



Norwegian University of Science and Technology

Trondheim, Norway | 26-28 June 2017 Twenty-Fifth International Conference on Case-Based Reasoning (ICCBR 2017)

Conference Program

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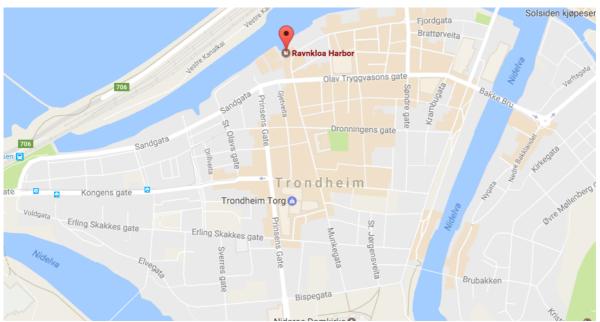
Sunday, 25 June 2017

12:15 pm: Social event: Boat Tour



We will enjoy a sightseeing tour in the harbour area and upwards Nidelva where you get to see the inner-city districts of Skansen and Ilsvikøra, as well as the old wharves and the Old Town Bridge in a new way. The boat tour will last for approximately 1.5 hours. A (free) stop at the island of Munkholmen is an option. After the boat tour, please join us for a 2-hour City Walk to see the sites of Trondheim. We anticipate ending our walk by about 4:00pm.

- Signup deadline: 21 June! Please sign up at https://goo.gl/forms/wkaQveXPIDqsQiua2
- Cost: €40 (approximately): This *must* be in cash (i.e., euros or Norwegian krones, only)
- Meeting point: Ravnkloa, Trondheim
- Web site

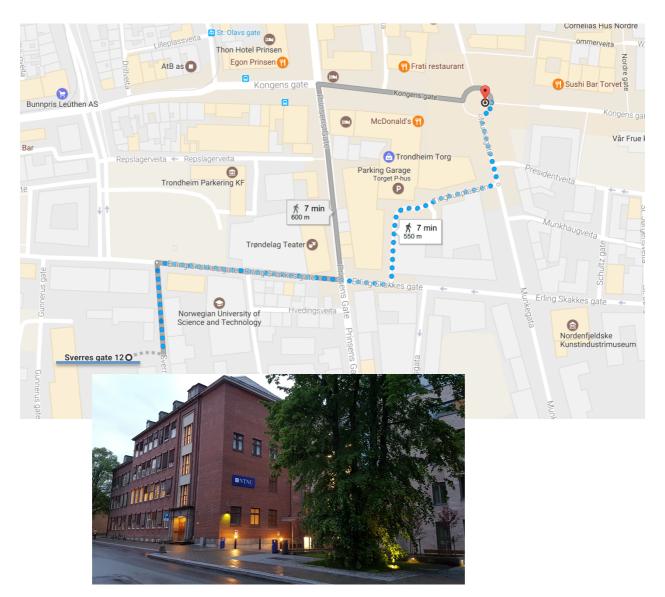


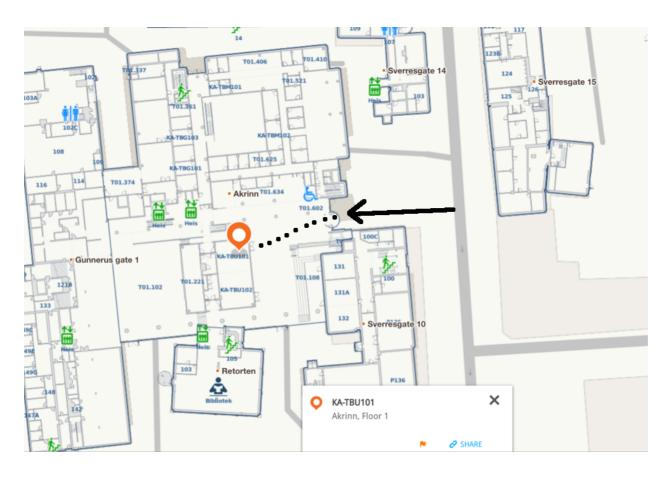
Sunday, 25 June 2017 (continued)

6:00 pm: Doctoral Consortium (DC): Opening Session

Welcome session (Chair, Stefania Montani): This will provide an opportunity for all participating students to meet & greet their mentors. After introductions, we will discuss the DC's objectives, agenda, plans for presentations, and answer any questions.

