PROGRAMME AND PRACTICAL INFORMATION

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https://petrinets2022.github.io/

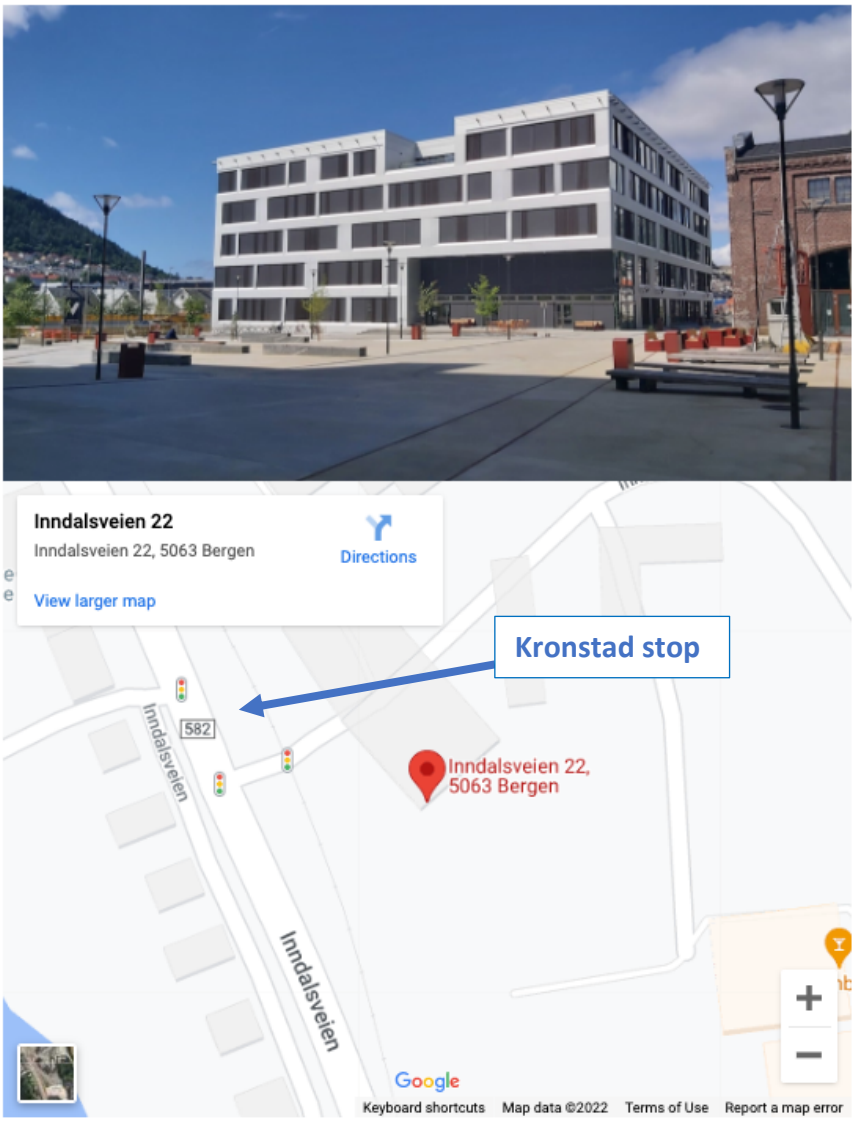
Western Norway University of Applied Sciences

