MONDAY 07.07.2025 (NTNU, Realfagbygget)

MA-01 Opening session (R5) 09:00 – Welcome addresses [Chair: Anders Gullhav]

MB-01 Plenary session (R5) 09:30 – Leveraging Operations Research to drive innovation in Healthcare Systems – Nadia Lahrichi [Chair: Anders Gullhav]

MC-01 Simulation 1 (R5) 11:00	MC-02 Implementation (R8) 11:00	MC-03 Staff scheduling (R9) 11:00
Comparative analysis of parametric and nonparametric	Condorcet ranking for developing co-designed outcome	Operating room scheduling under limited turnover staff –
probability distributions for uncertainty quantification in	measures in clinical research under the "Tournament Methods"	Gabriela Pinto Espinosa
simulation studies – Sara Garber	framework – Hannah Johns	
Optimizing Healthcare Resources through AI-Enhanced Diabetic	A systematic review of studies that mention the implementation	Nurse to patient ratios in South Africa and its impact on nurse
Foot Screening: A Long-Term Cost-Effectiveness Analysis – <i>Yan</i>	of OR in health services – Guillaume Lamé	and patient outcomes – Siedine Coetzee
Sun		
Managing the Ripple Effect: Dynamic Waiting Lists, Resource	Perinatal mental health plan assessment in Ile de France region	An automated doctor rostering decision support tool for Knysna
Constraints, and Adaptive Hospital Case Mix Planning for Internal	(IDF) – Catherine Crenn-Hebert	Hospital – Klara Engelbrecht
Management and External Influence – Sebastian Kraul		
How different drivers can influence patients' decisions – <i>Roberto</i>	From models to implementation: the impact of embedded OR	Healthcare staffing using split shifts – David Ajit Kirpekar-Sauer
Aringhieri	research in a Dutch hospital – Gréanne Leeftink	
MD-01 Home healthcare (R5) 13:30	MD-02 Patient to room (R8) 13:30	MD-03 ED & ICU (R9) 13:30
Barriers to Participation in Personalised Home Care: A COM-B-	Generating realistic patient data – Tabea Brandt	Addressing Emergency Department Overcrowding through
Informed Review of Self-Directed Support and International	Table 2 and	Efficient Queue Management: a Deep Reinforcement Learning
Models – Shafkat Ibrahimy		Approach – Luca Zattoni
Enabling Efficient Telemedicine: The Potential of OR/OM	Allocating Patients to Rooms under Uncertainty: An MDP-Based	ICU capacity management: An Al-based transparent scoring
Applications in Healthcare Delivery – Ali Ghavamifar	Approach – Philipp Pelz	model for integrated clinical decision support – Christina
		Bartenschlager
Multi-Objective Models for Efficient and Patient-Centered Home	Trade-off analysis of different objective functions for the patient-	Keep Waiting or Leave Without Being Seen? The Impact of Early
Healthcare Routing and Scheduling – Soumen Atta	to-room assignment problem – <i>Johanna Leweke</i>	Assessment in Emergency Departments – Chiara Morlotti
Investigating the Incorporation of Circular Economy, Resilience,	Optimizing Case-Mix Planning at the Territorial Level: A Pathway-	Dynamic Predictive Modeling for Decision Support and Patient
and Sustainability Concepts in Healthcare Supply Chain	Centered and Resource-Aware Approach – <i>Thierry Garaix</i>	Management in Intensive Care Units – Daniel García-Vicuña
Modelling: A Narrative Review with Expert Insights – <i>Fatemeh</i>		
Alidoost		
ME-01 Access and EMS (R5) 15:30	ME-02 Cancer and personalised care (R8) 15:30	ME-03 Appointment scheduling (R9) 15:30
Understanding the Impact of Accessibility on Hemodialysis	From Theory to Clinic: Operationalizing Evolutionary Cancer	Predictive decision-support tool for improved nurse scheduling
Outcomes in India – Sachin Bodke	Therapy for Metastatic Non-Small Cell Lung Cancer – Arina	through the application of artificial intelligence – <i>Agita</i>
		Colonario

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Outcomes in India – Sachin Bodke	Therapy for Metastatic Non-Small Cell Lung Cancer – Arina	through the application of artificial intelligence – Agita
	Soboleva	Solzemniece
Using queueing games and contract theory to improve access to	An Online Algorithm for Integrated Scheduling of Pre-Treatment	Warm-Starting Outpatient Appointment Scheduling Using
care: The case of the Ontario Autism Program – Felipe Rodrigues	and Treatment Appointments in Radiotherapy using Deep	Historical Solutions – Sara Cambiaghi
	Reinforcement Learning – Maxim Frankish	
On Surgery Ward Resilience: Quantitative Concepts, Evaluation,	Distributionally Robust Chance Constraints for VMAT Treatment	An Integrated Scheduling Model for Optimal Management of
and Analysis – Gabriela Ciolacu	Planning – Houra Mahmoudzadeh	Medical Examinations in Tertiary Hospitals – Jingshan Li
Applying OR to EMS practice - insights from Germany and New	Innovative Approaches to Managing Demand and Capacity in	The impact of forecasting: Dynamic appointment scheduling with
Zealand – <i>Melanie Reuter-Oppermann</i>	Mental Health – <i>Christos Vasilakis</i>	elective and semi-urgent patients – <i>Jedidja Lok - Visser</i>

