Noncommutativity in the North – MikaelFest

A Marcus Wallenberg symposium

in celebration of Mikael Rørdam's 65th birthday

17. - 20. June 2024

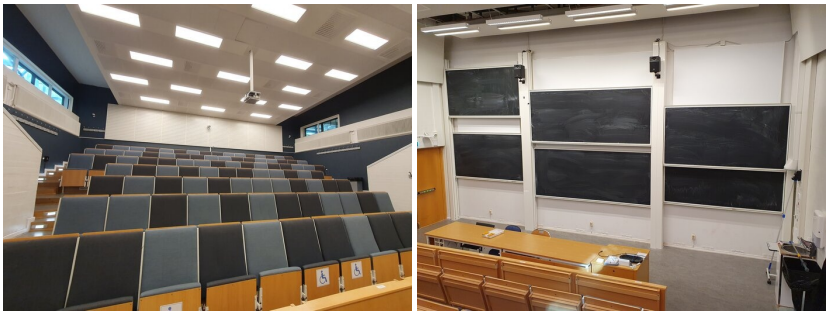
CHALMERS | GÖTEBORGS UNIVERSITET

Contents

About the conference

Venue

All talks will be at Lecture Hall KA of the Chemistry and Chemical Engineering Department, right in front of the Mathematics Department. The adress is Kemigården 4, 412 58 Göteborg.



Photos of lecture hall KA

Organizers

Georg Huppertz, Hannes Thiel, Eduard Vilalta

Sponsors

This conference is funded by the Marcus Wallenberg Foundation for International Scientific Collaboration, the K-theory foundation, and the Knut and Alice Wallenberg Foundation through the KAW Fellowship *Order-theoretic methods in operator algebras*.

Schedule

Monday 17th

9:00 - 9:30	**Registration**	
9:30 - 10:15	**Stuart White**	Classifying maps with and without $\mathcal{Z}$-stability
10:15 - 10:45	**Coffee break**	
10:45 - 11:30	**Karen Strung**	Crossed products by minimal mean dimension zero homeomorphisms twisted by vector bundles
11:45 - 12:30	**Erik Bedos**	Positive definiteness and Fell bundles over discrete groups
12:30 - 14:00	**Lunch break**	
14:00 - 14:45	**Kristin Courtney**	When is an operator system a C*-algebra?
15:00 - 15:45	**Søren Eilers**	Classification of simple C*-algebras from singular graphs
15:45 - 16:15	**Coffee break**	
16:15 - 17:00	**Bruce Blackadar**	Trends and Fashion in Operator Algebras
18:00	**Reception**	

Tuesday 18th

9:30 - 10:15	**James Gabe**	Tackling Basic Actions
10:15 - 10:45	**Coffee break**	
10:45 - 11:30	**Siegfried Echterhoff**	K-theory for crossed products of Bernoulli shifts
11:45 - 12:30	**Francesc Perera**	Pure C*-algebras
12:30 - 14:00	**Lunch break**	
14:00 - 14:45	**Eduard Ortega**	K-theory of groupoid L^p-algebras
15:00 - 15:45	**Nadia Larsen**	Gauge invariant uniqueness theorems
15:45 - 16:15	**Coffee break**	
16:15 - 17:00	**Marius Dadarlat**	Group stability with respect to the operator norm

Wednesday 19th

9:30 - 10:15	**Stefaan Vaes**	W*-superrigidity of group von Neumann algebras
10:15 - 10:45	**Coffee break**	
10:45 - 11:30	**Wilhelm Winter**	Diagonals in classifiable C*-algebras
11:45 - 12:30	**Andreas Thom**	High-dimensional expansion and soficity of groups
12:30 - 14:00	**Lunch break**	
14:00 - 14:45	**Sorin Popa**	The free group factors conundrum
15:00 - 15:45	**George Elliott**	Are they moving the goalposts again?
15:45 - 16:15	**Coffee break**	
16:15 - 17:00	**Mikael Rørdam**	A few of my favorite things
19:00	**Dinner**	