- **General Location**: Kalvskinnet campus of NTNU in the Trondheim city center
- **Room**: <u>KA-TBU101 at Akrinn</u>, Sverres gate 10 (see the photo below the Trondheim City Map and the building layout on the next page)
- Trondheim City Map: Path from the statue of St Olav in Kongens gate





7:30 pm: Group Dinner at Tulla Fischer

- Address: Kongens gate 8, Trondheim
- Web site: http://tulla.no/?lang=en
- **Cost**: Nothing; this is pre-paid
- Signup (due Th June 22): <u>https://goo.gl/forms/1uTcyYURr1zWa7bF3</u>
- All attendees and guests are welcome!



Monday, 26 June 2017

Overall Schedule: Opening Plenary Session, {CCC, Workshops, DC}, and Welcome Reception

Time	Activity
08:00-09:00 am	Registration: Realfagsbygget, outside of Auditorium R9
09:00-09:15 am	Welcome to ICCBR 2017! (Gundersen, Lieber, & Aha)
09:15-10:20 am	Invited Talk: Analogical Proportions and Analogical Reasoning: An Introduction Henri Prade (CNRS, France)
10:20-10:30 am	Industry Talk #1: Hayley Borck, Adventium Labs
10:30-11:00 am	Coffee break
11:00-12:15 pm	Doctoral Consortium (DC) and Workshops (see details below)
12:15-01:15 pm	Lunch: Kafe Realfagsbygget
01:15-03:00 pm	CCC, DC, and Workshops (see details below)
03:00-03:30 pm	Coffee break
03:30-05:00 pm	CCC, DC, and Workshops (see details below)
05:00-05:30 pm	Tour of Telenor-NTNU's AI Lab (Astrid Undheim, VP Analytics and AI at Telenor Research)
07:30 pm	Welcome Reception! To Tårn

CCC & Workshops Schedule (with Realfagsbygget room #). Please click links for <u>details</u>. PDF proceedings for the ICCBR-17 Workshops can be found at http://research.idi.ntnu.no/cbr/iccbr2017/ICCBR2017_workshop_proceedings.pdf

Work- shop	<u>CCC</u> (R91)	CBR & Deep Learning (R8)	<u>Computational</u> <u>Analogy</u> (R92)	Process Oriented CBR (R93)	<u>Doctoral</u> <u>Consortium</u> (R9)
11:00- 12:15 pm		Keynote talk	Session 1: Analogical Inference	Session 1: Health Applications	Session 1: Welcome, Invited Talk
1:15- 3:00 pm	Paper presentations	Paper presentations	Keynote Session 2: Analogy for Reuse	Session 2: POCBR Applications	Session 2: Healthcare Applications
3:30- 5:00 pm	Paper presentations; CCC discussion		Session 3: Analogy & NLP	Session 3: POCBR Applications; Panel Discussion	Session 3: Industrial Applications

Welcome Reception: To Tårn

Enjoy tapas and drinks in the heart of Trondheim with a view of Nidarosdomen.

- Address: Bispegata 5, Nidarosdomens Besøkssenter, near the Nidarosdomen Cathedral
- Web site https://www.bakeriet.no/english/



Monday, 26 June 2017 (continued)

Doctoral Consortium (DC) (Realfagsbygget Auditorium R9)

The DC pairs graduate students with mentors (senior CBR researchers), who assist them with preparing their presentation and provide feedback on content and presentation style. The DC warmly welcomes all ICCBR attendees!