Springer

With funding from The Research Council of Norway

CONFERENCE VENUE

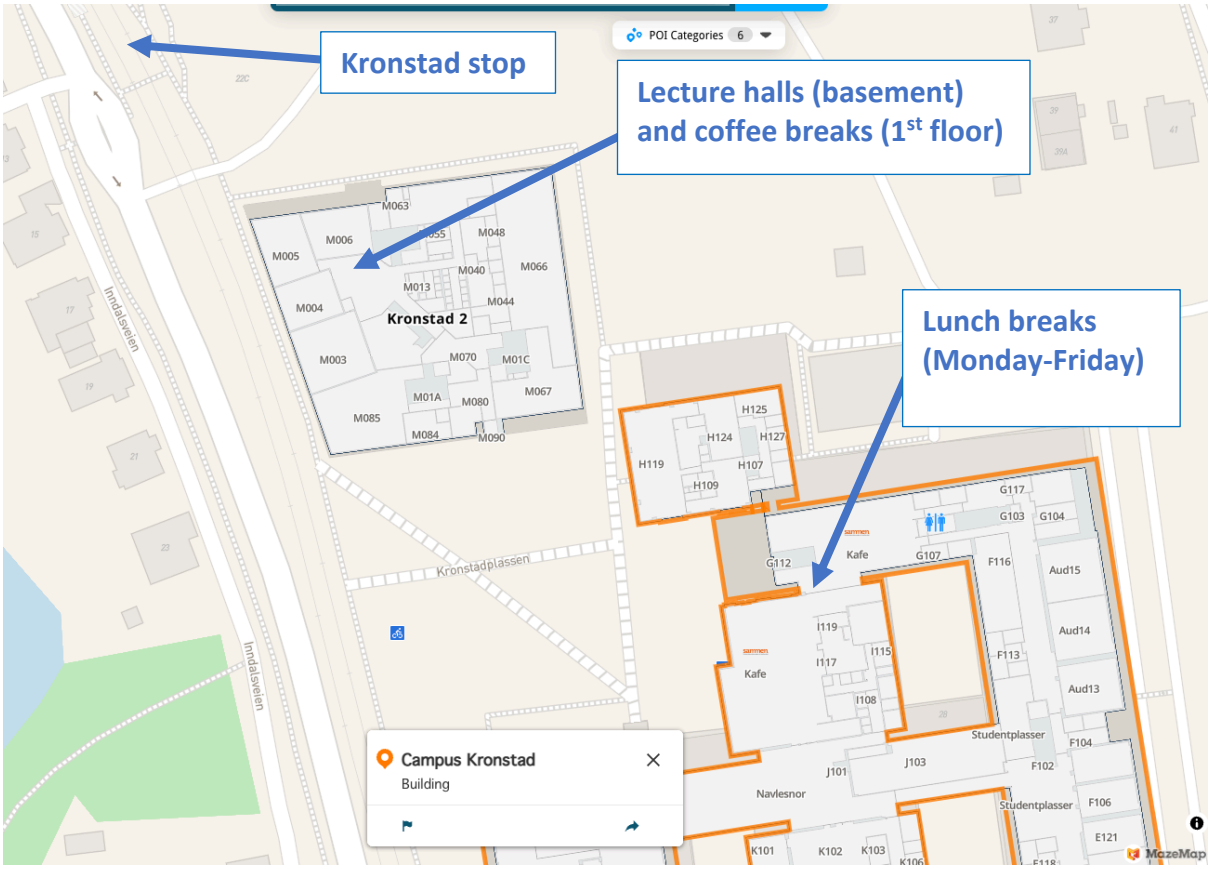
The conference takes place at Western Norway University of Applied Sciences, Campus Bergen in the K2 Building



The conference venue is located next to stop “Kronstad” on the Bergen Light Rail line: https://www.skyss.no/en/travel/timetables-and-maps/timetable-for-bergen-light-rail/

CONFERENCE ROOMS

A detailed map of the rooms where the conference takes place is available via Mazemap: https://use.mazemap.com/#v=1&center=5.349874,60.369764&zoom=17.7&sharepoitype=poi&sharepoi=1000459424&zlevel=1&campusid=9



COFFEE BREAKS

Coffee breaks will take place in room M130/M131 in Kronstad 2, 1st floor.

LUNCH

Lunch on Monday-Friday will be served in the canteen in the Kronstad 1 building just across from the Kronstad 2 building.

On Sunday, lunch will be in M130/M131 (same room as coffee breaks)

INTERNET ACCESS

Wireless Internet access is provided throughout the conference site / Campus.