Thursday 20th

9:30 - 10:15	**Nigel Higson**	Spectral theory for Toeplitz operators, topology, and a physical system of gyroscopes
10:15 - 10:45	**Coffee break**	
10:45 - 11:30	**Tatiana Shulman**	On residually finite-dimensional C*-algebras in dynamical context
11:45 - 12:30	**Ilan Hirshberg**	Non-isomorphic simple AH algebras with the same Elliott invariant and same radius of comparison
12:30 - 14:00	**Lunch break**	
14:00 - 14:45	**Ian Putnam**	A new construction of expansive/hyperbolic dynamics and their C*-algebras
15:00 - 15:45	**Shirly Geffen**	C*-algebras associated with boundary actions of certain torsion-free hyperbolic groups
15:45 - 16:15	**Coffee break**	
16:15 - 17:00	**Ilijas Farah**	Coronas and strongly self-absorbing C*-algebras

Titles and abstracts

Monday 17th

Classifying maps with and without $\mathcal{Z}$-stability

Stuart White, University of Oxford

I'll discuss some ingredients used in the classification of *-homomorphisms, looking at some situations where we can classify maps into C^*-algebras without using $\mathcal{Z}$-stability of the target algebra. This is based on joint work with Shanshan Hua, as well as the large scale project with Carrion, Gabe, Schafhauser and Tikuisis.

Crossed products by minimal mean dimension zero homeomorphisms twisted by vector bundles

Karen Strung, Institute of Mathematics of the Czech Academy of Sciences

The crossed product construction from a minimal homeomorphism on a compact metric space X has been well studied from the point of view of the classification program. One can generalize this construction by considering a crossed product by a Hilbert $C(X)$-bimodule given by a line bundle over X with left multiplication induced by the homeomorphism. In previous work with Adamo, Archey, Forough, Georgescu, Jeong and Viola, we showed that when X is finite dimensional, such crossed products are also Z-stable, and hence classifiable. In this talk I will discuss work with Forough and Jeong extending this classification to the case that the homeomorphism has mean dimension zero, thus extending the work of Elliott and Niu for the usual crossed product. We also show that, even when the systems do not have mean dimension zero, the tensor products of two crossed products by such bimodules will always be $\mathcal{Z}$-stable.

Positive definiteness and Fell bundles over discrete groups

Erik Bedos, University of Oslo

We will introduce a natural concept of positive definiteness for bundle maps between Fell bundles over (possibly different) discrete groups and describe some examples. Such maps induce completely positive (cp) maps between the associated full cross-sectional C^*-algebras in a functorial way. Under the assumption that the homomorphism connecting the groups under consideration is amenable,

they also induce cp maps between the associated reduced cross-sectional C*-algebras. As an application, we will define an approximation property for a Fell bundle over a discrete group which generalizes Exel's approximation property and implies the weak containment property; both approximation properties coincide when the unit fibre is nuclear. If time permits, we will also mention how positive definite bundle maps and C*-correspondences arise from (left) actions of Fell bundles on Abadie-Buss-Ferraro (right) Hilbert bundles.

The talk is based on joint work with Roberto Conti (Rome).

When is an operator system a C*-algebra?

Kristin Courtney, University of Southern Denmark

In the category of operator systems, identification comes via complete order isomorphisms, and so an operator system can be identified with a C*-algebra without itself being an algebra. So, when is an operator system a C*-algebra? In this talk, I will give a characterization in the separable nuclear setting coming from C*-encoding systems. This comes from joint work with Galke, van Lujik, and Stottmeister.

Classification of simple C^*-algebras from singular graphs

Søren Eilers, University of Copenhagen

There is a rich classification theory for unital simple C^*-algebras associated to finite graphs with no sinks, allowing to decide by invariants when two such C^*-algebras are isomorphic, not just in their own right, but equipped with their natural diagonals (Cartan subalgebras) or their natural circle actions. All of these results were proved by involving results from symbolic dynamics, even though some now are special cases of much more general results, and an early breakthrough was provided by Mikael.

