Jakob Lemvig - DTU Orbit (05/03/2019)
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Department of Applied Mathematics and Computer Science - Associate Professor
Mathematics

Research outputs:

**System bandwidth and the existence of generalized shift-invariant frames**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**On multivariate Wilson bases**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2017

**On Wilson bases in $L^2(\mathbb{R}^d)$**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Co-compact Gabor Systems on Locally Compact Abelian Groups**
Research output: Research - peer-review › Journal article – Annual report year: 2015

**Counterexamples to the B-spline Conjecture for Gabor Frames**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Explicit constructions and properties of generalized shift-invariant systems in $L^2(\mathbb{R})$**
Christensen, O., Hasannasabjaldehbakhani, M. & Lemvig, J. 2016 In : Advances in Computational Mathematics. 43, 2, p. 443–472
Research output: Research - peer-review › Journal article – Annual report year: 2016

**On some Hermite series identities and their applications to Gabor analysis**
Lemvig, J. 2016 In : Monatshefte fuer Mathematik. 182, 4, p. 899–912
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Reproducing formulas for generalized translation invariant systems on locally compact abelian groups**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Wavelets for Non-expanding Dilations and the Lattice Counting Estimate**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**A characterization of tight and dual generalized translation invariant frames**
Jakobsen, M. S. & Lemvig, J. 2015 Proceedings of the 11th International Conference on Sampling Theory and
Applications (SampTA 2015). IEEE Press, p. 96-100
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015
Density and duality theorems for regular Gabor frames
Research output: Research - peer-review › Journal article – Annual report year: 2015

Duality results for co-compact Gabor systems
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Prime tight frames
Research output: Research - peer-review › Journal article – Annual report year: 2012

Sparse Matrices In Frame Theory
Lemvig, J., Krahmer, F. & Kutyniok, G. 2014 In : Computational Statistics. 29, 3-4, p. 547-568
Research output: Research - peer-review › Journal article – Annual report year: 2012

Sparsity and spectral properties of dual frames
Krahmer, F., Kutyniok, G. & Lemvig, J. 2013 In : Linear Algebra and Its Applications. 439, 4, p. 982–998
Research output: Research - peer-review › Journal article – Annual report year: 2012

Constructing pairs of dual bandlimited frame wavelets in $L^2(R^n)$
Lemvig, J. 2012 In : Applied and Computational Harmonic Analysis. 32, 3, p. 313-328
Research output: Research - peer-review › Journal article – Annual report year: 2011

Optimally sparse approximations of 3D functions by compactly supported shearlet frames
Research output: Research - peer-review › Journal article – Annual report year: 2012

Oversampling of wavelet frames for real dilations
Research output: Research - peer-review › Journal article – Annual report year: 2011

Shearlets and Optimally Sparse Approximations
Research output: Research - peer-review › Book chapter – Annual report year: 2012

Affine and quasi-affine frames for rational dilations
Research output: Research - peer-review › Journal article – Annual report year: 2011

Constructing pairs of dual bandlimited framelets with desired time localization
Lemvig, J. 2009 In : Advances in Computational Mathematics. 30, 3, p. 231-247
Research output: Research - peer-review › Journal article – Annual report year: 2009

Wavelet frames and their duals
Research output: Research › Ph.D. thesis – Annual report year: 2008

Constructing pairs of dual bandlimited framelets with desired time localization
Research output: Research › Report – Annual report year: 2007
The canonical and alternate duals of a wavelet frame
Research output: Research - peer-review › Journal article – Annual report year: 2007

The canonical and alternate duals of a wavelet frame
Lemvig, J. 2007
Research output: Research › Poster – Annual report year: 2007

The canonical and alternate duals of a wavelet frame
Lemvig, J. 2007
Research output: Research › Sound/Visual production (digital) – Annual report year: 2007

The canonical and alternate duals of a wavelet frame
Lemvig, J. 2007
Research output: Research › Conference abstract for conference – Annual report year: 2007

The canonical and alternate duals of a wavelet frame
Research output: Research › Report – Annual report year: 2006

Projects:

The frame set for Gabor systems generated by B-splines
Nielsen, K. H., Lemvig, J. & Christensen, O.
Technical University of Denmark
01/08/2016 → 31/07/2019
Project: PhD

Mathematic and Efficient Signal Representation
Hasannasabjaldehbakhani, M., Christensen, O., Lemvig, J., Knudsen, K., Grosse-Erdmann, K. & Nielsen, M.
Forskningsrådsfinansiering
01/12/2015 → 12/12/2018
Project: PhD

Wavelet Frames in theory and Practice
Lemvig, J., Christensen, O., Hansen, P. C., Goh, S. S. & Laugesen, R. S.
DTU-lønnnet stipendie
01/08/2005 → 05/11/2008
Project: PhD

Gabor Frames, their Duals and Applications in Engineering
Jakobsen, M. S., Christensen, O., Lemvig, J., Knudsen, K., Feichtinger, H. & Hernández, E.
Technical University of Denmark
01/10/2013 → 23/11/2016
Project: PhD

Activities:

On multivariate Wilson bases
Lemvig, J. (Invited speaker)
6 Jul 2017
Activity: Talks and presentations › Conference presentations