Time	Activity (Each Presentation = 20min + 5min Q/A) (mentor)
11:00-12:15 pm	Session 1: Welcome and Agenda for the Day
11:00-11:25 am	 Invited speaker: Odd Erik Gundersen, NTNU
11:25-11:50 am	
	Brian Schack, Indiana University (Michael Floyd, Knexus Research Corp.)
11:50-12:15 pm	
	Pierre Murena, Télécom ParisTech (Agnar Aamodt, NTNU)
12:15-01:15 pm	Lunch break
01:15-03:00 pm	Session 2: Healthcare Applications
01:15-01:40 pm	•
	Manuel Striani, University of Turin (David Leake, Indiana U.)
01:40-02:05 pm	 AToM: An Analogical Theory of Mind
	Irina Rabkina, Northwestern University (Isabelle Bichindaritz, SUNY Oswego)
02:05-02:30 pm	 Case-Based Interpretation of Best Medical Coding Practices: Application to
	Data Collection for Cancer Registries
	Michael Schnell, Luxembourg Institute of Health (Cindy Marling, Ohio U.)
02:30-02:55 pm	
	and Caregivers in Chronic and Palliative Care
	Sara Nasiri, University of Siegen (Ralph Bergmann, U. Trier)
03:00-03:30 pm	Coffee break
03:30-05:00 pm	Session 3: Industrial Applications
03:30-03:25 pm	 A Case-Based Real-Time Adaptive Engineer Site Support System
	Kyle Martin, Robert Gordon University (Kerstin Bach, NTNU)
03:25-03:50 pm	 Building an Integrated CBR-Big Data Oriented Architecture for Case-Based
	Reasoning Systems
	Kareem Amin, German Research Center for AI (Stelios Kapetanakis, U.
03:50-04:15 pm	- ·
	• Exploiting Data to Support Operations of EXPOSED Aquaculture Installations
	Bjørn Magnus Mathisen, NTNU (Klaus-Dieter Althoff, U. Hildesheim)

