

NSF-CBMS Conference: Harmonic Analysis: Smooth and Non-Smooth
305 Carver Hall¹
Iowa State University
June 2-8, 2018

June 2, 2018: Bootcamp

Time	Speaker	Title
8:30-9:00	Refreshments	
9:00-9:50	Calvin Hotchkiss	Hadamard Matrices, ONB's
10:00-10:50	Evan Camrud	Reproducing Kernel Hilbert Spaces, Hardy Spaces
11:00-11:50	Justin Peters	$\mathcal{B}(H)$, Cuntz algebras
12:00-1:00	Lunch	
1:10-2:00	Eric Weber	Wavelets, filterbanks
2:10-3:00	Nate Harding	Measure and Integration
3:10-4:00	Anna Seitz	IFS's: Fractals and Invariant Measures
4:10-5:00	Eric Weber	Spectra, Tilings, Fuglede Conjecture



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¹All CBMS events will occur in 305 Carver Hall, except for the reception

June 3, 2018: Smooth and Non-Smooth Harmonic Analysis Symposium

Time	Speaker	Title
12:30-12:55	Sergii Bezuglyi University of Iowa	Graph Laplace and Markov operators on a measure space
1:00-1:25	Julia Dobrosotskaya Case Western Reserve U.	Diffuse interface energy based on sparse representations for image processing applications
1:45-2:10	Alexander Glickfield Butler University	Forming Hadamard Submatrices from a Fourier Matrix
2:15-2:40	Calvin Hotchkiss University of Delaware	Fourier Bases on the “Skewed Sierpinski Gasket”
3:00-3:25	Kamel al-Khaled Jordan UST	Wavelet-Based Numerical Scheme Compared with VIM for Solving Kawahara Equation
3:30-3:55	Yulong Li University of Wyoming	On A Characterization Of Elements Of $L^2(\mathbb{R})$ Via Riemann-Liouville Operators
4:15-4:40	Christopher Linden University of Illinois	Minkowski Question Mark Functions for Odd and Even Continued Fractions
4:45-5:10	Gabriel Picioroaga University of South Dakota	Generalized Walsh Bases and Some Applications to Digital Signal Processing
5:20-5:45	Srijanani Prasad IIT Tirupati	Riemann-Liouville Fractional Calculus of Blancmange Curve and Cantor Functions



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June 4, 2018: CBMS Day 1

Time	Speaker	Title
8:30-9:15	Refreshments	
9:15-9:30	Eric Weber	Announcements
9:30-9:35	Dean Schmittmann	Welcome
9:35-10:35	Palle Jorgensen	Lecture 1: Harmonic Analysis of Measures: Analysis on Fractals
1:00-2:00	Palle Jorgensen	Lecture 2: Spectra of measures, tilings, and wandering vectors
2:00-2:30	Refreshments	
2:30-3:30	Kasso Okoudjou University of Maryland	An introduction to fractal uncertainty principles and Szegő-type limit theorems
3:30-3:45	Group Photo	
5:00-6:00		Lightning Talks
6:00-8:00	Reception	Gallery Room, Memorial Union, serving heavy hors d'oeuvres



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June 5, 2018: CBMS Day 2

Time	Speaker	Title
8:30-9:00	Refreshments	
9:00-10:00	Palle Jorgensen	Lecture 3: The universal tiling conjecture in dimension one and operator fractals
1:00-2:00	Palle Jorgensen	Lecture 4: Representations of Cuntz algebras associated to quasi-stationary Markov measures
2:00-2:30	Refreshments	
2:30-3:30	Marius Ionescu United States Naval Academy	An introduction to pseudo-differential operators on fractals
5:00-??		Lightning Talks

June 6, 2018: CBMS Day 3

Time	Speaker	Title
8:30-9:00	Refreshments	
9:00-10:00	Palle Jorgensen	Lecture 5: The Cuntz relations and kernel decompositions
1:00-2:00	Palle Jorgensen	Lecture 6: Harmonic analysis of wavelet filters: input-output and state-space models
2:00-2:30	Refreshments	
2:30-3:30	Daniel Alpay Chapman University	Reproducing kernel spaces, linear systems, inverse scattering and related problems
5:00-??		Lightning Talks



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June 7, 2018: CBMS Day 4

Time	Speaker	Title
8:30-9:00	Refreshments	
9:00-10:00	Palle Jorgensen	Lecture 7: Spectral theory for Gaussian processes: reproducing kernels, boundaries, and L^2 -wavelet generators with fractional scales
1:00-2:00	Palle Jorgensen	Lecture 8: Reproducing Kernel Hilbert Spaces arising from groups
2:00-2:30	Refreshments	
2:30-3:30	Daniel Alpay Chapman University	Stochastic linear systems, infinite dimensional analysis and a new family of topological algebras
5:00-??		Lightning Talks

June 8, 2018: CBMS Day 5

Time	Speaker	Title
8:30-9:00	Refreshments	
9:00-10:00	Palle Jorgensen	Lecture 9: Extensions of positive definite functions
11:00-12:00	Palle Jorgensen	Lecture 10: Reflection positive stochastic processes indexed by Lie groups
2:00		Shuttle to Des Moines airport
4:30		Shuttle to Des Moines airport



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