- **Eduroam** can be used by participants that have access via their home institution.
- Participants without an Eduroam account can obtain WiFi access via self-registration on the **HVL Guest** network.

PROJECTORS

All lecture halls are equipped with two screens and a Windows PC with MS Office installed. This PC can be used for presentation. Presenters can also connect their own PC using HDMI.

The conference organisers will have some adapters available in case this is needed. As there may be a shortage of adapters, we encourage presenters that do not have an HDMI port on their PC to bring their own adapter.

SUNDAY – JUNE 19

Petri nets PhD course - Room M125	
https://petrinets2022.github.io/pncourse/	
8.30 – 9.00	Registration
9.00 – 10.30	Basic net classes I
10.00 – 10.30	**Coffee break in M130/M131**
10.30 – 12.00	Basic net classes II
12.00 – 13.00	**Lunch in M130/M131**
13.00 – 14.30	Coloured Petri nets and CPN Tools I
14.30 – 15.00	**Coffee break in M130/M131**
15.00 – 16.30	Coloured Petri nets and CPN Tools II

MONDAY – JUNE 20

8.30 – 9.00	Registration			
Room	**M125**	**M004**	**M005**	**M006**
	Petri Net PhD Course	**PNSE Workshop** **Detailed programme on next page**	**Tutorial on Aggregate Programming**	**HEDA Meeting**
9.00 – 10.30	Verification and model checking of Petri Nets I	Session I: Welcome and invited talk		
10.30 – 11.00	**Coffee break in M130/M131**			
11.00 – 12.30	Verification and model checking of Petri Nets II	Session II		Project meeting (by invitation only)
12.30 – 14.00	**Lunch in the canteen area of building K1**			
14.00 – 15.30	Timed and Stochastic Petri Nets I	Session III	Module I	Project meeting (by invitation only)
15.30 – 16.00	**Coffee break in M130/M131**			
16.00 – 17.30	Timed and Stochastic Petri Nets II	Session IV	Module II	Project meeting (by invitation only)
17.30 – 18.30	PNSE poster session in combination with drinks and light serving in M130/M131			

PNSE PROGRAMME

https://petrinets2022.github.io/pnse/

Session 1 [9:00 – 10:30] Session I: Welcome and keynote (H. Rölke)

Einar Broch Johnsen (University of Oslo): *Digital Twins - An Emerging Paradigm for Model-Centric Engineering*

Session 2 [11:00 – 12:30] Session II: Long paper presentations (25+5)

- Michael Köhler-Bußmeier and Heiko Rölke: *Analysing Adaption Processes of Hornets*
- Bart-Jan Hilbrands, Debjyoti Bera and Benny Akesson: *Partial Specifications of Component-Based Systems using Petri Nets*
- Lukas Voß, Sven Willrodt, Daniel Moldt, and Michael Haustermann: *Between Expressiveness and Verifiability: P/T-nets with Synchronous Channels and Modular Structure*

Session 3 [14:00 – 15:30] Session III: Long paper presentations (25+5)

- Ruben Dobler Strand, Lars Michael Kristensen and Laure Petrucci: *Formal Specification and Validation of a Data-driven Software System for Fire Risk Prediction*
- Federica Adobbati, Luca Bernardinello, Görkem Kılınç Soylu and Lucia Pomello: *Information flow among transitions of bounded free-choice nets*
- Rüdiger Valk and Daniel Moldt: *On Reduction of Cycloids*

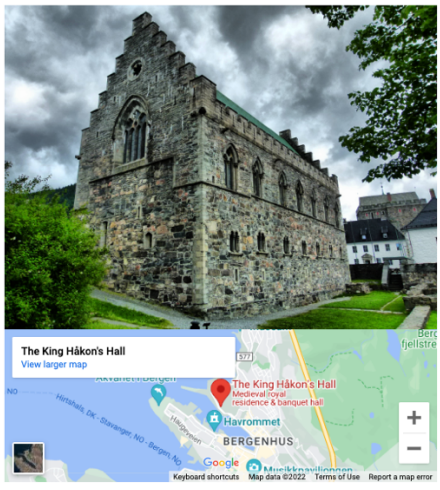
Session 4 [16:00 – 17:30] Session IV: Short paper presentations (10+5)