When one allows singular vertices — sinks or infinite emitters — the connection to the rich theory of shifts of finite type is lost, but the classical classification results have natural generalizations which one may aspire to show by other means. I will discuss and compare different notions of sameness of such graph C^*-algebras; all fully understood in the regular case, buth only half resolved in general. All work presented is joint with Efren Ruiz, and some also with Aidan Sims.

Trends and Fashion in Operator Algebras

Bruce Blackadar, University of Nevada

I will look at some of the notable changes that have taken place in the subject of Operator Algebras, primarily over my 50-year career. I will try to present a picture of what the subject was like when I began, how the emphasis has evolved, and some fashions which have come and gone (and may someday return!) I will discuss some problems which seemed important then, some of which are primitive by today's standards and some which remain open.

Tuesday 18th

Tackling Basic Actions

James Gabe, University of Southern Denmark

Gabe discusses recent results about the classification of group actions on C^*-algebras .

K-theory for crossed products of Bernoulli shifts

Siegfried Echterhoff, University of Münster

For a large class of unital C^*-algebras A, we calculate the K-theory of reduced crossed products $A^{\otimes G} \rtimes_r G$ of Bernoulli shifts by groups satisfying the Baum-Connes conjecture. In particular, we give explicit formulas for finite-dimensional C^*-algebras, UHF-algebras, rotation algebras, and several other examples. As an application, we obtain a formula for the K-theory of reduced C^*-algebras of wreath products $H \wr G$ for large classes of groups H and G. Our results are motivated and generalize earlier results by several authors on the K-theory of lamplighter groups.

Joint work with Sayan Chakraborty, Julian Kranz, and Shintaro Nishikawa.

Pure C^*-algebras

Francesc Perera, Universitat Autònoma de Barcelona

The class of (m, n)-pure C^*-algebras was introduced by Winter in his seminal work on separable, simple, unital C^*-algebras of finite nuclear dimension. In the case of the lowest possible values $m = n = 0$, one speaks of pure C^*-algebras, which translates into the fact that their Cuntz semigroup is almost unperforated and almost divisible.

Much effort has been put in understanding pureness, but less is known about the apparently weaker notion of (m,n)-pureness for $m,n>0$. In a joint paper with R. Antoine, L. Robert, and H. Thiel, we recently showed that any simple (m,n)-pure C^*-algebra is in fact pure. In this talk we will explore the situation in the non-simple setting, as well as the connections of pureness with the Global Glimm Property. This is joint work with R. Antoine, H. Thiel, and E. Vilalta.

K-theory of groupoid L^p-algebras

Eduard Ortega, Norwegian University of Science and Technology

In this talk we are going to show how to compute the K-theory of L^p-algebras associated to étale groupoids with polynomial growth. Our main result states the K-groups are invariant with respect to the index $p\in(1,\infty)$. The key device in the computations will be the algebra of smooth functions on the groupoid. This is a joint work with A. Austad and M. Palmstrøm.

Gauge invariant uniqueness theorems

Nadia Larsen, University of Oslo

Gauge invariant uniqueness theorems are results about faithfulness of a *-homomorphism on a C^*-algebra in terms of tractable conditions expressed at the level of a subalgebra or a distinguished set of generators, where equivariance of some sort is taken into account. I will discuss an approach to such a result in the context of P-graph C^*-algebras with emphasis on the use of maximal coactions. This viewpoint complements the more established use of normal coactions in a a number of recent results. The talk is based on joint work with R. Huben, S. Kaliszewski and J. Quigg.

Group stability with respect to the operator norm

Marius Dadarlat, Purdue University

We discuss cohomological obstructions to group stability with respect to the operator norm, with an emphasis on uniform-to-local stability.

