



Reining in digital platforms? Challenging monopolies, promoting competition and developing regulatory regimes

31st ITS European Conference
Gothenburg, Sweden, 20th – 21st June 2022



CHALMERS
UNIVERSITY OF TECHNOLOGY

Programme Overview, 19th – 21st June

Sunday, June 19		Monday, June 20		Tuesday, June 21	
		08:15 - 09:00	Registration		
		09:00 - 10:30	Opening session	09:00 - 10:30	Parallel sessions 4
		10:30 - 11:00	Coffee	10:30 - 11:00	Coffee
		11:00 - 12:30	Parallel sessions 1	11:00 - 12:30	Parallel sessions 5
		12:30 - 13:30	Lunch	12:30 - 13:30	Lunch
		13:30 - 15:00	Parallel sessions 2	13:30 - 15:00	Parallel sessions 6
		15:00 - 15:30	Coffee	15:00 - 15:30	Coffee
		15:30 - 17:00	Parallel sessions 3	15:30 - 17:30	Parallel sessions 7
17:00 – 19:00	Registration	17:30	Bus departure	17:45	Bus departure
18:00 – 20:00	Welcome Reception	18:00 – 20:00	Reception, Bourse of Gothenburg	18:00 – 22:00	Gala Dinner

Sunday, 19th June 2022

Conference registration 17:00 – 19:00. Welcome reception 18:00 – 20:00

Registration 17:00 – 19:00

The conference venue is:

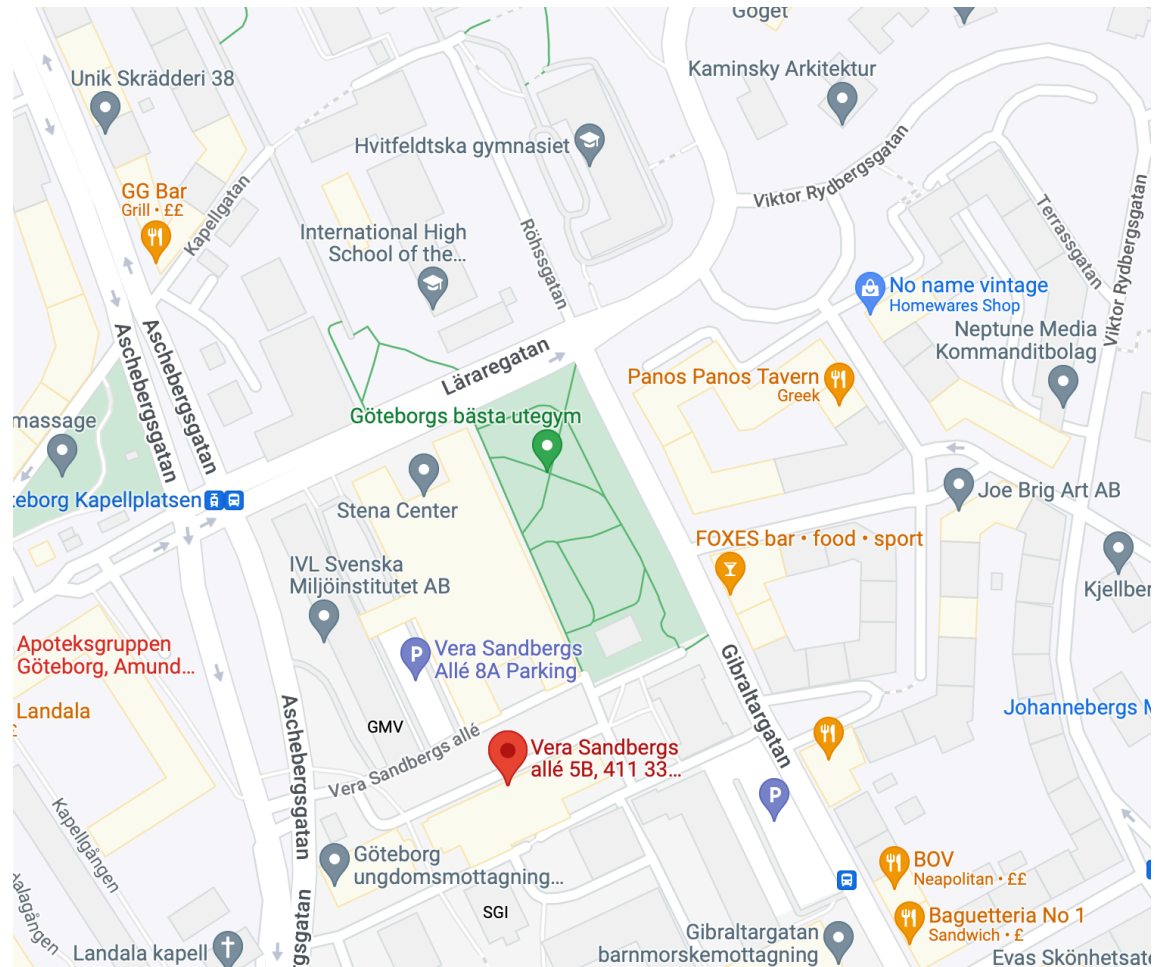
Department of Technology
Management & Economics,
Vera Sandbergs Allé 8,
Chalmers University of Technology,
Gothenburg