- Franck Pommereau, Colin Thomas and Cedric Gaucherel: *EDEN framework for interactive analysis of ecosystems models*
- Federica Adobbati and Łukasz Mikulski: *Analysing multi-agent systems using 1-safe Petri nets*
- Laif-Oke Clasen, Daniel Moldt and Marcel Hansson: *Enhancement of Renew to Version 4.0 Using JPMS*
- Nadiyah Almutairi: *Probabilistic Communication Structured Acyclic Nets*
- Tuwailaa Alshammari: *Towards Automatic Extraction of Events for SON Modelling*

Session 5 [17:30 – 17:40] Session V: Poster teaser presentations (2)

Session 6 [17.40 – 18.30] Session VI: Poster presentations in M130/131

TUESDAY – JUNE 21

8.30 – 9.00	Registration			
Room	**M003**	**M004**	**M005**	**M006**
	Model Checking Contest	**ATAED Workshop Detailed programme on next page**	**Tutorial on Petri Nets and Software Engineering**	**HEDA Workshop**
9.00 – 10.30		Welcome and keynote	Module I	
10.30 – 11.00	**Coffee break in M130/M131**			
11.00 – 12.30		Stochastics & Statistics	Module II	
12.30 – 14.00	**Lunch in the canteen area of building K1**			
14.00 – 15.30	Module I	Region Theory	Module III	
15.30 – 16.00	**Coffee break in M130/M131**			
16.00 – 17.30	Module II	Strategies for Behavioral Analysis	Module IV	
20.00 – 22.00	Reception with drinks and food hosted and sponsored by the Municipality of Bergen Address: Bergenhus 10, 5003 Bergen https://bymuseet.no/museum/the-king-hakons-hall/?lang=en It is important that attendees will be at the entrance before 20.00 as the doors will be closed. 			

ATAED PROGRAMME

https://petrinets2022.github.io/ataed/

Session 1 [9:00 – 10:15] Welcome and keynote

"Title of Key Note"; Sander Leemans, Full Professor RWTH Aachen University

Session 2 [11:00 – 12:30] Regular Papers (2x (30+15)) [Stochastics & Statistics]

- Jarne Vandenabeele, Gilles Vermaut, Jari Peeperkorn and Jochen De Weerdt. *Enhancing Stochastic Petri Net-based Remaining Time Prediction using k-Nearest Neighbors*
- Patrizia Schalk and Lisa Petrak. *Taking on Noise in Event Logs using Hypothesis Tests*

Session 3 [14:00 – 15:30] Regular Papers (2x (30+15)) [Region Theory]

- Marta Pietkiewicz-Koutny and Aishah Ahmed. *Minimising the synthesised ENL-systems*
- Robin Bergenthum and Jakub Kovář. *A First Glimpse at Petri Net Regions*

Session 4 [16:00 – 17:30] Regular Papers (2x (30+15)) [Strategies for Behavioral Analysis]

- Federica Adobbati, Luca Bernardinello, Lucia Pomello and Riccardo Stramare. *Implementable strategies for a two-player asynchronous game on Petri nets*
- Gabriel Juhás, Ana Juhásova and Tomáš Kováčik. *Deadlocks and livelocks in resource constrained workflow nets*

