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

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 – <i>Arina</i>	through the application of artificial intelligence – Agita
	Soboleva	Solzemniece
On Surgery Ward Resilience: Quantitative Concepts, Evaluation,	An Online Algorithm for Integrated Scheduling of Pre-Treatment	Warm-Starting Outpatient Appointment Scheduling Using
and Analysis – Gabriela Ciolacu	and Treatment Appointments in Radiotherapy using Deep	Historical Solutions – Sara Cambiaghi
	Reinforcement Learning – Maxim Frankish	
A systematic review of studies that mention the implementation	Distributionally Robust Chance Constraints for VMAT Treatment	
of OR in health services – Guillaume Lamé	Planning – Houra Mahmoudzadeh	
Using queueing games and contract theory to improve access to	Innovative Approaches to Managing Demand and Capacity in	The impact of forecasting: Dynamic appointment scheduling with
care: The case of the Ontario Autism Program – <i>Felipe Rodrigues</i>	Mental Health – Christos Vasilakis	elective and semi-urgent patients – <i>Jedidja Lok - Visser</i>

Date updated: 08.07.2025

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 – Isabelle Nieuwoudt
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		
	Using simulation modelling to compare the impact of alternative	Optimising Department Allocation in Hospital Layouts – <i>Allan</i>
	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 – <i>Marion Rauner</i>	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	The Integrated Healthcare Timetabling Competition 2024 (IHTC-	Coin making problem to Outpatient Pharmacy Automation
Using Column Generation – Robin Schlembach	2024) – Sara Ceschia	System – Kiok Liang Teow
Hierarchical Bayesian Model for 30-Day Hospital Census	A Two-Step Matheuristic for the Integrated Healthcare	Fair planning of out-of-hours service for pharmacies – <i>Christina</i>
Forecasting and Resource Optimization at a Large Academic	Timetabling Problem – Camille Pinçon	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>	

Date updated: 08.07.2025

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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 – <i>Joe Viana</i>
Process Mining Electronic Health Records of People with Multiple Sclerosis: A 5-year Longitudinal Study – <i>Märt Vesinurm</i>	Allocating operating room capacity to non-elective patients improves access and safety for 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: 08.07.2025