



NIKT 2021

Detailed Programme

Monday 29 November - Meetings

Venue: NTNU Gløshaugen

	Auditorium EL2, Gamle Elektro	Auditorium EL3, Gamle Elektro	Auditorium EL6, Gamle Elektro	Meeting room 454, IT building
10:00				NIKT steering board
12:00	Packed lunch for meeting participants 🍞			
12:45			UHR Fagråd Informatikk	
15:30	UDIT program committee	UHR Fagråd Informasjonsvitenskap		
17:00	Reception, NTNU Gløshaugen "Gamle Elektro" building Hall outside auditoriums EL5 and EL6 NIKT Opening Dr. Tor Grande, NTNU Vice Rector for Research Heri Ramampiaro, Head of Department IDI/NTNU Sponsor presentation: Visma (EL5) Poster lightning talks (EL5) Food 🍷🍗 Registration			

Time	Venue	Tue 30 Nov			
	(GE="Gamle Elektro" building, NTNU Gløshaugen)	NIK	NOKOBIT	UDIT	NISK
08:15	GE hall	Coffee and registration ☕			
09:00	GE AudEL5	Welcome and introduction			
09:15	GE AudEL5	Keynote: Letizia Jaccheri			
10:15	GE hall	Short coffee break ☕			
10:30		Algorithms - Room EL5	Platforms and ecosystems - Room EL3	Software development - Room EL6	Marine security and contact tracing - Room EL2
Paper session 1		<u>Session chair: Edvard Pedersen</u>	<u>Session chair: John Krogstie</u>	<u>Session chair: Guttorm Sindre</u>	<u>Session chair: Martin Strand</u>
		Sanaz Tavakolisomesh, Rodrigo Bruno and Paulo Ferreira. <i>Selecting a GC for Java Applications</i>	Jon Iden, Bendik Bygstad, Karen Osmundsen, Carolina Costabile and Egil Øvrelid. <i>Digital Platform Ecosystem Governance: Preliminary Findings and a Research Agenda</i> . Diskutant: Svein Ølnes	Hans Georg Schaathun. <i>Smidig epistemologi</i>	Truls Fismen, Andreas Reiming and Kirsi Helkala. <i>Elektronisk personellkontroll-system for Marinen</i>
		Sankardeep Chakraborty, Mohammad Sadegh Najafi and Srinivasa Rao Satti. <i>Improved Graph Indexing Algorithms for Label-Constrained Reachability Queries</i>	Anastasia Bengtsson, Petter Nielsen and Magnus Li. <i>Component trustworthiness in an enterprise software platform ecosystem</i> . Diskutant: Jon Iden	Andreas Brandsæter. <i>Programming in Mathematics Education: An Intermediary between the Real-World and the Mathematical Model</i>	Ahmed Amro. <i>Cyber-Physical Tracking of IoT devices. A maritime use case</i>
		Zawadi Svela and Anne C. Elster. <i>Multicore Max-Flow using GraphBLAS: A Usability Study</i>	Svein Ølnes. <i>Bitcoin and Blockchain Security: A Study of Misconceptions</i> . Diskutant: Jingyue Li	Andrei Ranete. <i>“Best Practice” without Evidence – Agile Software Methodology as Example</i>	Hans Heum. <i>Stupid, Evil, or Both? Understanding the Smittestopp conflict</i>