HEDA PROGRAMME

https://petrinets2022.github.io/heda/

09.00-10.45: Opening, Keynote and Short Presentations

- **Keynote**: Health Sense
- Markus Bertl, Gunnar Piho and Peeter Ross. *Exploratory Analysis of Health Insurance Billing Data from People with Psychiatric Diseases in Estonia: An Opportunity for Data Science and Artificial Intelligence?*
- Jaroslaw Pasiak, Wojciech Pasiak, Harald Soleim, Remy Andre Monsen, Atle Birger Geitung, Guri-Elise Holgersen and Thomas Fiskeseth Larsen. *VR supported self-help treatment for adolescents with psychosis*
- Marten Kask. *Distributed Health Data: Challenges and Opportunities for Maintaining Data Integrity*

11.00-12.30: Health data Modelling and Standards

- Rainer Randmaa, Igor Bossenko, Toomas Klementi, Gunnar Piho and Peeter Ross. *Evaluating business meta-models for semantic interoperability with FHIR resources*
- Igor Bossenko, Gunnar Piho and Peeter Ross. *Forward and backward compatibility design techniques applying the HL7 FHIR standard*
- Kristian Kankainen, Toomas Klementi, Peeter Ross and Gunnar Piho. *Using the Snomed CT as a semantic model for Controlled Natural Language capture of clinical data*
- Toomas Klementi, Kristian Kankainen, Gunnar Piho and Peeter Ross. *Prospective research topics toward preserving persons' electronic health records in decentralised content-addressable storage networks*
- Tanel Sõerd, Kristian Kankainen, Gunnar Piho, Peeter Ross and Toomas Klementi. *Specification of medical processes in accordance with international standards and agreements*

14.00-15.30: Health Data Analysis and Applications

- Philipp Bende, Olga Vovk, David Caraveo, Ludwig Pechmann and Martin Leucker. *A Case Study on Data Protection for a Cloud- and AI-based Homecare Medical Device*
- Severin A. Eliassen, Harald Soleim, Atle B. Geitung and Lars Peder V. Bovim. *VR-based rehabilitation of cognitive functions among stroke-survivors*
- Patrick Stünkel, Sabine Leh and Friedemann Leh. *Process Data Science for Workflow Optimization in Digital Pathology: A status report*
- Fazle Rabbi, Bahareh Fatemi and Wendy MacCaull. *Analysis of patient pathways with contextual process mining*
- Peter Pfeiffer, Heike Sander, Peter Fettke and Wolfgang Reisig. *A Standard Process for Supporting the Safety and Conformity of Medical Devices*

15.45-17.00 Panel session

- On Secondary use of health data in Estonia, Germany and Norway

WEDNESDAY – JUNE 22

Main conference - Room M003	
https://petrinets2022.github.io/mainconference/	
8.00 – 9.00	Registration
9.00 – 9.30	Welcome and opening session
9.30 – 10.30	**Distinguished Carl Adam Petri Lecture** Paulo Esteves-Verissimo: Assumptions in computer science: mere mathematical hypotheses, or representations of the physical world?
10.30 – 11.30	**Coffee break in M130/M131**
11.00 – 12.30	**Session 1: Application of Concurrency to System Design**
	▪ Vegard Steinsland, Lars Kristensen and Shujun Zhang: Towards the Application of Coloured Petri Nets for Design and Validation of Power Electronics Converter Systems ▪ Abel Armas Cervantes and Farbod Taymouri: Leveraging Concurrency for Discovering Unseen Behaviour ▪ Clément Bertrand, Hanna Klaudel and Frederic Peschanski: Layered Memory Automata: recognizers for quasi-regular languages with unbounded memory
12.30 – 14.00	**Lunch in the canteen area of building K1**
14.00 – 15.00	**Session 2: Timed models**
	▪ Loic Helouet and Pranay Agrawal: Waiting Nets ▪ Xavier Allamigeon, Marin Boyet and Stephane Gaubert: Computing Transience Bounds of Emergency Call Centers: a Hierarchical Timed Petri Net Approach
15.00 – 15.30	**Coffee break in M130/M131**
15.30 – 18.00	**Session 3: Tools and tool demonstrations**
	▪ Nicolas Amat and Louis Chauvet Kong: a Tool to Squash Concurrent Places ▪ Fernando Pereira, Filipe Moutinho, Anikó Costa, João-Paulo Barros, Rogério Campos-Rebelo and Luis Gomes: IOPT-Tools - From executable models to automatic code generation for embedded controllers development ▪ Jan Niklas Adams and Wil van der Aalst: OCπ: Object-Centric Process Insights
20.00	Conference dinner