	Doctoral Consortium		Commitational Analogy		Draces_Oriented CBD	CBD 8. Doon I coming	Committee Cooking Contact
Time		Time		Time			
		10:55- 11:00 am	Fadi Badra and Tarek Besold - Welcome				
	Session 1: Welcome and Agenda for the Day		Session 1: Analogical Inference		Session 1: Health Applications	Session 1: Welcome and Keynote	
11:00 - 11:25 am	- Invited speaker: Odd Erik Gundersen, NTNU n	11:00 - 11:25 am	 Henri Prade and Gilles Richard: A Discussion of Analogical-Proportion Based Inference 	11:00 - 11:15 am	11:00 - Introduction :15 am	11:00 - Welcome 11:10 am	
11:00 - 11:25 am	 Brian Schack, Indiana University (Michael Floyd, M Knexus Research Corp.) Maintenance of Case Contents and Adaptation Rules 	11:00 - 11:25 am		11:15 - 11:45 am	11:15 - Gineth Magaly Cerón Rios, Diego Mauricio 11:45 am López Gutierrez, Belén Díaz Agudo and Juan Antonio Recio Garcia Recommendation System based on CBR algorithm for the Promotion of Healthier Habits	11:10 - Massimiliano Ruocco 12:15 am Deep Learning for Recommender Systems	
11:50 – 12:15 am	11:50 – Pierre Murena, Télécom ParisTech (Agnar 12:15 am Aamodt, NTNU) Knowledge Transfer in Artificial Learning	11:50 – 12:15 am	Joseph A Blass, Irina Rabkina, and Kenneth D. Forbus: Towards a Domain-independent Method for Evaluating and Scoring Analogical Inferences	11:45 – 12:15 am	11:45 – I Sara Nasiri and Madjid Fathi: 12:15 am Case Representation and Similarity Assessment in a Recommender System to Support Dementia Caregivers in Geriatric and Palliative Care"		
	12:15-1:15 pm Lunch Break		12:15-1:15 pm Lunch Break		12:15-1:15 pm Lunch Break	12:15-1:15 pm Lunch Break	12:15-1:15 pm Lunch Break
	Session 2 - Healthcare Applications		Session 2 - Analogy for Reuse		Session 2 - PO CBR Applications	Session 2: Applications	
							1:15 - Opening of CCC'2017 1:20 pm
1:15 -		1:15 -		1:15 - 1:45	1:15 - 1:45 Ralph Bergmann, Mirjam Minor, Gilbert	1:15 - Sadiq Sani	
Шd 04:т	n Lears, inulaila O.) A Framework for Multi-Level Semantic Trace Abstraction		2.1.0 pm Analogy and Amalgams	5	would and rou schundchet. Project EVER: Extraction and Processing of Procedural Experience Knowledge in	1:40 pm teaming over reacties for know-based Human Activity Recognition	Adaptation of Taaable to the CCC'2017 Mixology and Salad Challenges, adaptation of
1.40				1.4E 0.4E	Workflows Diarda Fain Tinga Diata Tinga Causa 7:40	1.40 Distant Macanic Mathican	the cocktall names
2:05 pm	- Irina каркиз, иоглимезсеги Junversity n (Isabelle Bichindaritz, SUNY Oswego) AToM: An Analogical Theory of Mind			ct:2 -c4:1	1:45- 2:15 Interator rata, nago Pinto, nago Sousa, zita pm Vale and Juan Manuel Corchado: Automatic Selection of Optimization Algorithms for Energy Resource Scheduling using a Case-Based Reasoning System	1:40 - byorn wagnus warm.sen 2:05pm Data driven case base construction for prediction of success of marine operations	1:42 - Jornanian Pagnuti and Jim Wintenead 2:10 pm Cooking On The Margins: Probabilistic Soft Logics for Recommending and Adapting Recipes
2:05-	- Michael Schnell, Luxembourg Institute of	2:00 -	Fadi Badra:	2:15-2:45	2:15- 2:45 Maria Diapouli, Stelios Kapetanakis, Miltos	2:05- 2:30 Kyle Martin	2:10- Gilbert Müller and Ralph Bergmann
2:30 pm		2:35 pm	A Language of Case Differences	щd	Petridis and Roger Evans Behavioural Analytics using Process Mining in On-line Advertising	pm A Convolutional Siamese Network for Developing Similarity Knowledge in the SelfBACK Dataset	2:35 pm Cooking made easy: On a novel approach to complexity-aware recipe generation
2:30 -		2:35 -	Scott Friedman, Mark Burstein, Jeffrey Rye, and	2:45 - 3:00	2:45 - 3:00 Brief presentation: Overview of POCBR work	2:30 - Daniel Lopez Sanchez	
2:55 pm	n Bergmann, U. Trier) A Collaborative CBR Recommender System to Support Patients, its Relatives and Caregivers in Chronic and Palliative Care	3:00 pm	Ugur Kuter: Analogical Localization: Flexible Plan Execution in Open Worlds	E.	pm presented in the main conference	2:55 pm Case representation with deep transfer learning: a web-mining case study	3:00 pm Agnar Aamodt IntelliMeal - Enhancing Creativity by Reusing Domain Knowledge in the Adaptation Process
	3:00-3:30 pm Coffee Break		3:00-3:30 pm Coffee Break		3:00-3:30 pm Coffee Break	3:00-3:30 pm Coffee Break	3:00-3:30 pm Coffee Break
	Session 3 - Industrial Applications		Session 3 - Analogy and NLP		Session 3 - PO Applications and Panel Discussions		Session 2
3:30 - 3:55 pm		3:30 - 3:55 pm	Rashel Fam and Yves Lepage: A Study of the Saturation of Analogical Grids Agnostically Extracted from Texts	3:30 - 4:00 pm	3:30 - 4:00 Eric Kübler and Mirjam Minor: pm A workfow cloud management framework with process-oriented case-based reasoning		3:30 - Michael Ohene 3:55 pm A Proposed General Formula to Create and Analyze Baking Recipes
3.55 -	support system - Kareem Amin German Recearch Center for Al	3.55 -	Vias I anada.	1.00 - 5.00	1.00 - 5.00 Banel Discussion Current status and		3.55 - Christian Zavan Gilhart Müllar and Balnh
4:20 pm		4:20 pm	rves repage. Character-Position Arithmetic for Analogy Questions between Word Forms	md	pm challenges in Process Oriented CBR		
4:20 - 4:55 pm	 Bjørn Magnus Mathisen, NTNU (Klaus-Dieter n Althoff, U. Hildesheim) Exploiting Data to Support Operations of EXPOSED Aquaculture Installations 	4:20 - 4:45 pm	Rafik Rhouma and Philippe Langlais: Experiments in Learning to Solve Formal Analogical Equations				4:20 - CCC Discussion and Planning 5:00 pm
		4:45 - 5:00 pm	Concluding remarks and future of the workshop				

