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Report on:

"American Mathematical Society 2008 Spring Southeastern Meeting: Baton Rouge, LA, March 28-30, 2008"

by Gestur Olafsson and Boris Rubin §

The full program can be found at
http://www.ams.org/amsmtgs/2146_special.html

The following of the special sessions might be of particular interest for the "FCAA" readers:

• **Special Session on Radon Transforms, Tomography, and Related Geometric Analysis**

Organizers: Fulton B. Gonzalez (Tufts University), Isaac Pesenson (Temple University), Todd Quinto (Tufts University), Boris S. Rubin (Louisiana State University)

You can find the detailed program and abstracts of the talks at:
http://www.ams.org/amsmtgs/2146_program_ss16.html#title
(the * denotes the name of the speaker)

The Horocycle Radon Transform. Some old and new results. Sigurdur Helgason*

Invariant Differential Operators on Matrix Motion Groups and Applications to the Matrix Radon Transform. Fulton B. Gonzalez*

§ Member of "FCAA" Editorial Board

Inversion formulas for topological Radon transforms on Grassmann manifolds. Yutaka Matsui*

A support theorem for the geodesic ray transform. Venky P Krishnan*

Fundamental solution to the Schroedinger equation on a compact symmetric space. Tomoyuki Kakehi*

The Radon Transform on Short Geodesics and Maximally Curved Spheres. Eric L Grinberg*

Fractional integrals of Erdélyi-Kober type and Radon transforms on Grassmann manifolds. Elena Ournycheva*

Three way tiling sets: dilation, translation, reflection, David R. Larson*, Peter Massopust, Gestur Olafsson

Three way tiling sets: dilation, translation, reflection. David R. Larson*, Peter Massopust, Gestur Olafsson

Variations on the Riemann-Lebesgue Lemma. William O. Bray*,

Pointwise Fourier Inversion. Mark A Pinsky*

Mathematical problems of thermoacoustic tomography. Peter Kuchment*, Mark Agranovsky, Yulia Georgieva-Hristova, Linh Nguyen

On limited view tomography with side constraints. Gaik Ambartsoumian*

Quantitatively correct reconstruction in problems of thermoacoustic tomography with detectors placed on open surfaces. Leonid A Kunyansky*

Spherical Means in Odd Dimensions and the Euler-Poisson-Darboux Equation. Boris Rubin*

On the study of 1PI algorithms for a general class of curves. Mikhail Kapralov, Alexander Katsevich*

Sampling in Paley-Wiener spaces on combinatorial graphs. Isaac Z. Pesenson*

Spectral theory for multi-scale phenomena. Palle E. T. Jorgensen*, Dorin Dutkay

Cryo-EM Structure Determination through Eigenvectors of Sparse Matrices. Amit Singer

L^1 regularization applied to electron tomography. Hans Rullgaard*

Sampling Functions with Symmetry: Applications to Computed Tomography. Larry A Gratton*

Applications of the Wavelet and Ridgelet Transforms in Tomography and Medical Imaging. Ahmed I Zayed*, Lucia Dettori

Discussion, led by Sigurdur Helgason

• **Special Session on Wavelets, Frames, and Multi-Scale Constructions**

Organizers: Palle E. T. Jorgensen (University of Iowa), David R. Larson (Texas A&M University), Gestur Olafsson (Louisiana State University), Darrin Speegle (Saint Louis University)

You can find the detailed program and abstracts of the talks at:
http://www.ams.org/amsmtgs/2146_program_ss22.html#title
(the * denotes the name of the speaker)

Dimension functions of rationally dilated GMRAs and wavelets. Marcin Bownik*, Kenneth Hoover

Dilations of $\mathbb{R}^2$ that have simple wavelet sets. Kathy D. Merrill*

Multiscale Three Dimensional Image Analysis: Texture Segmentation and Biomedical Applications. Simon K. Alexander*, Robert Azencott, Saurabh Jain, Manos Papadakis

Multi-scale 3-D texture segmentation: Isotropic Representations. Simon Alexander, Robert Azencott, Saurabh Jain*, Manos Papadakis

Projective 2-designs for reconstruction from magnitudes of frame coefficients. Radu Balan, Bernhard G. Bodmann*, Peter G Casazza, Dan Edidin

The Golden Ratio Encoders. Yang Wang*, Ingrid Daubechies, Sinan Gunturk, Ozgur Yilmaz

Construction of Orthogonal Wavelet Frames. Eric Weber*, Brody Johnson

Construction of Frames on Nilpotent Domains. Brad Currey*

Coorbit spaces and discretizations. Jens Gerlach Christensen*, Gestur Olafsson

Frame potential and finite abelian groups. Brody D Johnson*, Kasso A. Okoudjou

Real Equiangular Tight Frames. Peter Casazza*

Schauder bases of translations and modulations. Alexander M. Powell*, Christopher Heil

Sums and products in finite fields. Alex Iosevich*, University of Missouri Derrick Hart

Stable sparse approximations via nonconvex optimization. Ozgur Yilmaz*

A frame-theoretic analysis of continuous wave radar. Matthew Fickus*

Computable Fourier condition for alias-free sampling lattices. Yue M. Lu, Minh N. Do, Richard S. Laugesen*

Fourier series on fractals. Dorin Ervin Dutkay*, Palle E.T. Jorgensen

Duality properties for frames induced by projective unitary representations. Deguang Han*

Wiener's lemma for localized integral operators. Qiyu Sun*

A Beurling-Helson type theorem for modulation spaces. Kasso Okoudjou*

An Almost Periodic Noncommutative Wiener's Lemma. Radu Balan*, Ilya Kryshtal

Filters and probability measures on solenoids. Judith A. Packer*

Optimal Nonlinear Models for Sparsity and Image Segmentation. Akram Aldroubi, Kourosh Zarringhalam*

Extension theorems for paraboloids in the finite field setting. Alex Iosevich, Doowon Koh*

Principal Invariant Subspaces for Unitary Representations of LCA Groups. E. Hernandez, H. Sikic, G. Weiss*, E. Wilson

See also about the special sessions:

- **Special Session on Harmonic Analysis and Partial Differential Equations in Real and Complex Domains**

Organizers: Loredana Lanzani (University of Arkansas), Zhongwei Shen (University of Kentucky)

http://www.ams.org/amsmtgs/2146_program_ss3.html#title

- **Special Session on Recent Trends in Partial Differential Equations**

Organizer: Wai Yuen Chan (Southeast Missouri State University)

http://www.ams.org/amsmtgs/2146_program_ss23.html#title