12:00	SIT cafe	Lunch 🍽️			
13:00	GE AudEL5	Keynote: Andreas Drolsum Haraldsrud			
14:00	GE AudEL5	Sponsor presentation: Graphcore			
14:10	GE hall	Coffee break ☕			
14:30		Search and optimization - Room EL5	Application of IT in health and public services - Room EL3	Interdisciplinary work and quality work - Room EL6	Foundations and real world security - Room EL2
Paper session 2		<u>Session chair: Eric Jul</u>	<u>Session chair: Pieter Toussaint</u>	<u>Session chair: Yngve Lindsjörn</u>	<u>Session chair: Anamaria Costache</u>
		Ingunn Sund, Knut Kirkhorn, Anne C. Elster and Jacob Tørring. <i>BAT: A Benchmark suite for AutoTuners</i>	Ali Al-Musawi, Erik Yang, Katja Bley, Devinder Thapa and Ilias Pappas. <i>The Role of Citizens’ Familiarity, Privacy Concerns, and Trust on Adoption of Smart Services</i> . Diskutant: Egil Øvrelid	Marius Rohde Johannessen, Birgit Andrine Apenes Solem and Tove Bøe. <i>Dybdelæring, tverrfaglighet og samskaping – en prosessuell studie av samarbeid mellom IT- og tjenestedesignstudenter</i>	Martin Strand. <i>Formalizing swarm security</i>
		Ole Jakob Mengshoel, Eirik Flogard, Jon Riege and Tong Yu. <i>Stochastic Local Search Heuristics for Efficient Feature Selection: An Experimental Study</i>	Egil Øvrelid. <i>Investigating the IT Silo problem: From Strict to Adaptive mirroring between IT Architecture and Organizational Health Services</i> . Diskutant: Hossein Baharmand	Grethe Sandstrak and Bjørn Klefstad. <i>Referansegrupper som verktøy for kontinuerlig kvalitetsforbedring</i>	Åvald Sommervoll and Audun Jøsang. <i>Machine Learning for Offensive Cyber Operations</i>
		Lars Bjertnes, Jacob Odgård Tørring and Anne C. Elster. <i>Autotuning CUDA: Applying NLP Techniques to LS-CAT</i>	Hossein Baharmand, Burcu Balci, Catherine Decouttere, Nico Vandaele, Lise Boey, Ross Phillips and Naima Saeed. <i>Toward a decision support system for fair COVID19 vaccine allocation in low- and middle-income countries</i> . Diskutant: Ilias Pappas	Åsmund Haugse and Trond Aalberg. <i>Git in an Educational Context</i>	Maren Hestad Aleksandersen, Lilya Budaghyan and Nikolay Stoyanov Kaleyski. <i>Searching for APN functions by polynomial expansion (short paper)</i> Markus Leira Asprusten, Julie Lidahl Gjerstad, Gudmund Grov, Espen Hammer Kjellstadli, Robert Flood, Henry Clausen and David Aspinall. <i>A containerised approach to labelled C&C traffic (short paper)</i>
16:00		End of program day 1			
19:30	Britannia Hotel, Trondheim city centre	Conference Dinner at Palmehaven, Britannia Hotel 🌴 Concert co-sponsored by Visma			