Date updated: 27.06.2025

ORAHS 2025 - Trondheim

TUESDAY 08.07.2025 (NTNU, Realfagbygget)

TuA-01 Surgery Scheduling 1 (R5) 09:00	TuA-02 EMS and cyber attacks (R8) 09:00	TuA-03 Location and logistics (R9) 09:00
Operating room scheduling with fairness over time and proper	Mapping and assessing cyberattack propagation through digitally	Inventory management for mobile clinics in the Witzenberg
training – Alice Daldossi	interconnected hospitals – Abhilasha Bakre	region, South Africa – <i>Isabelle Nieuwoudt</i>
Evaluation of the performance of machine learning models for	Quantitatively measuring cyber risk in healthcare – Aiman Zainab	A Novel Cross-Entropy Heuristic for Location-Allocation
the prediction of the operating room occupation time of non-		Problems in Healthcare Applications – Mark Tuson
elective surgeries – Anem Dupré		
Optimizing OR Efficiency with Just-In-Time Surgical Case Carts: A	Using simulation modelling to compare the impact of alternative	Optimising Department Allocation in Hospital Layouts – <i>Allan</i>
Combined Simulation and DEA Approach – Joke Borzée	hospital operational policies on patient outcomes following flood	Larsen
	disasters – Sorour Farahi	
Predicting nurse turnover intention using machine learning	Experimental investigation of personality and strategy types of	Improving accessibility to basic healthcare services by mobile
algorithms – <i>Jacoba Bührmann</i>	paramedics from the Austrian Red Cross – Marion Rauner	clinics – Angel Ruiz

TuB-01 Poster session 1 (R5 and AU1-101) 11:00 [Chair: Joe Viana]

A multiperiod resource minimization model for rural emergency medical services networks with ground and air ambulances – *Lieke Jansen*Panel Size Management for Enhanced Patient Care: A Data-Driven Simulation Approach – *Mina Moeini*When Every Minute Counts: Predictive Modeling and Simulation in Organ Donation Management – *Arianna Freda*Reusable Simulation of Emergency Departments: A Domain-Specific Modelling Language Approach – *BoFan Zhang*Volatility-stratified surgical portfolios with layered spackling strategy for operating room capacity planning – *Chao Pan*

The impact of forecasting: Dynamic appointment scheduling with elective and semi-urgent patients – Jedidja Lok - Visser

TuC-01 Analytics & healthcare management (R5) 13:30	TuC-02 Integrated planning (R8) 13:30	TuC-03 Optimisation (R9) 13:30
Prediction of Diabetic Foot Ulcer Using Bayesian Networks –	Swap-Stability in Nurse-to-Patient Assignment considering	Elective Case Scheduling under Surgery Duration Uncertainty –
Malavika Krishnakumar	personal preferences – Bianca Lauer	Sonja Weiland
Measuring the effect of deprivation on primary health care	An Adaptive Large Neighborhood Search Approach for the	Resilience Optimization of a Network of Hospitals Against
performance using data envelopment analysis and malmquist	Integrated Patient-to-Room and Nurse-to-Patient Assignment	Cyberattacks – Stephan Helfrich
indices – Holly Merelie	Problem – Emily Lex	
Optimizing Total Flow Time in Hospital Sterilization Departments	A Two-Step Matheuristic for the Integrated Healthcare	Coin making problem to Outpatient Pharmacy Automation
Using Column Generation – Robin Schlembach	Timetabling Problem – Camille Pinçon	System – Kiok Liang Teow
Hierarchical Bayesian Model for 30-Day Hospital Census	The Integrated Healthcare Timetabling Competition 2024 (IHTC-	Fair planning of out-of-hours service for pharmacies – <i>Christina</i>
Forecasting and Resource Optimization at a Large Academic	2024) – Sara Ceschia	Büsing
Medical Center – <i>Thomas Kingsley</i>		

TuD-01 Blood and sepsis (R5) 15:30	TuD-02 System dynamics (R8) 15:30	
A Discrete-Event Simulation Model to Improve Blood Component	Using system dynamics to assess the availability of emergency	
Production – Aleyna Gürsoy	care at a regional level – Matthew Pentecost	
Optimising Early Warning Systems: Exploring Enhanced Digital	Exploring the drivers of unsustainable pressures in health and	
Sepsis Alerts and Equity Challenges in Patient Care – Kate	social care: A qualitative system dynamics approach – Le Khanh	
Honeyford	Ngan Nguyen	
Sequential Selection of Biomarkers in Sepsis Risk Scores Using	Investigating health policies in childhood obesity using system	
Reinforcement Learning – Anandakrishnan Nandakumar	modelling – Hannah Callaghan	
Facilities Planning at CBS to meet collection targets in the 2030's	Simulation and Optimization Approaches for Pandemic	
- John Blake	Response: EpiMORPH – <i>Esma Gel</i>	

