CURRICULUM VITAE

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Personal
Date of birth: Sept. 10, 1972
Nationality: Danish citizen
Marital status: Married.

Education
- Dr. scient., Aalborg University, Denmark, March 2009
- Ph.D. in mathematics, Washington University in St. Louis, Missouri, USA, May 1999
- M.Sc. (mathematics/physics), Aalborg University, 1996.

Academic positions held
- Professor, June 2010–present, Aalborg University, Denmark
- Associate Professor, Aug. 2002–May 2010, Aalborg University
- Postdoctoral Research Associate, University of South Carolina, Columbia, South Carolina, USA, Aug. 1999–July 2002.

Administrative positions held
- Vice Head of Department, Nov. 2010-Aug. 2016, Department of Mathematical Sciences, Aalborg University, Denmark
- Interim Head of Department, Sept. 2011-Jan. 2012, Department of Mathematical Sciences, Aalborg University
- Chairman of the Study Board at Mathematical Sciences, 2018–present, Aalborg University, Denmark.

Visits abroad
- Visiting scientist, IRISA-INRIA, Rennes, France, July 1-30, 2004.
- Visiting Associate Professor, Washington University in St. Louis, Missouri, USA, Aug. 2006-Aug. 2007.

Research interests

Harmonic analysis with wavelets and their generalizations. Approximation theory, in particular problems related to nonlinear approximation with redundant systems. Constructive algorithms for sparse data representation.

Distinctions: Research

- EliteForsk-Prize 2013. The Danish Ministry of Science, Innovation and Higher Education (honoured by 1,200,000 DKK)
- The Spar Nord Foundation's Research Prize, 2010 (honoured by 250,000 DKK).

Distinctions: Teaching

- Teacher of the Year 2022, Study Board at Mathematical Sciences, Aalborg University
- Teacher of the Year 2022, Study Board at Mechanics and Physics, Aalborg University
- Teacher of the Year 2014, Study Board for Mathematics, Physics and Nano Technology, Aalborg University
- Teacher of the Year 2008, Basic Year of Science, Engineering and Medicine Study Board, Aalborg University.

Bibliometrics

- Citations: 3066 (Google Scholar, Jan 25, 2023).
- H-index: 28 (Google Scholar, Jan 25, 2023).

Publications

Refereed Journal Articles

[1] Walsh-type wavelet packet expansions. *Appl. Comput. Harmon. Anal.*, 9(3):265–285, 2000.

[2] On the construction and frequency localization of finite orthogonal quadrature filters. *J. Approx. Theory*, 108(1):36–52, 2001.

[3] (with R. Gribonval), Some remarks on non-linear approximation with Schauder bases. *East J. Approx.*, 7(3):267–285, 2001.

[4] (with R. Gribonval), Approximate weak greedy algorithms. *Adv. Comput. Math.*, 14(4):361–378, 2001.

[5] Highly nonstationary wavelet packets. *Appl. Comput. Harmon. Anal.*, 12(2):209–229, 2002.

[6] On convergence of wavelet packet expansions. *Approx. Theory Appl. (N.S.)*, 18(1):34–50, 2002.

[7] (with D.-X. Zhou), Mean size of wavelet packets. *Appl. Comput. Harmon. Anal.*, 13(1):22–34, 2002.

[8] Size properties of wavelet packets generated using finite filters. *Rev. Mat. Iberoamericana*, 18(2):249–265, 2002.

[9] (with L. Borup), Fast adaptive expansions in local trigonometric bases. *Signal Processing*, 83(2):445–451, 2003.

[10] (with L. Borup), Approximation with brushlets. *J. Approx. Theory*, 123(1):25–51, 2003.

[11] (with R. Gribonval), Sparse representations in unions of bases. *IEEE Trans. Inform. Theory*, 49(12):1320-1325, Dec. 2003.

[12] (with R. Gribonval), On approximation with spline generated framelets. *Constr. Approx.*, 20(2):207-232, 2004.

[13] (with R. Gribonval), Nonlinear approximation with dictionaries. I. Direct estimates. *J. Fourier Anal. Appl.*, 10(1):51-71, 2004.

[14] (with R. Gribonval), On a problem of Gröchenig about nonlinear approximation with localized frames. *J. Fourier Anal. Appl.*, 10(4):433-437, 2004.

[15] Nonseparable Walsh-type functions on $\mathbb{R}^d$. *Glas. Mat. Ser. III*, 31(1):111-138, 2004.

[16] (with L. Borup and R. Gribonval), Bi-framelet systems with few vanishing moments characterize Besov spaces. *Appl. Comput. Harmon. Anal.*, 17(1):3-28, 2004.

[17] (with L. Borup and R. Gribonval), Tight wavelet frames in Lebesgue and Sobolev spaces. *J. Function Spaces Appl.*, 2(3):227-252, 2004.

[18] (with L. Borup), Approximation with wave packets generated by a refinable function. *Proc. Amer. Math. Soc.*, 133(8):2409-2418, 2005.

[19] (with L. Borup), On the equivalence of wavelet and brushlet bases. *J. Math. Anal. Appl.*, 309(1):117-135, 2005.

[20] (with L. Borup), Approximation with general wave packets. *Anal. Theory Appl.*, 21(3):201-215, 2005.

[21] (with L. Borup), Nonlinear approximation in α-modulation spaces. *Math. Nachr.*, 279(1-2):101-120, 2006.

[22] (with L. Borup), Banach frames for multivariate α-modulation spaces. *J. Math. Anal. Appl.*, 321(2):880-895, 2006.