You can register from 17:00
onwards at the venue in the
following room: 'Veras grasmatta'.

Welcome reception 18:00 – 20:00

This will be held at:

Wikjanders Restaurant
Vera Sandbergs Allé 5B



Monday, 20th June 2022

Opening session 09.00 – 10.30

	Location: Veras Gräsmatta, Vera Sandbergs Allé 8, Department of Technology Management & Economics, Chalmers University of Technology
Opening Plenary Session	<p>Welcome speeches</p> <p>Mats Lundqvist, Vice President, Chalmers University of Technology</p> <p>Stephen Schmidt, ITS Chair & Vice President, TELUS, Canada</p> <p>Joakim Björkdahl, Head, Department Technology Management & Economics, Chalmers University of Technology</p> <p>Futures of e-Mobility: Technologies, Business Models and Regulation</p> <p>Session Moderator: Mats Lundqvist, Vice President, Chalmers University of Technology</p> <p>Per M Johnsson, Director, Ericsson - “Challenges for Ericsson and the Telecom Industry”</p> <p>Maria Massaro, Regulation Specialist, Volvo Group - “The Future of Automated and Connected Trucking: Regulatory Aspects”</p> <p>Per Arnäs, Director, Einride - “Intelligent Mobility - The Future of Freight”</p>
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Welcome message – Stephen Schmidt, ITS Chair

Dear Conference Participants,

It is a pleasure and honour to welcome you to Gothenburg, Sweden, for the 31st European Conference of the International Telecommunication Society (ITS). I am delighted that we are able to gather again – in person – to tackle critical issues facing the global telecommunications community.

It is wonderful that we have such a diverse mix of speakers and attendees, from 26 countries and spanning academia, government, and industry. With almost 100 papers being presented, this conference offers a tremendous opportunity to learn and draw lessons from global experience to inform digital policy and solutions to the world's pressing problems, whether 5G rollout and spectrum policy or climate change and gender equality.

The theme of the 31st European Conference - "Reining in Digital Platforms? Challenging monopolies, promoting competition and developing regulatory regimes" – was carefully chosen to reflect that we are on the cusp of a new era of telecom regulation. As digital platforms such as Facebook and Google gain increasing influence in our lives, policymakers across all countries are struggling to harness the potential of digital platform innovation against growing concerns over competition, online harm, and privacy. It is an ideal time to draw lessons from global experience, with global experts from grappling with questions such as: What barriers limit access to digital platforms? How can digital policies unleash innovation? How to balance market and social imperatives?

Aside from this broad theme, the range of topics span virtually all the contemporary issues facing the global telecommunications community, as well as many of the most pressing issues facing humanity as a whole such as digital divides, cybersecurity, privacy, artificial intelligence, and climate change. That many of the key issues facing the telecommunications community are as much social as technical, reminds me of the quotation from the science fiction writer, William Gibson: "The future is already here, it's just not evenly distributed".

The ITS is deeply grateful that the Conference is hosted by one of the world's leading universities – Chalmers University of Technology. With scientific excellence and industry relevance as its foundation, Chalmers promotes knowledge and technical solutions for a sustainable world by fostering an innovative spirit in collaboration with wider society. As a central hub for telecommunication research, collaboration, and training, Chalmers is having major influence on global telecommunications and is the ideal setting for our conference.