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ThA-01 Opening session (KA12) 09:15 Welcome address - Birger Endreseth [Chair: Thomas Bovim]

ThB-01 Plenary session (KA12) 09:30 Transforming healthcare delivery through data-driven organizational development and strategic planning – Lina Grännö [Chair: Henrik Andersson]

ThC-01 Innovation 1 (KA12) 11:00	ThC-02 Innovation 2 (KA11) 11:00
Integrated care modelling utilising a shared patient information system – Joe Viana	Balancing waiting lists and workloads in hospitals – Rob Vromans
Explainable Optimisation in Healthcare – Felix Engelhardt	Activity planning for surgeons with Deepinsight – Arvind Chawla
Introducing capacity planning in home care – Annelies van der Ham	The last mile of research: How do we spread ORAHS' knowledge and make it stick? – Sebastian Rachuba
Algorithmic surgical planning at Oslo University Hospital – <i>Kjartan Klyve</i>	Developing an Embedded Program for Operations Research Applied to Community Health Services and Public Health in a Canadian Health System: A Discussion of Lessons Learned – Alexander Rutherford

ThD-01 Poster session 2 (KA12) 13:30 [Chair: Aina Goday]

A multiperiod resource minimization model for rural emergency medical services networks with ground and air ambulances - Lieke Jansen

Panel Size Management for Enhanced Patient Care: A Data-Driven Simulation Approach – Mina Moeini

When Every Minute Counts: Predictive Modeling and Simulation in Organ Donation Management - Arianna Freda

Reusable Simulation of Emergency Departments: A Domain-Specific Modelling Language Approach – BoFan Zhang

Volatility-stratified surgical portfolios with layered spackling strategy for operating room capacity planning – Chao Pan

The impact of forecasting: Dynamic appointment scheduling with elective and semi-urgent patients – Jedidja Lok - Visser

ThE-01 Panel discussion on innovation in healthcare (KA12) 14:00

Chair: Jarl Reitan

Birger Henning Endreseth, St Olavs Hospital

Kjartan Klyve, KPMG

Gréanne Leeftink, University of Twente

Øystein Døhl, Trondheim Kommune

ThF-01 Innovation 3 (KA12) 15:30	ThF-02 Innovation 4 (KA11) 15:30
Process Mining in Clinical Pathways: Bridging Challenges and Opportunities – Luca Murazzano	Straight Home: An initiative to reduce the number of discharge ready patients – Joe Viana
Process Mining Electronic Health Records of People with Multiple Sclerosis: A 5-year Longitudinal	Allocating operating room capacity to non-elective patients improves access and safety for
Study – Märt Vesinurm	elective patients at Aarhus University Hospital (DK) – Maartje Zonderland
Staffing for Flexibility: Dimensioning and Scheduling Nursing Pools - A Case Study from St. Olav's	Constructing a polarity lexicon for depression-specific for sentiment analysis of social media
Hospital – Aina Goday	posts – Kurt Marais
Automatized nurse rostering at St. Olav's Hospital – Simen Vadseth	Personnel scheduling in hospital emergency departments – Anniek Pelleboer

FRIDAY 11.07.2025 (NTNU, Realfagbygget)

FA-01 Simulation 2 (R5) 09:00	FA-02 Surgery scheduling 2 (R8) 09:00	FA-03 Elderly care (R9) 09:00
Modeling strategic-level decision-making in specialized	Simulating the impact of errors on length-of-stay predictions and	Care pathway optimisation using Markov chain modelling – Maik
healthcare using simulation, with a focus on reducing waiting	rescheduling policies on elective surgery planning – Martina	Overmars
lists in traumatology services – Miguel Baigorri	Doneda	
Evaluating the impact of staffing recommendations in maternity	A kernel based approach for the estimate-then-optimize surgery	Improving access to long-term care – René Bekker
units in France: combining simulation and time-and-motion	scheduling problem – <i>Ricardo Otero</i>	
study – Louis Niffoi		
A Generic Framework for Organizational Digital Twins in	Scheduling surgery requests from outdoctors and indoctors	Choosing pathways through hospital care for older persons –
Healthcare: Application to an Emergency Department – Marius	under uncertainty – Serhat Gül	Yvonne Li
Huguet		
A discrete-event simulation model to improve the appointment	Shaping Outpatient Surgery Schedules: A Dual-Horizon	Modelling (change in) health status and health care utilization in
process and the patient flow of an MRI department – <i>Marie Petit</i>	Approach with Distributional Clustering – Davide Duma	the 60+ population – Geert-Jan Kommer

FB-01 Business meeting (R5) 11:00 [Chairs: Melanie Reuter-Oppermann and Roberto Aringhieri]

FC-01 Closing (R5) 12:20 [Chair: Anders Gullhav] - May be brought forward depending on the duration of the Business Meeting

Date updated: 27.06.2025