Wed 1 Dec						
	(GE="Gamle Elektro" building, NTNU Gløshaugen)	NIK	NOKOBIT	UDIT	NISK	
08:15	GE hall	Coffee and registration ☕				
09:00	GE AudEL5	Keynote: Alexander Lundervold				
10:00	GE hall	Coffee break ☕				
10:30	Paper session 3	Sustainability - Room EL5 <u>Session chair: Dag Langmyhr</u> Jon Elias Moen, Eivind Kohmann, Vebjørn Nilsen and Katherine Asha Brox Saidi. <i>Hyperspectral imaging and machine learning for the prediction of SSC in kiwi fruits</i> Vahiny Gnanasekaran, Helga Tenold Fridtun, Herborg Hatlen, Mats Langøy, Anine Syrstad, Sruti Subramanian and Katrien De Moor. <i>Digital carbon footprint awareness among digital natives: an exploratory study</i>	Data and information management - Room EL3 <u>Session chair: Karen Stendal</u> Anders Rekve , Eilif Hjelseth and Sujesh Francis Sujan. <i>Achieving increased BIM adoption in the built environment: a paradox</i> . Diskutant: John Krogstie Tor Sporse m, Morten Hatling and Marius Mikalsen. <i>Invisible Data Curation Practices: A Case Study from Facility Management</i> . Diskutant: Xiaomeng Su Erica Gjetsund, Victoria Jenserud and Xiaomeng Su. <i>Modenhetsmodell For Måling Av Datadrevenhet i Organisasjoner</i> . Diskutant: Marius Mikalsen	Remote collaboration and teamwork - Room EL6 <u>Session chair: Per Lauvås</u> Abdullah Bahmani and Rune Hjelsvold. <i>Ph.D. Academic Life at the Time of the Coronavirus</i> Louise Sandal Løkeland, Katarina Ekren, Elias Kløverød Brynstad and Sveinung Hauge. <i>Desktop Video Conferencing Tools in Higher Education: Understanding Lecturers' Experience</i> Yngve Lindsjørn, Steffen Almås and Viktoria Stray. <i>A Case Study of Teamwork and Project Success in a Comprehensive Capstone Course</i>	Security of facial biometric data and FIDO transaction confirmations - Room EL2 <u>Session chair: Patrick Bours</u> Marcel Grimmer, Haoyu Zhang, Raghavendra Ramachandra, Kiran Raja and Christoph Busch. <i>On the Generation of Non-Deterministic Synthetic Face Datasets Guided by Identity Priors</i> Lazaro Janier Gonzalez-Soler, Marta Gomez-Barrero, Manuel Günther and Christoph Busch. <i>Analysing the feasibility of using Objectosphere for Face Presentation Attack Detection</i> Andre Büttner and Nils Gruschka. <i>Enhancing FIDO Transaction Confirmation with Structured Data Formats</i>	
12:00		SIT cafe	Lunch 🍽️			
13:00		GE AudEL5	Keynote: Colin Alexander Boyd			
14:00		GE AudEL5	Sponsor presentation: GoForIT			
14:10	GE hall	Coffee break ☕				
14:30	Paper session 4	Image processing and visualization - NB: Room EL2 <u>Session chair: Michael Kirkedal Thomsen</u> Tatiana Kravet. <i>Polygonal blending splines in application to image processing</i> Álvaro Martínez Fernández, Lars Ailo Bongo and Edvard Pedersen. <i>GeneNet VR: Interactive visualization of large-scale biological networks using a standalone headset</i>	IT management and organization - Room EL3 <u>Session chair: Øyvind Hanssen</u> Lars Erik Kjekshus and Bendik Bygstad. <i>The Institutional Logic of Digitalism</i> . Diskutant: Leif Erik Opland Jon Iden, Karen Stendal , Daniel Elston and Hanna Midttun. <i>Hva skjer når etablerte, samlokaliserte agile team må arbeide og samarbeide fra hjemmekontor?</i> Diskutant: Torgeir Dingsøy Sobah Abbas Petersen, Tone Lise Dahl , Eva Amdahl Seim and Martha Skogen. <i>Enhancing Learning and Collaboration in Organisations through In-house Crowdsourcing</i> . Diskutant: Bendik Bygstad	Assessment - Room EL6 <u>Session chair: Hans Georg Schaathun</u> Rune Hjelsvold and Nipuna Hiranya Weeratunge. <i>Peer Code Review as Formative Assessment: A Case Study from a Database Course Project</i> Per Lauvås. <i>Video Portfolio as an Exam Option in a Database Course</i> Guttorm Sindre. <i>Studiebarometeret på programnivå: effekt av vurderingsformer og obligatoriske øvinger</i>	ICT & History, Markets and Future (Open Session) - Room EL5 <u>Session Chair: Anne C. Elster (NTNU) - tent.</u> Arvid Staupé (NTNU). <i>Samfunnsutvikling gjennom computers</i> (bassert på nytgitt bok av foredragsholder) Sjur Didrik Flåm(UiB). <i>Market Mechanisms, Money, Trade and Computer Science</i> Franz Fuchs (SINTEF Digital & head of SINTEF/NTNU/UiO's Quantum Computing Cente)r: <i>Intro to Quantum Computing.</i>	
16:00		Aud EL5	Wrap-up			
16:15			End of conference day			
16:30			Excursion to Rockheim museum and Egon Tårnet restaurant 🎸			