Wednesday 19th

W*-superrigidity of group von Neumann algebras

Stefaan Vaes, KU Leuven

A countable group G is said to be W^*-superrigid if G can be entirely recovered from its ambient group von Neumann algebra $L(G)$. In this talk, I will present a joint work with Milan Donvil in which we establish the following new degree of W^*-superrigidity for certain wreath product groups G: if $L(G)$ is virtually isomorphic, in the sense of admitting a bifinite bimodule, with any other group von Neumann algebra $L(H)$, then the groups G and H must be virtually isomorphic. Moreover, we allow both group von Neumann algebras to be twisted by an arbitrary 2-cocycle.

Diagonals in classifiable C^*-algebras

Wilhelm Winter, University of Münster

Cartan and diagonal subalgebras encode underlying dynamical structures of C^*-algebras via their associated groupoids.

The existence of Cartan subalgebras in separable, simple, nuclear C^*-algebras is closely related to the UCT problem, but even for well-known classifiable ambient C^*-algebras, we have only limited knowledge of the range of examples. A long-term goal is it to explore structural properties of Cartan subalgebras and diagonals of classifiable C^*-algebras, and pave the grounds to eventually classifiy suitable classes of such subalgebras.

In this talk I will describe new examples of diagonals of classifiable C^*-algebras such as the Cuntz algebra $\mathcal{O}_2$, the CAR algebra, and the Jiang-Su algebra $\mathcal{Z}$. In the former two cases, the constructions combine arguments from classification and from Cantor minimal systems, which then yield diagonals with Cantor spectra, which are different from the standard masas. In particular this shows that in UHF algebras there exist non-AF diagonals with Cantor spectrum.

High-dimensional expansion and soficity of groups

Andreas Thom, TU Dresden

For $d \geq 4$ and p a sufficiently large prime, we construct a lattice $\Gamma \leq \mathrm{PSp}_{2d}(\mathbb{Q}_p)$, such that its universal central extension cannot be sofic if Γ satisfies some weak form of stability in permutations. In the proof, we make use of high-dimensional expansion phenomena and, extending results of Lubotzky, we construct new examples of cosystolic expanders over arbitrary finite abelian groups. This is joint work with Lukas Gohla.

The free group factors conundrum

Sorin Popa, University of California, Los Angeles

The structure and classification of the so-called *free group factors*, arising as W*-algebras of the free groups $\mathbb{F}_n$ with n generators, $2 \leq n \leq \infty$, has been the subject of much interest for 80 years by now. But despite a series of remarkable results and the development of several insightful techniques, some of the most basic questions concerning this fundamental class of II_1 factors remained open:

(1) $L\mathbb{F}_n \simeq L\mathbb{F}_m$ iff $n = m$;

(2) $\mathcal{F}(\mathbb{F}_n) = 1$ if $n < \infty$

(3) infinite generation of $L\mathbb{F}_\infty$;

(4) existence of non freely complemented maximal amenable MASAs in $L\mathbb{F}_n$;

(5) do $L\mathbb{F}_n$ embed in any non-amenable II_1 factor.

I will comment on the progress made on these problems and possible approaches to solve them.

Are they moving the goalposts again?

George Elliott, University of Toronto

Several times, over the sixty-five year development of C*-algebra classification theory (beginning with Glimm, followed by Dixmier and Bratteli, with a more abstract, functorial formulation by me), an apparent saturation point, or impasse, has been reached, which however has eventually been overcome, through an extension of the functorial invariant. This ostensible freezing has now again occurred—with all conceivable values of the invariant again exhausted, by the so-called classifiable class, of Jiang-Su stable simple separable amenable C*-algebras satisfying the UCT. (This is the result of the combined work of at least a hundred people.)

It now appears that this result might just be the tip of the iceberg, given the immense complexity of structure which is steadily coming to light in the Cuntz semigroup, shown (by Li, Niu, and me) to be a very effective additional invariant for the first kind of algebras introduced by Villadsen, and (work of Niu and me in progress) also certain generalizations of the Villadsen algebras (with AF rather than UHF diagrams). The property of Jiang-Su stability no longer holds for these algebras, although they are of stable rank one. It is not yet known exactly what the Cuntz semigroup is.