The organization of a conference of this magnitude involves immense efforts by many people and we are very fortunate for their diligence and goodwill. I wish to express my sincere thanks to Professor Jason Whalley of Northumbria University and Dr. Volker Stocker of TU Berlin, the program chairs, as well as to Professor Erik Bohlin of Chalmers, the local organizer. I also extend sincere thanks to the corporate sponsors and the city of Gothenburg

I would like to thank all of the authors, presenters and participants. In a very real sense, you are the co-creators of the conference, bringing it to life with your papers, presentations, ideas, and friendship. Finally, but most importantly, I would like to thank the students presenting papers and in attendance – the source of our freshest and most exciting research at ITS conferences.

I look forward to meeting as many of you as possible at this conference.

Sincerely,



Stephen Schmidt

ITS Chair

Parallel sessions 1: 11.00 – 12.30

5G	Broadband 1	Covid 1 - apps	Competition
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7
<p>Laitsou, Ioannou & Katsianis - 5G fixed wireless access for rural broadband</p> <p>Markendahl & Beckman - Can local 5G networks using local spectrum be used as platform for digitalization of industrial systems and services?</p> <p>Jurva, Outila, Matinmikko-Blue, Merisalo & Jutila – Towards an integrated process for digital transformation: 5G and beyond based smart transportation systems in cities and regions</p>	<p>Ferrandis, Ramos & Feijoo - Deployment of high-speed broadband in rural areas in the EU: Evolution of the investment gap and alternatives to reduce it</p> <p>Guiffard - Broadband Internet and political mobilization in sub-Saharan Africa</p> <p>Mohan & Lyons - High-speed broadband availability, internet activity among older people, quality of life and loneliness</p>	<p>Howell & Potgieter - Smartphone-based COVID-19 contact tracing apps: Antipodean insights</p> <p>Mitomo, Otsuka & Kamplean - Severity of COVID-19 infection and the adoption of contact-confirming application in Japan</p> <p>Kamplean, Mitomo & Otsuka - Lack of trust and its influence on the installation of the COVID-19 contact-confirming application in Japan</p>	<p>Kanellos, Katsianis & Varoutas - Forecasting a telecommunications provider's market share</p> <p>Hanspach - Physical Internet infrastructure and competition in digital markets</p> <p>Jamison, Ajit & Tecza - Effects of conferring business resource on rivals</p>
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Parallel sessions 2: 13.30 – 15.00

Panel	Artificial intelligence	Big tech	Broadband 2
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7
<p>Beyond the pandemic? Exploring the impact of Covid on telecommunications and the Internet</p> <p><i>Moderator</i> Volker Stocker, Weizenbaum Institute for the Networked Society & Technische Universität Berlin</p> <p><i>Panellists</i> Roslyn Layton, Aalborg University, Denmark Bill Lehr, MIT, USA Scott Marcus, Bruegel, Belgium</p>	<p>Schauer & Schnurr - Competition between human and artificial intelligence: An experimental analysis</p> <p>Gideon - Evaluating algorithmic governance regimes: A game theoretic and empirical analysis</p> <p>Petre & Varoutas - On the application of machine learning in telecommunications forecasting: A comparison</p>	<p>de Barsy & Gautier - Acquisitions in the digital economy: Are GAFAM killing the next big thing?</p> <p>Henten & Windekilde - Demand side economies of scope and Big Tech business models</p> <p>Kawamata – Informatics turn of hard and soft power over 5G and AI technological hegemony</p>	<p>Aravantinos, Petre, Katsianis, Chipouras & Varoutas - A hedonic approach to estimate the price evolution of FTTH service: evidence from EU</p> <p>Eltges, Wiewiorra & Fourberg - Copper to fibre migration: Regulated access fees incentivising migration</p>
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Parallel sessions 3: 15.30 – 17.00