Tuesday, 27 June 2017

Plenary Sessions (Realfagsbygget Auditorium R9)

Download proceedings: <u>https://link.springer.com/book/10.1007%2F978-3-319-61030-6</u>

Time	Activity
08:30-09:00 am	Registration (Realfagsbygget, outside of Auditorium R9)
09:00-09:05 am 09:05-10:30 am	 Welcome to ICCBR-17! (David W. Aha & Jean Lieber) Invited talk: Case-Based Reasoning and the Upswing of AI Enric Plaza (IIIA, Spain) and Agnar Aamodt (NTNU, Norway)
10:30-11:00 am	Coffee break
11:00-11:25 am 11:25-11:50 am	 Case-based recommendation (Session Chair: Juan A. Recio García) On the Pros and Cons of Explanation-Based Ranking Khalil Muhammad, Aonghus Lawlor, and Barry Smyth Case-Based Recommendation for Online Judges using Learning Itineraries
11:50-12:15 pm	Antonio A. Sánchez-Ruiz, Guillermo Jimenez-Diaz, Pedro P. Gómez-Martín and Marco A. Gómez-Martín
12:15-01:15 pm	Lunch break: Kafe Realfagsbygget
01:15-01:40 pm 01:40-02:05 pm 02:05-02:35 pm 02:35-03:00 pm	 Graph representations for CBR (Session Chair: Peter Funk) Conversational Process-Oriented Case-Based Reasoning Christian Zeyen, Gilbert Müller, and Ralph Bergmann A SPARQL Query Transformation Rule Language: Application to Retrieval and Adaptation in Case-Based Reasoning Olivier Bruneau, Emmanuelle Gaillard, Nicolas Lasolle, Jean Lieber, Emmanuel Nauer, and Justine Reynaud Poster advertisements (2 minutes each) (Session Chairs: C. Marling & K. Bach) Discussion: 25 years of EWCBR/ECCBR/ICCBR: On the History and Status of CBR
03:00-03:30 pm	Coffee break and start of poster session (Handout of Poster Quiz)
03:30-04:30 pm	 Poster session (continued) (Outside of Auditorium R9) Poster Session (see details below) Collection of Poster Quiz
04:30-04:55 pm 04:55-05:20 pm 05:20-05:30 pm 05:30-05:40 pm	 CBR and time series (Session Chair: Ian Watson) Case-Based Reasoning for Inert Systems in Building Energy Management Mirjam Minor and Lutz Marx Time Series and Case-based Reasoning for an Intelligent Tetris Game Diana Lora, Antonio A. Sánchez-Ruiz, and Pedro González Calero Industry Talk #2: Michael Floyd, Knexus Research Corp. Industry Talk #3: Mark Burstein, SIFT
06:30 pm 07:00 pm	 Bus Departs from NTNU to the Conference Banquet Conference Banquet! EC Dahls Awards: Poster Quiz Winner, Best Video and Best Student Video, CCC Awards, and Best Paper