A few of my favorite things

Mikael Rørdam, University of Copenhagen

I will talk about some of the mathematical problems that have fascinated me over the years and have shaped my scientific path.

Thursday 20th

Spectral theory for Toeplitz operators, topology, and a physical system of gyroscopes

Nigel Higson, Pennsylvania State University

A remarkable system of rapidly spinning gyroscopes that interact via magnetism, devised by physicists, exhibits behavior that is more commonly encountered in quantum mechanical systems than in classical mechanics. I shall explain how to interpret the system mathematically, using spectral theory for families of Toeplitz operators, plus a little bit of K-theory (the K-theory part of the story is by now quite well known; the point is to combine the K-theory with explicit spectral theoretic computations). This is joint work with Jacek Brodzki and Nicholas Stroughair.

On residually finite-dimensional C^*-algebras in dynamical context

Tatiana Shulman, Chalmers / University of Gothenburg

A C^*-algebra is residually finite-dimensional (RFD) if it has a separating family of finite-dimensional representations. The property of a C^*-algebra of being RFD is central in C^*-algebra theory and has connections with other important notions and problems. The topic of this talk will be the RFD property in dynamical context, namely we will discuss the RFD property of crossed products by amenable actions and, if time permits, of C^*-algebras of amenable etale groupoids. We will present consequences of our results to residual properties of groups and to approximations of representations in spirit of Exel and Loring, and we will discuss examples. Joint work with Adam Skalski.

Non-isomorphic simple AH algebras with the same Elliott invariant and same radius of comparison

Ilan Hirshberg, Ben-Gurion University of the Negev

Recently, Elliott, Li and Niu proved a classification theorem for Villadsen-type algebras using the combination of the Elliott invariant and the radius of comparison, an invariant which was introduced by Toms in order to distinguish between certain non-isomorphic AH algebras with the same Elliott invariant. This might have raised the prospect that the Elliott classification program can be extended beyond the Z-stable case by adding the radius of comparison to the invariant. I will discuss a recent preprint in which we show that this is not the case: we construct an uncountable family of non-isomorphic AH algebras with the same Elliott and same radius of comparison. We can distinguish between them using a finer invariant, which we call the local radius of comparison.

This is joint work with N. Christopher Phillips.

A new construction of expansive/hyperbolic dynamics and their C^*-algebras

Ian F. Putnam, University of Victoria

A standard tool in the study of hyperbolic dynamical systems is the notion of a Markov partition, which allows a complicated topological system to be coded by combinatorial one. The simplest example of this is decimal (or binary) expansion of real numbers. In this talk, I will show how the process can be 'reverse engineered': starting from a shift of finite type and the idea of binary expansion, one can produce interesting hyperbolic systems. I will also discuss the implications for operator algebras associated with such systems. No prior knowledge of dynamics will be necessary.

C^*-algebras associated with boundary actions of certain torsion-free hyperbolic groups

Shirly Geffen, Universität Münster

For a class of fundamental groups of closed oriented hyperbolic 3-manifolds acting on their Gromov boundary, we compute the K-theory of the associated crossed products in terms of the first homology group of the manifold. Using classification results of purely infinite C^*-algebras, we conclude that there exist infinitely many pairwise non-isomorphic torsion-free hyperbolic groups acting on their boundary, for which all crossed products are isomorphic. As in all these cases the boundary is homeomorphic to the 2-sphere, we find infinitely many pairwise non-conjugate Cartan subalgebras with spectrum S^2 in such crossed products.

This is joint work with Johannes Ebert and Julian Kranz.

Coronas and strongly self-absorbing C^*-algebras

Ilijas Farah, York University

Suppose that D is a separable, strongly self-absorbing C^*-algebra and A is a σ-unital C^*-algebra. Then the following are equivalent:

1. A is locally tensorially D-absorbing.
2. The corona of the stabilization of A, $\mathcal{Q}(A \otimes K)$, is locally tensorially D-absorbing.
3. The asymptotic sequence algebra $\mathcal{Q}(A \otimes K)_\infty$, is locally tensorially D-absorbing.
4. The multiplier algebra $M(A)$ is locally tensorially D-absorbing.

