



VORTRÄGE

Montag, 4. April 2016 von 14:00 bis 14:45 Uhr, SR13, 2. OG, OMP 1

Habilitationsvortrag: José Luis Romero (Univ. Wien): "Applications of the Hahn-Banach theorem"

The Hahn–Banach theorem allows one to show that the fundamental properties of a normed vector space can be described in terms of continuous linear functionals. By means of the HBT, constructions and arguments typical of finitedimensional linear algebra can be brought to bear on problems involving general normed spaces. The HBT is therefore a cornerstone of functional analysis and motivates the study of dual spaces. In this talk, several applications of the Hahn-Banach theorem will be introduced and discussed. The presentation will be at the level of a bachelor or master class in functional analysis.

Karlheinz Gröchenig

Mittwoch, 6. April 2016 von 16:15 bis 17:00 Uhr, Sky Lounge, OMP 1

Mathematisches Kolloquium: Sy-David Friedman (Kurt Gödel Research Center): "The Current State of the Foundations of Set Theory"

Set-theorists have for many years had a pretty good system of axioms for mathematics, the ZFC axioms. Nearly all of the theorems of mathematics can be translated into set theory and then shown to follow from the ZFC axioms. But Goedel's incompleteness theorem tells us that no system of axioms, not even ZFC, is really complete: there always are statements that can be neither proved nor disproved in any formal system. The most famous example for ZFC is Cantor's continuum hypothesis (CH), stating that any two uncountable sets of real numbers have the same cardinality. Goedel conjectured that one might resolve this incompleteness problem by adding axioms of large infinity to ZFC, now called large cardinal axioms, in order to resolve many of the natural problems of set theory like CH. Goedel was only partly right: Many natural questions concerning nicely definable sets of reals are resolved by large cardinal axioms as well as virtually any question about the consistency (freedom from contradiction) of statements of set theory. But many questions, including CH, remain untouched by large cardinal axioms. Is the incompleteness of ZFC relevant for mathematics? In other words, are there questions that are important for areas of mathematics other than logic which are undecidable in ZFC? There is evidence for a positive answer: the Whitehead problem (Abelian group theory), the Kaplansky Conjecture (Banach algebras), the existence of outer automorphisms of the Calkin algebra (C^* algebras), the Borel Conjecture (measure theory) are all undecidable in ZFC. But some will regard these examples as disguised versions of questions in abstract set theory, lying outside of "core mathematics". Whether the mathematicians of the future will need axioms beyond ZFC to resolve questions at the heart of mathematics remains a fascinating open question. However there is no doubt that settheorists themselves must go beyond ZFC if they wish to resolve questions at the heart of set theory. This problem has been approached in two distinct ways, through "intrinsic" or "extrinsic" evidence for new axioms of set theory. The former makes use of principles concerning sets that result from our intuitive understanding of the concept; only recently has it been discovered that such principles can lead to new axioms which go far beyond ZFC. The latter has until now been based on the choice of axioms which best facilitate the mathematical development of the subject. A new proposal is to expand this to the choice of axioms which best resolve questions outside set theory, such as those mentioned above, which are known to be undecidable in ZFC.

im Anschluss vinum cum pane

Harald Rindler



Montag, 4. April 2016, ab 10:00 Uhr, Seminarraum 08.135, WPI., OMP 1

WPI-Workshop on "Pathwise methods, Functional Calculus and applications in Mathematical Finance"

org by Christa Cuchiero (U. Wien), Rama Cont (Imperial College London), Walter Schachermayer (WPI c/o U. Wien)

http://www.wpi.ac.at/event_view.php?id_activity=212

Dienstag, 5. April 2016 von 13.15 bis 14:45, Seminarraum 9, 2. OG, OMP 1

Complex Analysis SE: Stefan Fördös (Univ. Wien): "On a smooth reflection principle II"

org. by B. Lamel, M. Reiter (Details siehe Anhang)

Dienstag, 5. April 2016, von 15:00 bis 17:00 Uhr, SR 9, 2. OG., OMP 1

Geometry and Analysis on Groups: Martin Finn-Sell (Univ. Wien): "How not to prove Thompson-like groups are exact (and three other short stories)"

org. by G. Arzhantseva, Ch. Cashen

Mittwoch, 6. April 2016, ab 11 Uhr, Besprechungszimmer 3. OG, OMP 1,

Seminar: Francesco Solombrino (TU München): "Linearly constrained evolution of critical points"

We introduce a novel constructive approach to define time evolution of critical points of an energy functional, as well as to construct local energetic solutions of linearly constrained rate-independent processes. Our procedure is prone to efficient and consistent numerical implementations, and allows for an existence proof under very general assumptions. We consider in particular rather nonsmooth and nonconvex energy functionals, provided the domain of the energy is finite dimensional. Nevertheless, in the infinite dimensional case study of a cohesive fracture model, we prove a consistency theorem of a discrete-to-continuum limit. We show that a quasistatic evolution can be indeed recovered as limit of evolutions of critical points of finite dimensional discretizations of the energy, constructed according to our scheme.

This is a joint work with F. Cagnetti, M. Fornasier, and M. Artina

org. by Ulisse Stefanelli

Mittwoch, 6. April 2016, ab 11.30 Uhr, Seminarraum 10, 2. OG, OMP 1,

NuHAG Seminar: Nira Dyn (Tel-Aviv University): "Linear multiscale transforms based on reverse subdivision schemes"

<http://www.univie.ac.at/nuhag-php/home/seminar.php?abstract=Y&id=3136>

Donnerstag, 7. April 2016, 11 Uhr, Besprechungsraum 9. Stock, OMP 1

Öffentliche Defensio: Thomas Glatz (Univ. Wien): „Photoacoustic Inversion Based on In-depth Wave"

(siehe Anhang)

Donnerstag, 7. April – 9. April 2016, ab 9 Uhr, Boecklsaal, Hauptgebäude der TU Wien, 1.Stock, Stiege 1, Karlsplatz 13, 1040 Wien

Workshop on "Algebra and Coalgebra meet Proof Theory"

org. by Agata Ciabattini (WPI c/o TU Wien)

<http://alcop2016.logic.at/>



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Donnerstag, 7. April 2016, von 16.00 Uhr bis 18:00 Uhr, Josephinum, SR 8 (Zi. 02.101), Währinger Str. 25, 1090 Wien,

KGRC Research Seminar: Radek Honzík (Charles University in Prague, Czech Republic): "The tree property and the continuum function below \aleph_ω "

org. by Kurt Gödel Research Center

http://www.logic.univie.ac.at/2016/Talk_04-07_a.html

Freitag, 8. April 2016, von 11.30 Uhr bis 13.00 Uhr, SR 11, 2. Stock, OMP 1

GAP Seminar: Alexander Gottlieb (WPI): "Geometry of the Hilbert space for three fermions with six single-particle states"

Org by M. Bauer, V. Branding (Fak. Math, TU), D. Fajman, J. Joudioux (Fak. Phys, UniVie), B. Schoerckhuber (Fak. Math, UniVie)
(siehe Anhang)

Freitag 8. April 2016, von 13.30 bis 17.00 Uhr, ESI, Boltzmann Lecutre Hall,

Budapest-Vienna Seminar: Programme on "Mixing Flows and Averaging Methods"

organized by

Peter Bálint (TU, Budapest), Henk Bruin (U Vienna), Carlangelo Liverani (U Rome, Tor Vergata), Ian Melbourne (U Warwick), Dalia Terhesiu (U Vienna)

(siehe Anhang)