Mobile 1	Platforms and ecosystems	Cloud & security	Panel session
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Veras Gräsmatta
<p>Papai, Nagy & McLean - Quality-adjusted price changes on the Hungarian mobile market between 2015-2021</p> <p>Liang - Suboptimal mobile spectrum allocation lowers or reverses the traditional gain in consumer surplus from a new MNO entrance</p> <p>Savunen, Hammaine, Kilkki & Kekolahti - Role of mobile network operators in next generation public safety services</p>	<p>Kraemer, Shekhar & Hofmann - Regulating algorithmic learning in digital platform ecosystems through data sharing and data siloing: Consequences for innovation and welfare</p> <p>Grob & Vidal - Towards a more sustainable Internet: the case for rebalancing the digital ecosystem</p> <p>Dippon & Hoelle - The economic costs of structural separation, line of business restrictions, and common carrier regulation of online platforms and marketplaces</p>	<p>Leka - What should economists know about the cloud? A literature review on digital economics</p> <p>Lim & Kim - Why would the users of Google's cloud services intend to switch to alternative services?</p> <p>Falch, Tadayoni, Skouby, Williams & Olesen - Cyber Security and privacy in relation to SMEs</p>	<p>Future of Mobile Regulation and Policy: A Global View</p> <p><i>Moderator:</i> Erik Bohlin, Professor, Chalmers University of Technology</p> <p><i>Panellists:</i> Seongcheol Kim, Korea University Yu-li Liu, City University of Hong Kong Francesco Cappelletti, Future Europe Journal Erik Bohlin, Chalmers University of Technology Francesco Cappelletti, European Liberal Forum Simon Forge, SCF Associates Jason Whalley, Northumbria University Bill Lehr, MIT</p>
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Conference Reception: 18:00 – 20.00

	Reception hosted by Gothenburg City
Bourse of Gothenburg Gustav Adolfs Torg 5	Welcome speeches by: Lord Mayor Anneli Rhedin, City of Gothenburg Stephen Schmidt, ITS Chair & Vice President Regulatory Affairs, TELUS, Canada Logistics: Buses from Chalmers University to City Hall will be across the entrance of the conference venue in front of Wijkanders at Vera Sandbergs allé 5B Departure time for bus is 17.30

TUESDAY 21 June 2022

Parallel sessions 4: 09.00 – 10.30

Mobile 1	Internet of Things	Blockchain	Covid 2	Platforms 1
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7	Location: Veras Gräsmatta
<p>Kim, Kim, Jang & Park - Value of spectrum for mobile communications: Case of Korea</p> <p>Bahia, Butler & Castells - The socio-economic benefits of the 6GHz band: Considering licensed and unlicensed options</p> <p>Jeanjean - Infrastructure sharing and co-investment in the telecommunication Industry</p>	<p>Markendahl - Analysis of IoT services, data platforms and re-use of data and solutions in a smart city context</p> <p>Degrade, Vannieuwenborg, Verbrugge & Colle – A model for cooperative intelligent transport diffusion simulation in the European vehicle fleet</p> <p>Harno - Scenarios for the Industry 4.0 ecosystem development</p>	<p>Kshetri - Blockchains with Chinese characteristics</p> <p>Dalvi & Gadkari - CCI and regulation of digital platforms and blockchain: Will it take a rule of reason; per se or a schizophrenic approach?</p> <p>Castañeda & Feijoo - Blockchain within agri-food international value chains. A comparative analysis from public perspective in the case of Spain</p>	<p>Cheng, Mitomo, Kamplean & Seo - E-health literacy and the voluntary adoption of the new normal in COVID-19: the case of Japan</p> <p>Garín-Muñoz, Pérez-Amaral & Valarezo-Unda - Evolution of the Internet gender gaps in Spain and effects of the Covid-19 pandemic</p> <p>Fast & Schnurr - Data donations for digital contact-tracing: Short- and long-term effects of monetary incentives</p>	<p>Prado - Safeguarding competition in digital markets: A comparative analysis of emerging policy and regulatory regimes</p> <p>Ueda - A conjoint analysis of consumers' attitudes towards digital platforms: A case study in Japan</p> <p>Papathanassopoulos & Varoutas - On the competition between Video OTTs platforms vs traditional TV: A niche case study in Greece</p>
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Parallel sessions 5: 11.00 – 12.30