The proof uses the notion of D-saturation and provides additional equivalent reformulations. I will also discuss various applications.

This is a joint work with Gabór Szabó.

List of participants

Vadim Alekseev	TU Dresden
Are Austad	University of Oslo
Erik Bedos	University of Oslo
Jamie Bell	University of Münster
Guillaume Bellier	Chalmers / University of Gothenburg
Suvrajit Bhattacharjee	University of Oslo
Bruce Blackadar	University of Nevada, Reno
Ben Bouwen	University of Southern Denmark
Mattias Byléhn	Chalmers/University of Gothenburg
Alejandro Cano	Purdue University
Laurent Cantier	Universitat Autònoma de Barcelona
Jorge Castillejos	Institute of Mathematics, Unidad Cuernavaca, UNAM
Roberto Conti	Sapienza Università di Roma
Kristin Courtney	University of Southern Denmark
Jakub Curda	University of Oxford
Marius Dadarlat	Purdue University
Anupam Datta	University of Bonn
Tim de Laat	University of Münster
Siegfried Echterhoff	University of Münster
Søren Eilers	University of Copenhagen
George Elliott	University of Toronto
Ulrik Enstad	University of Oslo
Samuel Evington	University of Münster
Ilijas Farah	York University
Marzieh Forough	Czech Technical University in Prague
Magnus Fries	Lund University
James Gabe	University of Southern Denmark
Eusebio Gardella	Chalmers / University of Gothenburg
Shirly Geffen	University of Münster
Thierry Giordano	University of Ottawa
Sergio Girón Pacheco	KU Leuven
Olof Giselsson	Mid Sweden University
Forrest Glebe	Purdue University
Julian Gonzales	Glasgow University
Jan Gundelach	Chalmers / University of Gothenburg
Nigel Higson	Pennsylvania State University
Ilan Hirshberg	Ben-Gurion University of the Negev
Shanshan Hua	University of Oxford
Georg Huppertz	Chalmers / University of Gothenburg

Quentin Hurez	University of Copenhagen / Sorbonne
James Hyde	University of Copenhagen
David Jekel	University of Copenhagen
Aaron Kettner	Institute of Mathematics of the Czech Academy of Sciences
Se Jin Kim	KU Leuven
Grigoris Kopsacheilis	University of Muenster
Julian Kranz	University of Münster
Manish Kumar	IMPAN Warsaw
Nadia Larsen	University of Oslo
Kang Li	Friedrich-Alexander-Universität Erlangen-Nürnberg
Huaxin Lin	University of Oregon
Fernando Lledó	Universidad Carlos III Madrid / Instituto de Ciencias Matemáticas
Martin Mathieu	Queen's University Belfast
Csenge Miklos	University of Copenhagen
Alistair Miller	University of Southern Denmark
Miho Mukohara	University of Tokyo
Magdalena Musat	University of Copenhagen
Robert Neagu	University of Oxford
Lukas Obermeyer	University of Münster
Eduard Ortega	Norwegian University of Science and Technology
Chrisil Ouseph	Purdue University
Matteo Pagliero	KU Leuven
Francesc Perera	Universitat Autònoma de Barcelona
Sorin Popa	University of California, Los Angeles
Akshara Prasad	University of Göttingen
Ian Putnam	University of Victoria
Yigang Qiu	Institut de mathématiques de Jussieu - Paris Rive Gauche
Guillem Quingles	Universitat Autònoma de Barcelona
Martin Raum	Chalmers / University of Gothenburg
Alexander Ravnanger	University of Copenhagen
Mikael Rørdam	University of Copenhagen
Tatiana Shulman	Chalmers / University of Gothenburg
Philipp Sibbel	University of Muenster
Christian Skau	University of Oslo
Pieter Spaas	University of Copenhagen
Karen Strung	Institute of Mathematics of the Czech Academy of Sciences
Jonathan Taylor	University of Potsdam
Hannes Thiel	Chalmers / University of Gothenburg

