenses of service modularity, and measure the degree of individuality embedded in a 3PL provider through the application of service modularity function. Our findings posit that, in order to differentiate, logistics service providers should replicate more advanced value added services across projects.

Juliana Hsuan (Copenhagen Business School), Gunter Prockl (Copenhagen Business School)

The Service Quality Gap Model: Application to Digital Business Teaching

Teaching Digital Business creates student expectations. The Service Quality Gap model measures expectations. Learning was designed through constructive alignment and modified to meet expectations. The aim being to close gaps and measure the service quality of learning. A qualitative survey of learning explores the gaps and options for managing expectations.

Steve Pearce (University of Bristol), Niels Schneider (University of Bristol)

Applying the Theory of Constraints to Pure Services Contexts

The theory of constraints has never been applied to pure service operations, such as teach-ing. In this paper, we use a non-linear regression model on a sample of 627 weekly tasks to identify the factors that constrain students' performance and to highlight how a universi-ty can improve its teaching performance.

Michel Leseure (University of Chichester Business School), Andy Harvey (University of Chichester Business School)

Strengthening Supply Chain Using Blockchain Apps (2)
Session Chair: Samir Dani and Yavuz Gunlay

Wordsworth Room

Transforming supply chain finance with digital technologies

Academics and practitioners have suggested the importance of digital technologies (such as blockchain and smart contract) in facilitating supply chain finance (SCF). But, there have been few studies of digital SCF models. This research aims to develop a theoretical framework of digital SCF based on a systematic literature review.

Hang Yang (University of Roehampton), Wantao Yu (University of Roehampton)

Sustainability potential of blockchain technology in the food supply chain

Blockchain technology has been applied successively in many sectors included food indus-try. Blockchain might support the sustainability of food supply chain along key mechanisms i.e. product origins, resource rights, behavioural incentives. This study examines existing literature and use-cases to determine sustainability potential of blockchain technology in the food supply chain.

Yasanur Kayikci (Turkish-German University), Manoj Dora (Brunel University London)

Collaborative Business Models for Road Freight Transportation Based on Blockchain Technology

This study aims to investigate the problems of current business models in road transporta-tion in a design science research perspective. First, exploratory study is made by conduct-ing in-depth interviews and focus group discussions with industry professionals. Next, col-laborative business models based on blockchain technology are proposed to address these problems.

Serkan Alacam (Bogazici University), Asli Sencer (Bogazici University)

Project Management Session
Session Chair: Martin Rost

Blockchain-based traceability for fashion apparel supply chains

The fashion industry is often criticised for lack of traceability. This paper explores the im-plementation of traceability in the fashion supply chain using blockchain technology (BT). Using a demonstrative simulation we identify what are the sector-specific requirements, main procedures (i.e. smart-contract rules), and how to use them for BT-based traceability.

Rudrajeet Pal (University of Borås), Vijay Kumar (University of Borås), Tarun Kumar Agrawal (University of Borås), **Samir Dani** (University of Huddersfield), Yavuz Gunalay (Bahçesehir University)

Relational Coordination in project-based organizations – a socio-technical approach

Task coordination alone does not accommodate the operational dynamics in project-based organizations. The social-relational part of coordinating interdisciplinary work is recognised as an important component to success. This paper (based on a systematic review of 387 papers on PBOs) proposes a framework to consolidate this dispersed area.

Maria Kapsali (Manchester Metropolitan University)

Ambidexterity and complexity in 'VUCA' high-Tech Projects

In a "VUCA world" organizations have to be ambidextrous. But this causes complexity. This research studies with a case-study approach (seven cases, 72 interviews) from an opera-tions-perspective, how organizations can cope with this complexity. As a result we develop a framework for coping on the levels organization, project and individual.

Martin Rost (University of Stuttgart), Roula Michaelides (Manchester Metropolitan University)

Investigating projectification – the case of Dreso ops transitioning to agile projects

We use a series of experimental sprints to investigate the operational transition towards agile projects at Dreso. We collect data on three sets of independent variables on agility, ambidexterity and relationality linked to project performance. We share our experience from the first round of sprints and the framework that emerged.

Maria Kapsali (Manchester Metropolitan University), Roula Michaelides (Manchester Met-ropolitan University), Zenon Michaelides (Manchester Metropolitan University)

Wednesday 4th September
11.30 - 12.45 - parallel sessions

Panel: Practice-based research: Lessons learned for external research funding

Renaissance Room

The panel intends to familiarize academics with grant writing insights. Some exemplar finding bodies are introduced (including impact of Brexit on joint research proposals between UK and other European countries are explained). Operations Management experts share their experience with funding journey. Questions are answered through a panel discussion.

Nagesh Murthy (University of Oregon), **Michael Bourlakis** (Cranfield Management School), **Lenny Koh** (University of Sheffield Management School), **Malgorzata Gosia Czerwiec** (UK Research Office)

Sustainable Operations and SCM (6)
Session Chair: Yongmei Bentley

Shelley Room

Sustainable Food Supply Chain Management

Sustainable food supply chain management (FSCM) has a rich literature mostly covering economic and environmental aspects. This research deals with food waste management focusing on social aspect of FSCM by improving the quality of life of final consumers. The literature review on the subject and future research plan will be presented.

Sheikh Muhammad Zahid (University of Roehampton), Nasrin Asgari (University of Roe-hampton)

Factors Motivating Indian Manufacturing SME Employers in Adopting Green Supply Chain Management (GSCM) Practices

The aim of this study is to identify the typical SME employers' perceptions and motivations in adopting GSCM practices in their firms using semi-structured interviews. A key finding show a low-level involvement of small enterprise employers in adopting GSCM practices while medium-sized firms are more likely to adopt such practices.

