WORKSHOP IN ANALYSIS AND GEOMETRY

January 4-5, 2011, Baton Rouge, LSU

PROGRAM

January 4, Morning Session

8:50 - 09:00	Opening.
9:00 - 9:30	Eric Grinberg (University of New Hampshire), The admissibility problem for Radon transforms on projective spaces.
9:30 - 10:00	Dmitry Ryabogin (Kent State University), A counterexample to a problem of Klee.
10:00 - 10:30	Tomoyuki Kakehi (Okayama University), Schroedinger equation on certain compact symmetric spaces and Gauss sum.
10:30 - 11:00	Break.
11:00 - 11:30	Dave Larson,(Texas A&M University), Operator-valued measures, dilations, and the theory of frames.
11:30 - 12:00	Deguang Han (University of Central Florida), Frames for group representations.
12:00 - 12:30	Victor Kaftal (University of Cincinnati), Equal-norm perturbations of finite frames.
12:30 - 2:00	Lunch.

January 4, Parallel Session

Integral Geometry & Harmonic Analysis

2:00 - 2:30 Boris Rubin (Louisiana State University),
The Funk, Cosine and Sine transforms
on Stiefel and Grassmann manifolds.

2:30 - 3:00 Elena Ournycheva (Fort Hays State University),
On Y. Nievergelt's inversion formula
for the Radon transform.

3:00 - 3:30 Cristina Balderrama (Universidad Central de Venezuela),
Generalized orthogonal polynomials and associated
Markov semigroups.

3:30 - 4:00 Break.

4:00 - 4:30 Hongyu He (Louisiana State University),
Uniform bounds on smooth matrix coefficients
on L^2-spaces.

4:30 - 5:00 Jeremy J. Becnel (Stephen F. Austin State University),
A support theorem for infinite dimensional
Gaussian Radon transform.

5:00 - 5:30 Susanna Dann (Louisiana State University),
Representation theory and Paley-Wiener theorems.

5:30 - 6:00 Alex Stokolos (Georgia Southern University),
Bellman function for the dyadic maximal operator.

January 4, Parallel Session
Wavelets

2:00 - 2:30 Bin Han (University of Alberta),
Symmetric complex orthonormal wavelets
and matrix extension with symmetry.

2:30 - 3:00 Aaron Bailey (Texas A&M University),
Multivariate polynomial interpolation and sampling
in Paley-Wiener spaces.

3:00 - 3:30 Gregory Backus (Bard College),
A categorization of Mexican free-tailed bat
(Tadarida brasiliensis) chirps.

3:30 - 4:00 Break.

4:00 - 4:30 Myung-Sin Song (Southern Illinois University),
Matrix factorization and lifting.

4:30 - 5:00 David Jimenez (Texas A&M University),
On the match of point configurations.

5:00 - 5:30 John Myers (South Dakota School of Mines & Technology),
An algorithm for unitary equivalence of matrices
and a path-connectedness application.

5:30 - 6:00 Eileen Martin (University of Texas) and
Ryan Hotovy (University of Nebraska-Lincoln),
Continuously moving Parseval frames on smooth
manifolds.

January 4, Parallel Session
Tomography / PDE

2:00 - 2:30 Shijun Zheng (Georgia Southern University),
Semilinear Schroedinger equation with magnetic potentials.

2:30 - 3:00 Phuc Cong Nguyen (Louisiana State University),
TBA.

3:00 - 3:30 Tadele Mengesha (Louisiana State University),
Local gradient estimates in homogenization of elliptic equations.

3:30 - 4:00 Break.

4:00 - 4:30 Lakshmi Roychowdhury (Texas A&M University),
Optimal points for any Cantor distribution.

4:30 - 5:00 Tara D. Taylor (St. Francis Xavier University),
Using Cantor sets to study the connectivity of Sierpiński relatives.

5:00 - 5:30 Suresh Eswarathasan (Rochester Institute),
Microlocal analysis of backscattering for nested conormal potentials.

5:30 - 6:00 Rim Gouia (University of Texas, Arlingon),
Inversion of the circular Radon transform on an annulus.

January 5, Morning Session

9:00 - 9:30 Alex Iosevich (University of Rochester),
Regular value theorem in a fractal setting.

9:30 - 10:00 Gaik Ambartsoumian (University of Texas at Arlington),
Exterior problem of acoustic reflectivity imaging.

10:00 - 10:30 Emily King (Laboratory for Integrative
and Medical Biophysics, National Institutes
of Health), Generalized shearlets and the extended
metaplectic group.

10:30 - 11:00 Break.

11:00 - 11:30 Mrinal K. Roychowdhury,
(The Univeristy of Texas-Pan American),
Quantization dimension for infinite self-similar
mappings.

11:30 - 12:00 Akram Aldroubi (Vanderbilt University),
Union of subspace clustering, sparse approximations
and dimensionality reduction.

12:00 - 12:30 Yang Wang (Michigan State Universtiy),
Peano curves for fractals.

12:30 - 2:00 Lunch.

January 5, Parallel Session
Analysis - 1

2:00 - 2:30 Jeehyeon Seo (University of Illinois at Urbana),
Bi-Lipschitz embeddability of the Grushin plane
into Euclidean space.

2:30 - 3:00 Patrick Orchard (University of Oklahoma),
Orthogonal and maximal sets for Bernoulli measures.

3:00 - 3:30 Break.

3:30 - 4:00 Ryan Hotovy (University of Nebraska-Lincoln) and
Sam Scholze (University of Wisconsin-Platteville),
Binary frames.

4:00 - 4:30 John Rock (California State University at Stanislaus),
Partition zeta functions of self-similar measures.

January 5, Parallel Session
Analysis - 2

2:00 - 2:30 Shidong Li (San Francisco University),
Fusion frame in action: High resolution image fusion.

2:30 - 3:00 Nishu Lal (University of California at Riverside),
Product structure of the spectral zeta function
of the Sturm-Liouville operator on fractals.

3:00 - 3:30 Break.

3:30 - 4:00 John Jasper (University of Oregon),
Frames with prescribed norms and frame operator.

4:00 - 4:30 Dominic Kramer (Iowa State University),
Frame based steganography.

January 5, Parallel Session
Coorbits / Wavelets

2:00 - 2:30 Azita Mayeli (NY City College of Technology),
Band-limited wavelets and Besov space norms
in Hilbert spaces.

2:30 - 3:00 Jens Christensen (University of Maryland),
Sampling of band limited functions for Gelfand pairs.

3:00 - 3:30 Break.

3:30 - 4:00 Bradley Currey (Saint Louis University),
Admissibility for representations of connected Lie groups.

4:00 - 4:30 Jose Luis Romero (Univesidad de Buenos Aires),
TBA.