NORDAN-98

Program

FREDAG, 24/4

14.00	Ankomst, kaffe	
15.00	Information	
15.15-16.00	Urban Cegrell	The Complex Monge-Ampère Operator
16.15-17.00	Maciej Klimek	Extremal Plurisubharmonic Functions
17.00	Kaffe	
17.30-18.15	Mattias Jonsson	Pluricomplex dynamics I
19.00	Middag	

LÖRDAG, 25/4

08.00-10.00	Frukost	
10.00-10.45	Charles Favre	Classification of special type of contracting germs in $\mathbb{C}^2$, and its application to geometry
11.00-11.45	Nils Øvrelid	Boundary regularity for the $\bar{\partial}$-equation in domains with irregular or non pseudoconvex boundary points
12.00	Lunch	
14.30-15.15	Peter Ebenfelt	Real hypersurfaces in complex space and their mappings
15.15	Kaffe	
15.45-16.30	Jan Boman	On unique continuation of microanalytic distributions
16.45-17.30	Mattias Jonsson	Pluricomplex dynamics II
19.00	Middag	

SÖNDAG, 26/4

08.00-10.00	Frukost	
10.00-10.45	Mattias Jonsson	Pluricomplex dynamics III
10.45	Kaffe	
11.15-12.00	Ragnar Sigurdsson	The relative extremal function
12.00	Lunch	
14.00	Avresa	

Sammanfattningar

Urban Cegrell

The Complex Monge-Ampère Operator

In this talk, we discuss definitions and estimates of the Complex Monge-Ampère operator.

Maciej Klimek

Extremal Plurisubharmonic Functions

Several new techniques of investigating of extremal plurisubharmonic functions have emerged in recent years. The talk will contain an overview of these methods.

Peter Ebenfelt

Real hypersurfaces in complex space and their mappings

In 1974, Chern and Moser gave a complete description of the local invariant geometry of real-analytic hypersurfaces in $\mathbb{C}^{n+1}, n \geq 1$, at Levi nondegenerate points, including a complete normal form (the Chern–Moser normal form) at such points. Several interesting and important corollaries concerning mappings between such hypersurfaces can be deduced from their work, such as e.g. the structure of the stability group at a Levi nondegenerate point as a finite dimensional Lie group and convergence of formal mappings. In this talk, we shall discuss the problem of obtaining results along these lines at Levi degenerate points. We shall present some work in progress and some joint work with M. S. Baouendi and L. P. Rothschild.

Jan Boman

On unique continuation of microanalytic distributions

The new proof of Holmgren's uniqueness theorem given by Hörmander in 1971 contained as one part the following unique continuation theorem for distributions that are microlocally real analytic. If f is a distribution which vanishes on one side of a C^1 hypersurface S, and $(x, \xi) \notin WF_A(f)$, where $x \in S$ and ξ is conormal to S at x, then f must vanish in some neighborhood of x; here $WF_A(f)$ denotes the analytic wave front set of f. A similar theorem with slightly stronger analyticity assumption but weaker vanishing assumption reads as follows. Assume that S is a real analytic surface and both conormals to S at x are absent in the analytic wave front set of f for all $x \in S$, and that the derivatives of f of all orders vanish along S. Then $f = 0$ in some neighborhood of S. Note that the wave front assumption implies that the restriction to S of an arbitrary derivative of f is well defined. Applications of this theorem will be given to unique continuation of CR functions and to uniqueness theorems for generalized Radon transforms.

Ragnar Sigurdsson

The relative extremal function

Let X be a complex manifold and let E be a subset of X. The relative extremal function $u_{E,X}$ for E in X is the supremum of the class of plurisubharmonic functions $v \leq 0$ on X with $v \leq -1$ on E. I will discuss a formula for $u_{E,X}$ based on Poletsky's theory of disc functionals and give some applications of it. The main result is that if E is either an open or compact subset of a convex domain X in $\mathbb{C}^n$, then the sublevel sets of $u_{E,X}$ are convex. The proof uses a new result on Blaschke products, which is hopefully of independent interest.
This is a report on a joint work with Finnur Lárusson, University of Western Ontario, Canada.

Deltagare/Rumsplacering

Rum:

Erik Løw, Oslo
Mattias Jonsson, Stockholm KTH
Mikael Passare, Stockholm
Jim Arlebrink, Borås
Hasse Carlsson, Göteborg
Urban Cegrell / Gunilla Lindström, Umeå
Mats Andersson, Göteborg
Lars Hörmander, Lund
Peter Ebenfelt, Stockholm KTH
Frank Wikström, Umeå / Jonas Wiklund, Umeå
Maciej Klimek, Uppsala
Peter Grenholm, Uppsala / Björn Ivarsson, Uppsala
Nils Øvrelid, Oslo
Vincent Guedj, Paris / Charles Favre, Stockholm KTH
Lars Filipsson, Stockhom KTH /Andreas Nilsson, Stockholm
Jan Boman, Stockholm

Sviter:

Burglind Juhl-Jöricke, Uppsala / Ewa Bergqvist, Umeå
Ragnar Sigurdsson, Sundsvall / Finnur Larusson, Western Ontario
Timur Sadykov, Stockholm / Frank Kutzschebauch, Basel
Yang Xing, Umeå / Magnus Carlehed, Sundsvall
Niklas Lindholm, Göteborg / Thomas Hansson, Göteborg / Henrik Delin, Göteborg
Ulf Backlund, Umeå / Anders Fällström, Sundsvall

Alphyddan:

Bo Berndtsson, Göteborg
Ozan Öktem, Stockholm
Jörgen Boo, Sundsvall
Nikolay Shcherbina, Göteborg
Nikolay Kruzhilin, Moskva
Andrej Domrin, Moskva
Giuseppe Tomassini, Pisa
Claudio Rea, Rom
Zbigniew Blocki, Krakow