Arklint, S.– University of Copenhagen
"Corners and other hereditary subalgebras of graph C*-algebras"
Combining non-stable K-theory considerations with basic moves on a graph $E$ with finitely many vertices, one can show that a unital C*-algebra Morita equivalent to the unital graph C*-algebra $C^*(E)$ is itself a graph C*-algebra. As a consequence, corners of Cuntz-Krieger algebras are Cuntz-Krieger algebras, and hereditary subalgebras of unital real rank zero graph C*-algebras are graph C*-algebras. Combined with K-theoretical classification of C*-algebras with finitely many ideals, this becomes a powerful tool for constructing well-known and manageable concrete representations of various C*-algebras. This is joint work with J. Gabe and E. Ruiz.

Bentmann, R.– Georg-August-universitat Gottingen
"A more general method to classify up to equivariant KK-equivalence"
Using a homological invariant together with an obstruction class in a certain Ext$^2$-group, we may classify objects in triangulated categories that have projective resolutions of length two. This invariant gives strong classification results for actions of the circle group on C*-algebras, C*-algebras over finite unique path spaces, and graph C*-algebras with finitely many ideals. This is joint work with Ralf Meyer.

Cuntz, J.– WWU Muenster
"Index theorems in the framework of bivariant K-Theory"
We sketch a very short proof for the index theorem by Baum-Douglas-Taylor and explain how this implies the index theorems by Kasparov and Atiyah-Singer.

Dadarlat, M.– Purdue University
"The Brauer group of strongly-selfabsorbing C*-algebra"
The isomorphism classes of orientable locally trivial fields of C*-algebras over a compact metrizable space $X$ with fiber $D \otimes \mathbb{K}$, where $D$ is a strongly self-absorbing C*-algebra, form an abelian group under the operation of
tensor product. We show that all torsion elements of this group arise from continuous fields with fiber \( D \otimes M_n(\mathbb{C}) \), \( n \geq 1 \), for all known examples of strongly self-absorbing \( C^* \)-algebras \( D \). This is joint work with Ulrich Pennig.

**Echterhoff, S.– WWU Muenster**

"On the K-theory for exotic crossed products"  

Given a locally compact group \( G \), an exotic crossed-product functor for \( G \) is a functor \( A \mapsto A \rtimes_\mu G \) from the category of \( G \)-C*-algebras into the category of C*-algebras such that for any \( G \)-algebra \( A \) the identity map on \( C_c(G, A) \) extends to surjective *-homomorphisms 

\[
A \rtimes_{\text{max}} G \to A \rtimes_\mu G \to A \rtimes_{\text{red}} G.
\]

It follows from work of Okayasu and others that for any discrete group \( G \) containing the free group \( F_2 \), there exist uncountably many different crossed product functors for \( G \) with very good functorial properties. We show that if \( G \) is a-T-menable (e.g., \( G = F_2 \)), all these crossed-products have isomorphic K-theory groups, showing that these groups are K-amenable in a very strong sense. (joint work with Alcides Buss and Rufus Willett)

**Eilers, S.– University of Copenhagen**

"Morita equivalence of unital, real rank zero graph C*-algebras is decidable"  

Ever since the inception of the Cuntz-Krieger algebras, there has been considerable interest in trying to decide which underlying dynamical systems yield C*-algebras which are Morita equivalent, and this question was resolved in the simple case by Rørdam - preceding and inspiring the more general result by Kirchberg and Phillips - and in the general real rank zero case by Restorff. After some years of incremental progress we now have a complete understanding of when unital graph C*-algebras of real rank zero are Morita equivalent, reducing the question to K-theory on one hand and to equivalence via elementary operations on the graph on the other, the latter in a way resembling that of Reidemeister moves for knots. Combining our results with recent work by Boyle and Steinberg pertaining to flow equivalence of shifts of finite type we may prove that the question of when such two C*-algebras are stably isomorphic is in fact decidable. This is joint work with Gunnar Restorff, Efren Ruiz and Adam Sørensen.
Elliott, G.– University of Toronto
“Applications of the Cuntz semigroup”
The Cuntz semigroup has, tantalizingly, come up in a number of quite different ways in C*-algebra classification theory—both directly, in either the conclusion or hypotheses of various statements, or indirectly, in the proofs of various other statements. It would seem to be appropriate to survey the situation, with a view to trying to detect a pattern.

Evans, G.– Aberystwyth University
“Investigating the structure of simple higher-rank graph C*-algebras”
Simple graph algebras are classifiable - they are either AF or purely infinite. However, once the rank of a graph, in Kumjian and Pask’s sense, increases beyond one, the general structure of simple higher-rank graphs is unknown. We discuss how far recent developments in the classification programme for nuclear C*-algebras can be employed to investigating the structure of simple higher-rank graph C*-algebras.