Thu Dec 02, 2021

Workshop AI & HPC for Geophysical Forecasting (Hosted by SFI CGF - Center for Geophysical Forecasting)

Room: Auditorium EL6, Gamle Elektro

09:00 Registration

09:20 Welcome by Martin Landrø, Director of SFI CGF

09:45 Franz Fuchs, Sintef: "Quantum Computing" (continuation of public intro on Wed afternoon)

10:15 Coffee/Refreshments

10:30 Phil Ringrose, Equinor/NTNU: CO2 Storage -- AI & HPC Challenges

11:00 Susann Wienecke, ASN: "DAS -- Sensing the environment via optical cables (and generating lots of data) "

11:30 Ole Jakob Mengshoel, NTNU: "Developing Complex but Trustworthy Computing Systems with Artificial Intelligence"

12:00-13:00 Lunch

Workshop AI & Innovation (Hosted by SFI NorwAI)

13:00 Welcome by Jon Atle Gulla & Kjelltil Nørnvåg, SFI NorwAI

13:20 Lars Ådne Heimdal og Benjamin Kille: «Kaia the social robot»

14:10-14:30 Coffee/Refreshments

14:30 Håkon Måløy, NTNU "Self-supervised Learning for Aquaculture Applications"

15:00 Odd Gundersen, Trønder Energi: "Standing on the Feet of Giants: Reproducibility in AI"

15:30-16:00 Joint short presentations and discussions: CGF and NorwAI - From Research to Innovation

Thu Dec 02, 2021

Workshop on Sustainability in IT Education

Hosted by Excited Centre for Excellent IT Education. Room: Auditorium EL3, Gamle Elektro

08:30 Registration

09:00 Welcome

09:10 Sustainability in IT Education: Relevant frameworks. Birgit Krogstie, NTNU

09:50 Short coffee break

10:00 **Panel session** with introductory presentations + discussion

Panel:

Deepti Mishra, Assoc. professor, NTNU

Simen Sommerfeldt, Chief Technology Officer, Bouvet ASA

Maja van der Velden, Professor, UiO

Chair: Line Kolås, Nord University

12:00 Lunch

13:00 **Hands-on workshop session**, including coffee break

15:30 Wrap-up

16:00 Workshop ended

Norsk Kryptoseminar 2021: NTNU Crypto Day

General information

- **Date:** Thursday December 2nd, 2021, as a part of the [NISK 2021](#) conference.
- **Registration fee:** The event is free to attend. We provide lunch for all attendees. Dinner is covered individually.
- **Registration deadline:** Thursday November 11th (we might accept late registration if available seats).
- **Registration:** Send an email to tjerand.silde@ntnu.no with name and affiliation.
- **Presentations:** Ph.D. students are expected to give a short talk about their work during the workshop.
- **Organisers:** [NTNU Applied Cryptology Lab](#) and [Norwegian Defence Research Establishment](#).
- **Location:** [SiT Elektro Cafe, Room A191](#), Elektrobygget, NTNU Gløshaugen, Trondheim.

Organisation committee: Lise Millerjord (NTNU), Tjerand Silde (NTNU) and Martin Strand (FFI).
Contact: [Tjerand Silde](#).

Thursday 2 December

Preliminary program

- 08:45: Registration
- 09:15: Opening
- 09:30: Invited talk
 - [Carsten Baum \(Aarhus University\)](#): "Modern Cryptography through the Lense of Secure Computation".
- 10:15: Coffee and refreshments
- 10:30: Industry talks
 - Håkon Jacobsen (Thales): "Implementing stateful hash-based signatures"
 - Martin Strand (FFI): "Anonymous tokens and private contact tracing"
- 11:30: Orientation from research institutions
- 12:00: Lunch
- 13:00: Presentations by Ph.D. students 1
- 14:00: Coffee and refreshments
- 14:30: Presentations by Ph.D. students 2
- 16:00: Wrap up
- 18:00: Dinner