Tuesday, 27 June 2017 (continued)

Posters (Session will be outside of Realfagsbygget Auditorium R9)

- 1. A Hybrid CBR Approach for the Long Tail Problem in Recommender Systems Gharbi Alshammari, Jose L. Jorro-Aragoneses, Stelios Kapetanakis, Miltos Petridis, Juan A. Recio-Garcia, and Belen Diaz-Agudo
- 2. Extending the Flexibility of Case-Based Design Support Tools: A Use Case in Architectural Domain

Viktor Ayzenshtadt, Christoph Langenhan, Syed Saqib Bukhari, Klaus-Dieter Althoff, Frank Petzold, and Andreas Dengel

- **3.** A Reasoning Model Based on Perennial Crop Allocation Cases and Rules Florence Le Ber, Xavier Dolques, Laura Martin, Marc Benoit, and Alain Mille
- 4. Similar Users or Similar Items? Comparing Similarity-based Approaches for Recommender Systems

Marta Caro-Martinez and Guillermo Jimenez-Diaz

5. Tetra: A Case-Based Decision Support System Assisting Nuclear Physicians in Image Interpretation

Mohammad B. Chawki, Emmanuel Nauer, Nicolas Jay, and Jean Lieber

6. The Mechanism of Influence of a Case-based Health Knowledge System on Hospital Management Systems

Dongxiao Gu, Jingjing Li, Isabelle Bichindaritz, Shuyuan Deng, and Changyong Liang

- 7. Semantic Trace Comparison at Multiple Levels of Abstraction Stefania Montani, Manuel Striani, Silvana Quaglini, Anna Cavallini, and Giorgio Leonardi
- 8. Towards a Case-Based Reasoning Approach to Dynamic Adaptation for Large-Scale Distributed Systems Sorana Tania Nemes and Andreea Buga
- 9. Evolutionary Inspired Adaptation of Exercise Plans for Increasing Solution Variety
- Tale Prestmo, Kerstin Bach, Agnar Aamodt, and Paul Jarle Mork
- **10.** Intelligent Control System for Back Pain Therapy Juan Recio-Garcia, Bélen Díaz-Agudo, Jose Luis Jorro Aragoneses, and Alireza Kazemi
- **11. Dependency Modeling for Knowledge Maintenance in Distributed CBR Systems** Pascal Reuss, Christian Witzke, and Klaus-Dieter Althoff
- 12. Case-Based Interpretation of Best Practices: Application to Data Collection for Cancer Registries

Michael Schnell, Sophie Cougnal, Jean Lieber, Stephanie Saleh, and Nicolas Jay

13. SCOUT: A Case-Based Reasoning Agent for Playing Race for The Galaxy Ian Watson and Michael Woolford

Gala Dinner: E.C Dahls Pub and Kitchen

Whether you are in the pub or the restaurant, lively flavors and aromas await you. The ingredients are mainly sourced from local producers. Inspired by the great American barbecue, we make good use of the grill. We smoke both meat and fish, and combine old culinary traditions with new trends.

- Address: Strandveien 71, 7067 Trondheim
- Web site: https://www.ecdahls.no/en/ pub-and-kitchen/



Wednesday, 28 June 2017

Plenary Sessions (Realfagsbygget Auditorium R9)