The impact of digital technologies	Content	New technologies	ICT and the environment
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7
<p>Axenbeck & Breithaupt - Measuring firm-level digitalisation and its impact on economic and social stability during the COVID-19 Crisis – A novel text-mining approach</p> <p>Sholler & MacInnes – The economic impact of AI on employment and income disparities</p> <p>Gijón, Fernández-Bonilla & Whalley - Behind the pandemic: the loopholes of the digital divide</p>	<p>Deshpande, Lechardoy & Villanueva - Towards a comparative and integrative framework for regulatory approaches to online advertising</p> <p>Fourberg, Tas & Wiewiorra - My Browser is not a Billboard: Experimental Evidence on Ad-blocking Adoption and Users' Acquisition of Information</p> <p>Kurata - Who wins the people wins the world</p>	<p>Kim, Lee & Kwon - Does the video assistant referee (VAR) system mitigate referee bias in professional football leagues?</p> <p>Kshetri - International variation in regulations related to initial coin offerings: Preliminary findings and a research agenda</p> <p>Nam & Kim - Why do elderly people feel negative about the use of self-service technology and how do they cope with the negative emotions?</p>	<p>Edquist & Bergmark - How is mobile broadband affecting CO₂ Emissions globally?</p> <p>Kapatamoyo & Mbumwae - ICT in Zambia – Green informatics on strategies and technological innovations</p> <p>Briglauer, Köppl-Turyna & Schwarzbauer - Evaluating effects of ICT core elements on CO₂ emissions: recent evidence from OECD countries</p>
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Parallel sessions 6: 13.30 – 15.00

Panel	Competition 1	European Union	Digital divide
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7
<p>Beyond 5G: Global convergence or divergence?</p> <p><i>Moderator</i> Scott Marcus, Bruegel, Belgium</p> <p><i>Panellists</i> Jan Jochum, VP Spectrum Policy & Projects, Deutsche Telekom Janne Peisa, Ericsson Bernard Barani, European Commission</p>	<p>Tang & Howell - Spectrum policy on broadband market to reduce digital divide and promote competition</p> <p>Ida, Kawaguchi, Kuroda & Sato - Multi-product quality competition and bundling: The case of telecommunication industry</p> <p>Yang, Vialle & Whalley - Is disruption the second time around harder to do? The entry of Iliad into the Italian telecommunications market</p>	<p>Arcos & Feijóo - An analysis of the content-neutrality approach in European audiovisual market regulation</p> <p>Vander Maelen - Articles 40-41 GDPR: A new approach to using codes of conduct in EU law</p> <p>de Rojas, Pita & Martínez - Understanding Spain and Europe in the global digital sector</p>	<p>Setthasuravich, Sirikhan & Kato - Spatial econometric analysis of the digital divide in Thailand at the sub-district level: patterns and determinants</p> <p>Vargas-Montoya, Robalion & Madrigal – Digital divide in Costa Rica over the last decade: How does it change and what drives it?</p> <p>Griffin, Lyons, McCoy & Mohan - Early digital exposure and later digital skills: evidence from home and school environments in Ireland</p>
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Parallel sessions 7: 15.30 – 17.30