Hirshberg, I.– Ben Gurion University of the Negev
“Rokhlin flows and nuclear dimension”
Let A be a C*-algebra with finite nuclear dimension. Suppose $\alpha$ is a one parameter group of automorphisms of A, which satisfies the Rokhlin property in the sense of Kishimoto. Then the crossed product of A by R has finite nuclear dimension as well. This can be generalized to a notion of finite Rokhlin dimension for flows. Joint work with Szabo and Winter.

Kerr, D.– Texas A M University
“Classifying C*-crossed products: a view from ergodic theory ”
I will discuss some of the major themes that have emerged at the interface between topological dynamics and C*-algebra structure theory in the context of the classification program. A key problem has been to understand the relationship between perturbative and asymptotic phenomena, especially as reflected in the Toms-Winter conjecture. I will argue how the concepts of boundary and approximate invariance provide some illumination on this puzzle.
Kirchberg, E.– Humboldt-Universität zu Berlin

  TBA

Larsen, N. S.– University of Oslo

  "C*-algebras of right LCM semigroups"
I will discuss a class of semigroups which generalises the quasi-lattice ordered semigroups of Nica, and present uniqueness results for the associated full semigroup C*-algebra in the sense of Li. In particular, purely infinite simple C*-algebras arising in this context will be discussed. This is based on joint work with N. Brownlowe and N. Stammeier.

Li, X.– Queen Mary University of London

  "Amenability and the Liouville property"
We discuss amenability and the Liouville property for groups, groupoids, semigroups, and semigroup actions.

Ng, P. W.– University of Louisiana at Lafayette

  "Simple C*-algebras with quasicontinuous scale"
Let A be a unital separable simple exact Z-stable C*-algebra. Let B be a nonunital hereditary C*-subalgebra of $A \otimes K$. We characterize when the corona algebra $M(B)/B$ is purely infinite (though not necessarily simple).

Niu, Z.– University of Wyoming

  "A classification of approximately subhomogeneous C*-algebras"
A classification theorem is obtained for the class of C*-algebras which have their tensor products with a UHF algebra being tracially approximated by Elliott-Thomsen algebras. An important aspect of this class of C*-algebras is that it exhausts all possible values of the invariant for the class of stably finite unital simple Z-stable C*-algebras. This is a joint work with Guihua Gong and Huaxin Lin.

Ozawa, N.– Kyoto University

  "Noncommutative real algebraic geometry of Kazhdan’s property (T)"
I will start with a gentle introduction to the emerging subject of “noncommutative real algebraic geometry,” a subject which deals with equations and inequalities in noncommutative algebra over the reals, with the help of
analytic tools such as representation theory and operator algebras. I will then present a surprisingly simple proof that a group $G$ has Kazhdan’s property (T) if and only if a certain inequality in the group algebra $\mathbb{R}[G]$ is satisfied. Very recently, Netzer and Thom used a computer to verify this inequality for $\text{SL}(3, \mathbb{Z})$, thus giving a new proof of property (T) for $\text{SL}(3, \mathbb{Z})$ with a much better estimate of the Kazhdan constant than the previously known.

**Pask, D.– University of Wollongong**

"Dynamical systems and graph $\mathcal{C}^*$-algebras"

Shifts of finite type are, up to conjugacy, the edge shifts of directed graphs. The relations defining a graph $\mathcal{C}^*$-algebra encode the connectivity of a directed graph in terms of operators on a Hilbert space. Closer examination of the structure of a graph $\mathcal{C}^*$-algebra reveals deep connections between its internal properties and the dynamical properties of the associated shift of finite type. The first part of the talk will examine these connections.

It has been known for some time now that flow equivalence on shifts of finite type are related to certain graphical contructions, called splittings and delays, on the underlying directed graph. In the second part of this talk we will examine how the operations of splittings and delays affect the associated graph $\mathcal{C}^*$-algebras. This is joint work with Teresa Bates.

**Perera, F.– Universitat Autonoma de Barcelona**

"Tensor products in the category Cu and structure of Cu-semirings"

In this talk we will describe tensor products in the category Cu. We will introduce also the concept of a Cu-semiring and exhibit strongly self-absorbing $\mathcal{C}^*$-algebras as examples. Of particular interest will be the Cuntz semigroup of the Jiang-Su algebra. We also study simple Cu-semirings and what we term ‘solid’ Cu-semirings (i.e. those self-absorbing in a strong algebraic sense). We prove a classification result for such semirings. This is joint work with Ramon Antoine and Hannes Thiel.