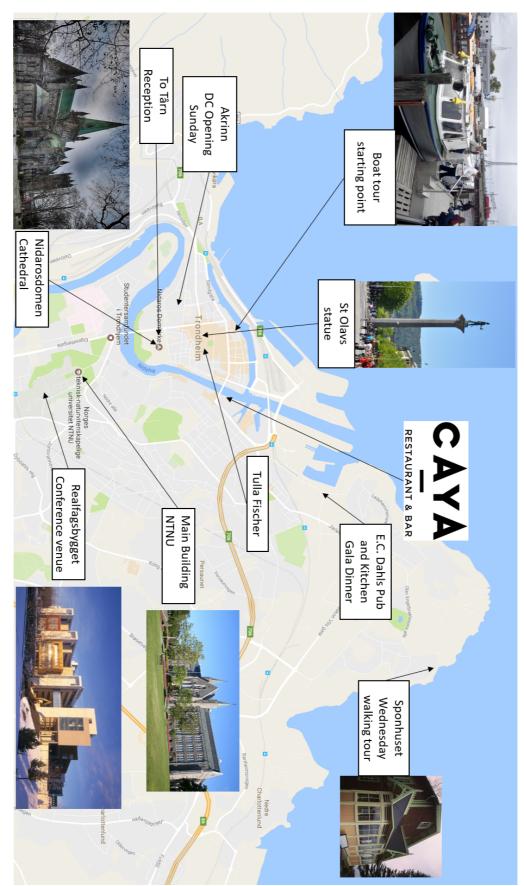
Time	Activity
08:30-09:00 am	Registration (Realfagsbygget, outside of Auditorium R9)
09:00-10:10 am	 Invited talk: Encouraging Curiosity in CBR and Recommender Systems Mary Lou Maher (UNCC, USA)
10:10-10:20 am	 Industry Talk #4: Freddy Aursø, Lighthouse8
10:20-10:30 am	Video Competition Summary (Michael Floyd)
10:30-11:00 am	Coffee break
11:00-11:25 am	 CBR and machine learning (Session Chair: Miltos Petridis) A User Controlled System for the Generation of Melodies Applying CBR María Navarro-Cáceres, Sara Rodríguez, Diego Milla, Belén Pérez Lancho, and Juan Manuel Corchado
11:25-11:50 am	kNN Sampling for Personalised Human Activity Recognition
	Sadiq Sani, Nirmalie Wiratunga, Stewart Massie, and Kay Cooper
11:50-12:15 pm	 Case-based Team Recognition Using Learned Opponent Models
	Michael W. Floyd, Justin Karneeb, and David W. Aha
12:15-01:40 pm	Lunch break (Kafe Realfagsbygget) PC meeting (Realfagsbygget R92)
01:40-02:05 pm	 Efficient CBR (Session Chair: Klaus-Dieter Althoff) Maintenance for Case Streams: A Streaming Approach to Competence-Base Deletion
02:05-02:30 pm	Yang Zhang, Su Zhang, and David LeakeA CBR System for Efficient Face Recognition under Partial Occlusion
02:30-02:55 pm	 Daniel López-Sánchez, Juan M. Corchado, and Angélica Gonzalez Arrieta Scaling Up Ensemble of Adaptations for Classification by Approximate Nearest Neighbor Retrieval Vahid Jalali and David Leake
02:55-03:15 pm	Coffee break
03:15-03:40 pm	 Textual CBR (Session Chair: Isabelle Bichindaritz) Weighted One Mode Projection of a Bipartite Graph as a Local Similarity Measure Rotem Stram, Pascal Reuss, and Klaus-Dieter Althoff
03:40-04:15 pm	 Panel: Future of CBR (Chair: David McSherry) Panelists: Michael Cox, Belén Díaz-Agudo, and Nirmalie Wiratunga
04:15-05:00 pm	Community meeting
05:30 pm 06:00 pm 08:00 pm	 Bus Departs from NTNU to Lade Walk to fjord! (approx. 6km) Group Dinner: Caya

Group Dinner: Caya (Ferjemannsveien 16, <u>Web site:</u> <u>http://www.restaurantcaya.no</u>)

The ingredients served are from the Trøndelag region. A mix of classical dishes and new exciting tastes. The restaurant is hidden on the dock by the river Nidelven.