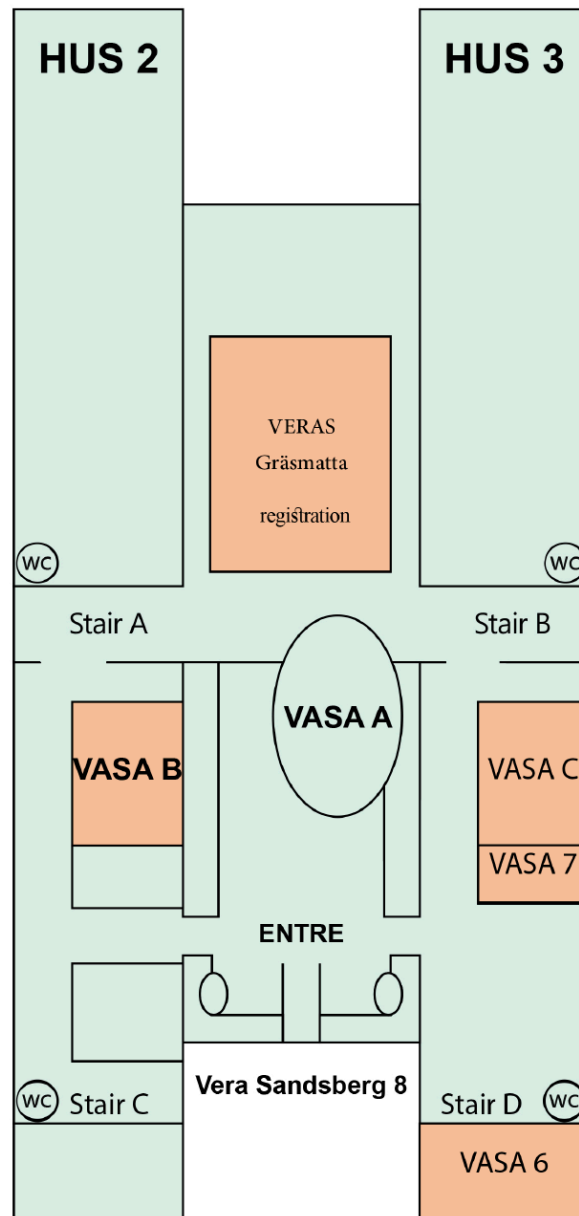
Smart	Content	5G	Platforms 2	R&D
Location: Vasa B	Location: Vasa C	Location: Vasa 6	Location: Vasa 7	Location: Veras Gräsmatta
<p>Markendahl - Analysis of use of shared data for smart parking services in Sweden</p> <p>Sirikhan - Potentials and challenges of the connected autonomous shared electric vehicle (CASE) from urban geography perspective in southeast Asia mega-urban regions</p> <p>Yan, Hu & Liu - Privacy fatigue of smart speaker users in China: Exploring the affecting factors and privacy coping behaviors</p> <p>Lehr - Smart contracts: Myths and implications for economics and financial regulation</p>	<p>Gideon & Kukura - “Everyone had to be part of this:” Social media and uprising participation decisions</p> <p>Fujisawa & Kasuga - Differentiation strategy for firms: online ad versus mass media ad</p> <p>Lin - Investigating the relationship of disguised socialbots and disinformation threat in Taiwan</p> <p>Park & Kim - How do people with physical disabilities want to construct virtual identity with avatars?</p>	<p>Castells & Bahia - Investments and mobile network performance in Europe: does market structure matter in the 5G era?</p> <p>Gisca, Matinmikko-Blue, Ahokangas, Yrjölä & Gordon - Legitimacy challenges of local private 5G and beyond networks in Europe</p> <p>Földes - Financial and regulatory assessment of mobile network sharing as a trigger of cost efficient 5G rollout in CEE</p> <p>Knieps - Internet of Things and the challenges for cross-border network slicing in 5G-based smart networks</p>	<p>Forge - We’ve been here before – New and old in anti-trust regulation for global web platforms and future regulatory policy</p> <p>Verstraete, Verbrugge & Colle - Solid: Enabler of decentralized, digital platforms ecosystems</p> <p>Nam & Kwon - Quantifying different psychological costs of user behavioral info for overcoming the ‘take-it-or-leave-it’ condition</p> <p>Jamison & Ajit - Effects of mobile platform choice on firm success</p>	<p>Gamarra & Friedl - Ownership concentration and average total costs of standard-essential patent families</p> <p>Li - R&D subsidies and technological progress in the Chinese ICT manufacturing industry</p> <p>Shigeno, Matsuzaki, Taher & Tsuji – Relationship between innovation and corporate performance in Japanese SMEs by two-stage panel data analysis</p>
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Conference dinner: 18:00 – 22.00

	Lågedrags Vårdhus
Conference Dinner Lågedrags Vårdhus Talattagatan 24 426 76 Västra Frölunda	Logistics Buses for Lågedrags Vårdhus will depart from across the entrance of the conference venue, in front of Wijkanders at Vera Sandbergs allé 5B Departure time for bus is 17.45

TME Building

Chalmers University of Technology



Building Vasa Hus 3
Entrance Floor

Across Department of
Technology Management and Economics
Entrance from Vasa Sandberg Alle 5B

Bourse of Gothenburg
Gustav Adolfs Torg 5



Instruction:
Buses from Chalmers to Långedrag's Vårdhus will be across the entrance
in front of Wijkanders in Vera Sandbergs allé 5B.
Departure time for bus is 17.45