Manpreet Kaur Dhillon (University of Bedfordshire), **Yongmei Bentley** (University of Bed-fordshire)

What is Inamori Management Philosophy?

Konosuke Matsushita, was praised as "God of Business" for his management philosophy. Today, does Japan have a top manager comparable to Konosuke Matsushita? The answer is "Yes". That is, Kazuo Inamori, the founder of Kyocera. This paper considers what the Inamori Management Philosophy is from the three viewpoints of management.

Fangqi Xu (Kindai University)

Exploring the Enablers and Inhibitors of Electric Vehicle Adoption Intention from Sellers' Perspective in India: A View of the Dual-Factor Model

The study explores the enablers and inhibitors of electric vehicle adoption intention from the sellers' perspective using TPB and status quo bias theory. Attitude, subjective norm, perceived behavioral control, environmental concern, perceived CSR obligation were found significant enablers. Regret avoidance, inertia, perceived threat, perceived value found to be significant inhibitors.

Amit Shankar (Institute of Management Technology, Ghaziabad), Pooja Kumari (Fore School of Management, New Delhi)

Manufacturing Operations
Session Chair: Simon Thevenin

Tennyson Room

Linearized formulation for dynamic facility layout problem

Dynamic facility layout problem (DFLP) is NP-hard problem and very complex to solve op-timally. Currently, dynamic programming (DP) approach is used to solve DFLP optimally. No other technique than DP is available in the literature. In this paper, a new linearized formulation of DFLP is presented, to solve it optimally.

Rajesh Matai (Birla Institute of Technology and Science), Surya Prakash Singh (Indian Institute of Technology Delhi)

Stochastic dual dynamic programming for supply chain manufacturing master planning

Supply chain manufacturing master planning refers to the optimization of manufacturing and distribution plan in a multi-echelon network under material and capacity constraints. We investigate the use of stochastic dual dynamic programming and progressive hedging as heuristics to solve large instances of SCMP under stochastic demands in a dynamic context.

Simon Thevenin (IMT Atlantique), Yossiri Adulyasak (HEC Montréal), Jean-François Cordeau (HEC Montréal)

Quality 4.0: Development of machine learning model for Apparel Quality Monitoring and Prediction

Paper presents machine learning model to predict defect type & quantity in the sewing floor basis fabric & operations. A QI tool integrating high risk analysis, RCA & Predictive model for predicting defect patterns. Model identifies root causes, prediction of occurrence and provides knowledge support for formulating QI plans.

Anupama Gupta (S P Jain Institute of Management & Research), Induja Rajendran (National Institute of Fashion Technology)

Service Operations (2)
Session Chair: Maria Holgado

Wordsworth Room

How can bike-sharing platform companies overcome service paradox? A social exchange perspective

This study, by using multiple case study method, explores ways in which bike-sharing platform companies overcome the service paradox through improving the operational efficiency. The study mainly finds that two external inputs (i.e., government and capital organization) and one internal input (i.e., customer involvement) affect the relationship between bike-sharing service operations process and operational efficiency.

Dun Li (Xi'an Jiaotong-Liverpool University)

Innovative technologies in industrial services: configuration and functionalities

Industrial services may benefit from emerging technologies. This work aims to understand the benefits and challenges of integrating new technologies into current service portfolios. It presents a comprehensive literature review on the use of technologies, e.g. IoT and AI, in industrial services, focusing on their capabilities to enhance customer value.

Maria Holgado (University of Sussex)

Supply Chain Management (5)
Session Chair: Jas Kalra

Learning to contract differently: How a multinational business adapted their contracting capabilities to local requirement

Our study explores how multinational corporations (MNCs) learn to contract in a new country. Through in-depth study of a French MNC and its boilerplates, we posit that MNCs use problem-solving approach to adapt their contracting capabilities to a new country and sim-ultaneously continue to contract traditionally in their own country.

Beverly Tyler (NC State University), **Jas Kalra** (University of Bath), Jens Roehrich (Univer-sity of Bath), Brian Squire (University of Bath)

Information sharing strategy in supply chains under information leakage

This paper analyzes the information sharing strategy of retailers in competing supply chains under the risk of information leakage. Retailer's motivation to share the signal of demand depends on its accuracy and market condition. The expanse of leakage and manufacturer's subsidy will also influence the choice.

Kai Lin (Peking University), Lihua Chen (Peking University)

Deployment of Information Communication Technologies to Mitigate Food Security Risks

Dealing with Food security risk to attain a food secure system is a global concern for which information communication technologies play vital role. Exploratory factor analysis integrated with fuzzy evidential reasoning algorithm assign relative ranks to technologies and proposed a comprehensive framework for the most robust technology i.e. Blockchain.

Rachita Gupta (IMT Ghaziabad), Ravi Shankar (Indian Institute of Technology, Delhi)

Severity Assessment of Food Security Impediments in Food Supply Chain

The study provides a modelling framework to perform the severity assessment of food security impediments and profiling of their associated risks based on their effect on social, economic and operational perspectives using fuzzy evidential reasoning algorithm considering decision-makers' behavioural perception. Profiling is performed based on the dynamic changes in risk-percept.

Rachita Gupta (IMT Ghaziabad), Ravi Shankar (Indian Institute of Technology, Delhi)

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