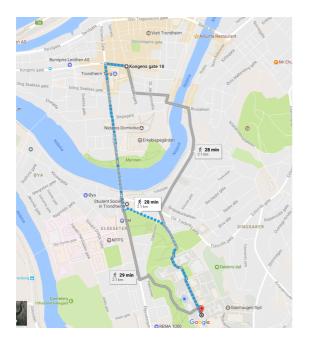


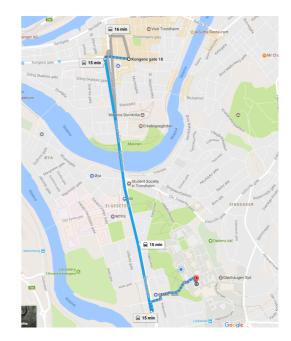
Conference locations in Trondheim



Getting from the city center to NTNU - Gløshaugen

There are two options to get to the venue: you can walk from most hotels in the city center (about 35min) or you can take the bus (about 20 mins).





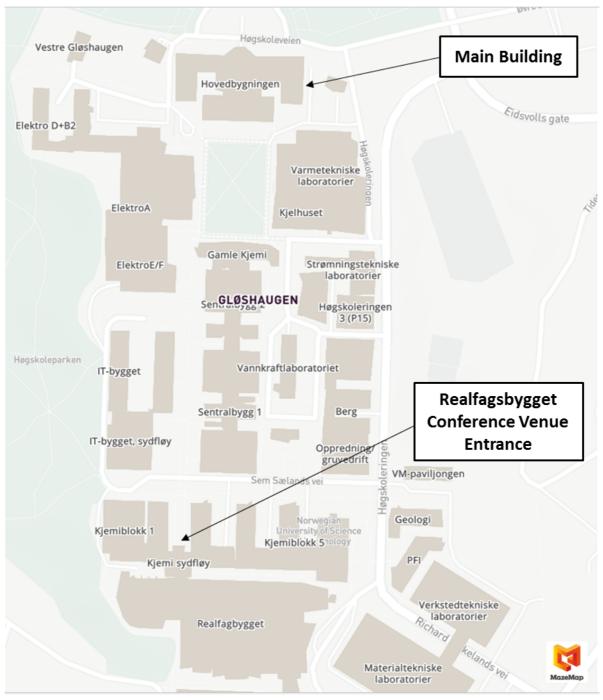
Most buses from downtown go towards "Professor Brochs gate". Once you get off there, cross the street, and walk up the hill to the university campus. From there, signs will guide you to the conference venue in "Realfagsbygget".

You can pay cash in the buses (50 NOK), but you can also use an app¹ to pay the fare. You need to create an account and register your credit card in order to use the app. Google maps as well as atb.no provide the timetables.

¹ <u>https://www.atb.no/fares/category1497.html</u>

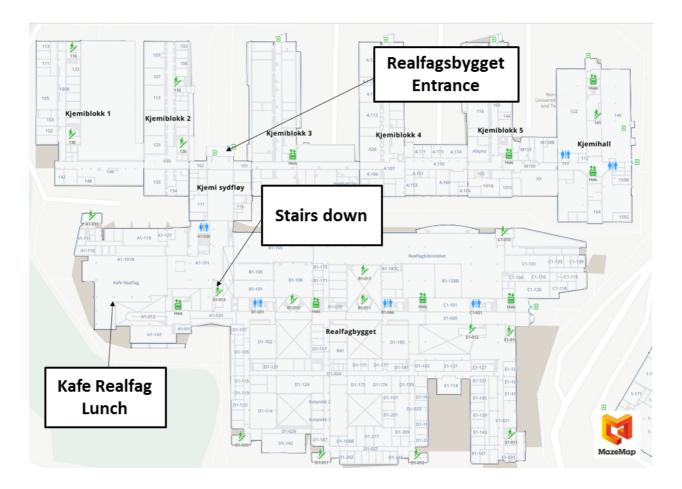
Map of Campus Gløshaugen, NTNU

Digital maps are available $here^2$. Use the search bar to locate buildings and rooms.



² <u>http://use.mazemap.com/?v=1&campusid=1</u>

Map of Realfagsbygget @ Gløshaugen: Ground floor





Entrance Realfagsbygget

Map of Realfagsbygget @ Gløshaugen: Floor U1