THURSDAY – JUNE 23

Main conference - Room M003	
https://petrinets2022.github.io/mainconference/	
8.30 – 9.00	Registration
9.00 – 10.00	**Invited talk** Volker Diekert: Petri Nets and Mazurkiewicz Traces Partnership when Honeymoon is Forgotten
10.00 – 10.30	**Coffee break in M130/M131**
10.30 – 12.00	**Session 4: Applications**
	▪ Rafal Graczyk, Waldemar Bujwan, Marcin Darmetko, Marcin Dziezyc, Damien Galano, Konrad Grochowski, Michal Kurowski, Grzegorz Juchnikowski, Marek Morawski, Michal Mosdorf, Piotr Orleanski, Cedric Thizy and Marcus Voelp: From Graphs to the Science Computer of a Space Telescope. The power of Petri Nets in Systems Engineering. ▪ Franck Pommereau, Colin Thomas and Cedric Gaucherel: Petri Nets Semantics of Reaction Rules (RR), a Language for Ecosystems Modelling ▪ Maxim Storetvedt, Latchezar Betev, Nikola Hardi, Håvard Helstrup, Kristin Fanebust Hetland and Bjarte Kileng: Modelling the Next Generation ALICE Grid Middleware using Coloured Petri Nets
12.00 – 13.30	**Lunch in the canteen area of building K1**
13.30 – 14.30	**Session 5: Synthesis**
	▪ Raymond Devillers and Ronny Tredup: Synthesis of inhibitor-reset Petri nets: algorithmic and complexity issues ▪ Paul Hannibal and Ernst-Rüdiger Olderog: The Synthesis Problem for Repeatedly Communicating Petri Games
14.30 – 15.00	**Coffee break in M130/M131**
15.00 – 16.00	**Session 6: Petri nets architecture**
	▪ Victor Khomenko, Maciej Koutny and Alex Yakovlev: Avoiding Exponential Explosion in Petri Net Models of Control Flows ▪ Elvio Gilberto Amparore and Susanna Donatelli: The ins and outs of Petri net composition
16.15 – 18.00	Petri Nets steering committee meeting (by invitation only)
Evening	Nordic mid-summer celebration in the city centre

FRIDAY – JUNE 24

Main conference - Room M003	
https://petrinets2022.github.io/mainconference/	
9.00 – 9.30	Registration
9.30 – 10.30	**Invited talk** Marieke Huisman: VerCors and Alpinist: correctness of GPU applications throughout the development of cycle
10.30 – 11.00	**Coffee break in M130/M131**
11.00 – 12.00	**Session 7: Process mining I**
	▪ Lisa Luise Mannel and Wil van der Aalst: Improving the Noise Filtering Technique of the eST-Miner by Providing Fitness Guarantees ▪ Dominique Sommers, Natalia Sidorova and Boudewijn van Dongen: Aligning Event Logs to Resource-Constrained nu-Petri nets
12.00 – 13.00	**Lunch in the canteen area of building K1**
13.00 – 14.00	**Session 8: Process mining II**
	▪ Viki Peeva, Lisa Luise Mannel and Wil van der Aalst: From Place Nets to Local Process Models ▪ Jan Martijn E. M. van der Werf, Andrey Rivkin, Artem Polyvyanyy and Marco Montali: Data and Process Resonance: Identifier Soundness for Models of Information Systems
14.00 – 14.30	**Closing session and hand-over ceremony**
	▪ M. Koutny: Information from the steering commitee ▪ L. Gomes: Presentation of Petri nets 2023 venue
14.30	**Coffee and drinks in M130|M131**