Andreas Thom	TU Dresden
Lyudmyla Turowska	Chalmers / University of Gothenburg
Andrea Vaccaro	University of Muenster
Stefaan Vaes	KU Leuven
Eduard Vilalta	Chalmers / University of Gothenburg
Stuart White	University of Oxford
Wilhelm Winter	University of Münster
Shuoxing Zhou	École normale supérieure Paris

Useful information

Getting around Gothenburg

To plan trips, it is useful to download the Västtrafik to Go app or browse vasttrafik.se. You can buy a day card or 3 day card ticket on the app, or in most convenience stores (Pressbyrån or 7-eleven). These cards include travel by bus, tram and ferry within Gothenburg. Note that you cannot buy tickets by cash on buses or trams.

Reception

The conference reception will be at the foyer of Chalmers Conference Centre. You can see the building in front of you when you drop at the tram stop Chalmers.

Conference Dinner

The conference dinner will be at Restaurant Imagine, at the top of the Gothia Towers. The easiest way to get there from the conference venue is to go to tram stop Chalmers (Platform A) and take either tram number 6 or 8. Drop at stop Korsvägen and you will see the towers in front of you.

Restaurants for lunch and dinner

In Sweden it is more affordable to go out for lunch than for dinner. Water is often included in a lunch. Here we have listed a few options for you during the conference. It is common to have diner around 18:00, and some restaurants may not let you in after 20:00.

Note that not every restaurant is open in the summer. Please contact one of the organizers in case of special requests. It is also possible to buy a lunch box and warm it up with a microwave.

At campus (Johanneberg)

- Wijkanders, Vera Sandbergs allé 5B, 411 33 Göteborg. They offer nicely presented meals for 124/129 SEK. You can choose between Meat, Fish and Vegetarian. The lunch includes an all you can eat salad bar with vegetables, knäckebröd, rice, pasta and potato salads. In this restaurant food will be brought to your table. This restaurant is closest to the venue.

- Kårrestaurangen in Kårhuset (the student guilt building, Sven Hultins gata 4, 412 58 Göteborg) offers a meal for 95 SEK. You can pick Nordic, Streetfood or Greens (vegetarian). The lunch includes salad and bread.
- JA Pripps in Kårhuset is a pub that also offers hamburgers (and vegaburgers), pizzas and bakeries. They are open until 22.00. Sometimes they have special lunch offers that include fries, a hamburger and a drink.
- STORE in Kårhuset is technically not a restaurant, but a shop that offers everything from paper to merchandize to puzzles. They also sell yoghurt, non-alcoholic drinks, bakeries and lunch boxes.

For those with allergies, both Wijkanders and Kårrestaurangen specify their allergens. You can find the complete list of restaurants at campus here: https://chalmerskonferens.se/en/restauranger/johanneberg/.

<10 minutes walking

- Restaurant Krakow, Karl Gustavsgatan 28B, 411 25 Göteborg. This restaurant is open Tuesday to Saturday from 17:00. They are specialized in Polish cuisine and serve a mixture of traditional Nordic food and Central European food. This restaurant is quite meat-oriented, with large portions, and not so suitable for vegetarians.
- Ölstugan Tullen Johanneberg, Utlandagatan 14, 412 61 Göteborg. This is a pub with a large collection of beers brewed in Sweden. They also offer a couple of Nordic dishes at a reasonable price. They have good meat and fish options, as well as vegetarian options. Open until midnight.

Other facilities

The nearest supermarkets are listed below. In Sweden it is not possible to buy alcohol in supermarkets. For this you need to go to Systembolaget. The nearest one is next to the Coop.

- Willy's Hemma at Viktor Rydbergsgatan 60, 412 81 Göteborg.
- Coop at Kapellplatsen 4, 411 31 Göteborg.