**Phillips, C.– University of Oregon**

"Large subalgebras of crossed products and applications"

We define large subalgebras of $\mathcal{C}^*$-algebras, and relate properties of a large subalgebra to the $\mathcal{C}^*$-algebra which contains it. We exhibit some examples, mostly related to transformation group $\mathcal{C}^*$-algebras of minimal dynamical
systems, and give some applications to the structure of some transformation group C*-algebras.

**Sato, Y. – University of Kyoto**

"Elementary amenable groups are quasidiagonal"

In 1987, J. Rosenberg proved that if the reduced group C*-algebra is quasidiagonal then the given group is amenable, and he conjectured that the converse also holds. We confirm this Rosenberg conjecture for elementary amenable groups. This is a joint work with N. Ozawa and M. Rørdam.

**Sims, A – University of Copenhagen**

"Kirchberg algebras in the UCT class have nuclear dimension 1"

Winter and Zacharias introduced nuclear dimension for C*-algebras in 2010. In the same paper, they proved that all Kirchberg algebras in the UCT class have nuclear dimension at most 5, and asked whether the exact value of their nuclear dimension is determined by algebraic properties of their K-theory. I will discuss recent work with Ruiz and Sorensen showing that the answer is no: every Kirchberg algebra in the UCT class has nuclear dimension 1.

**Strung, K. – WWU Muenster**

"On the classification of C*-algebras of minimal dynamical systems of a product of the Cantor set and an odd dimensional sphere"

I will discuss my recent work towards classifying C*-algebras of minimal dynamical systems which do not have projections separating tracial states by considering product systems with Cantor minimal systems.

**Suzuki, Y. – University of Kyoto**

"Realization of hyperbolic group C*-algebras as decreasing intersection of Cuntz algebras O₂"

We show that for every ICC group which is embeddable into a hyperbolic group, the reduced group C*-algebra is realized as the intersection of a decreasing sequence of isomorphs of the Cuntz algebra O₂. The proof is based on the study of amenable quotients of the boundary actions. (Reference: arXiv:1406.2740)
Szabo, G.– WWU Muenster

"Rokhlin dimension for certain residually finite groups"

In 2012, Ilan Hirshberg, Wilhelm Winter and Joachim Zacharias introduced the concept of Rokhlin dimension for actions of finite groups and the integers. Shortly thereafter, this was adapted to actions of $\mathbb{Z}^m$. The main motivation for introducing this concept was that actions with finite Rokhlin dimension preserve the property of having finite nuclear dimension, when passing to the crossed product C*-algebra. Since then, this has been successfully used to verify finite nuclear dimension for a variety of non-trivial examples of C*-algebras, in particular transformation group C*-algebras. We extend the notion of Rokhlin dimension to cocycle actions of countable, residually finite groups. If the group in question has a box space of finite asymptotic dimension, then one gets an analogous permance property concerning finite nuclear dimension. We examine the case of topological actions and indicate that Rokhlin dimension is closely related to amenability dimension in the sense of Erik Guentner, Rufus Willett, and Guoliang Yu. Moreover, it turns out that the recent result concerning the Rokhlin dimension of free $\mathbb{Z}^m$-actions on finite dimensional spaces generalizes to actions of finitely generated nilpotent groups. (joint work with Jianchao Wu and Joachim Zacharias)

Tikuisis, A.– University of Aberdeen

"Maps that agree on traces"

Consider two homomorphisms, or c.p.c. order zero maps, between C*-algebras $A$ and $B$. Suppose that they agree on traces, i.e. they induce the same map from $T(B)$ to $T(A)$. What can be said about them? I will particularly focus on the case that the C*-algebras $A$ and $B$ are simple, separable, nuclear, unital, $\mathbb{Z}$-stable, and finite. Applications to dimension computations will also be discussed.

Thomas, A.– Glasgow University

"C*-algebras associated to graphs of groups"

Graphs of groups encode group actions on trees and have many applications in geometric group theory. A graph of groups $G$ consists of a graph $(V, E)$ together with a group $G_v$ for each vertex $v$ in $V$ and a group $G_e$ for
each edge $e$ in $E$, so that $G_e$ includes into $G_v$ for $v$ the range and source of $e$. The graph of groups $G$ has a fundamental group which acts on its universal covering tree $T$, and thus acts on the boundary of $T$. Under mild assumptions on $G$, we associate a C*-algebra to $G$, and show that this algebra is isomorphic to the tensor product of the compact operators on $\ell^2(V)$ with the crossed product associated to this boundary action. This is joint work with Nathan Brownlowe, Alex Mundey, David Pask and Jack Spielberg.

Toms, A.– Purdue University

TBA