[23] (with R. Gribonval), Nonlinear approximation with dictionaries. II. Inverse estimates. *Constr. Approx.*, 24(2):157-173, 2006.

[24] (with L. Borup), Boundedness for pseudodifferential operators on multivariate α-modulation spaces. *Ark. Mat.*, 44(2):241-259, 2006.

[25] On polynomial symbols for subdivision schemes. *Adv. Comput. Math.*, 27(2):195-209, 2007.

[26] (with R. Gribonval), Highly sparse representations from dictionaries are unique and independent of the sparseness measure. *Appl. Comput. Harmon. Anal.*, 22(3):335-355, 2007.

[27] (with L. Borup), Frame Decomposition of Decomposition Spaces. *J. Fourier Anal. Appl.*, 13(1):39-70, 2007.

[28] (with H. Šikic), Schauder bases of integer translates. *Appl. Comput. Harmon. Anal.*, 23(2):259-262, 2007.

[29] An example of an almost greedy uniformly bounded orthonormal basis for $L_p(0,1)$, *J. Approx. Theory*, 149(2):188-192, 2007.

[30] (with R. Gribonval), Beyond sparsity: recovering structured representations by ℓ^1 minimization and greedy algorithms. *Adv. Comput. Math.*, 28(1):23-41, 2008.

[31] (with L. Borup and R. Gribonval) Beyond coherence: recovering structured time-frequency representations. *Appl. Comput. Harmon. Anal.*, 24(1):120-128, 2008.

[32] (with L. Borup), On anisotropic Triebel-Lizorkin type spaces, with applications to the study of pseudo-differential operators. *J. Function Spaces Appl.*, 6(2):107–154, 2008.

[33] (with H. Šikic), Quasi-greedy systems of integer translates. *J. Approx. Theory*, 155(1):43-51, 2008.

[34] Trigonometric quasi-greedy bases for $L_p([0,1])$. *Rocky Mountain J. Math.*, 39(4):1267-1278, 2009.

[35] Orthonormal bases for α-modulation spaces. *Collect. Math.*, 61(2):173-190, 2010.

[36] Trigonometric bases for matrix weighted L_p-spaces. *J. Math. Anal. Appl.* , 371:784–792, 2010.

[37] On stability of finitely generated shift-invariant systems. *J. Fourier Anal. Appl.*, 16(6):901-920, 2011.

[38] (With K. N. Rasmussen), Compactly supported curvelet type frames. *J. Funct. Spaces Appl.*, Art. ID 876315, 18 pp., 2012.

[39] On transference of multipliers on matrix weighted L_p-spaces. *J. Geom. Anal.*, 22(1):12-22, 2012.

[40] (with H. Šikic), Maximal functions, product condition and its eccentricity. *Collect. Math.*, 63(2):192-202, 2012.

[41] (with K. N. Rasmussen), Compactly supported frames for decomposition spaces. *J. Fourier Anal. Appl.*, 18(1):87–117, 2012.

[42] (with R. Gribonval), The restricted isometry property meets nonlinear approximation with redundant frames. *J. Approx. Theory*, 165(1):1–19, 2013.

[43] (with C. R. Jacobsen), Stylometry of paintings using hidden Markov modelling of contourlet transforms. *Signal Processing*, 93(3):579–591, 2013.

[44] (with E. Hernández, H. Šikic, and F. Soria.), Democratic systems of translates. *J. Approx. Theory*, 171:105–127, 2013.

[45] On traces of general decomposition spaces. *Monatsh. Math.* , 171:3-4:443–457, 2013.

[46] Summation of multiple Fourier series in matrix weighted L_p-spaces. *J. Math.*, Art. ID 135245, 7 pp., 2013.

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[47] Frames for decomposition spaces generated by a single function. *Collect. Math.*, 65(2):183–201, 2014.

[48] (with H. Šikic.), On stability of Schauder bases of integer translates *J. Funct. Anal.*, 266(4):2281–2293, 2014.

[49] On quasi-greedy bases associated with unitary representations of countable groups. *Glas. Mat. Ser. III*, 50(70):193-205, 2015.

[50] On Schauder basis properties of multiply generated Gabor systems. *Rocky Mountain J. Math.*, 46(6):2043-2060, 2016.

[51] (with A. G. Georgiadis), Pseudodifferential operators on mixed-norm Besov and Triebel-Lizorkin spaces. *Math. Nachr.*, 289(16):2019-2036, 2016.

[52] (with A. G. Georgiadis), Pseudodifferential Operators on Spaces of Distributions Associated with Non-negative Self-Adjoint Operators. *J. Fourier Anal. Appl.*, 23(2):344-378, 2017.

[53] (with C. R. Jacobsen and M. G. Rasmussen), Generalized Sampling in Julia. *Journal of Open Research Software.*, 5(1), p.12. DOI: http://doi.org/10.5334/jors.157, 2017.

[54] (with G. Cleanthous and A. G. Georgiadis), Anisotropic Mixed-Norm Hardy Spaces. *J. Geom. Anal.*, 27(4):2758–2787, 2017.

[55] (with J. Johnsen and A. G. Georgiadis), Wavelet transforms for homogeneous mixed-norm Triebel-Lizorkin spaces. *Monatsh. Math.*, 183(4):587–624, 2017.

[56] (with E. S. Ottosen), A Characterization of Sparse Nonstationary Gabor Expansions. *J. Fourier Anal. Appl.*,24(4):1048-1071, 2018.

[57] (with G. Cleanthous and A. G. Georgiadis), Molecular decompostition of anisotropic homogeneous mixed-norm spaces with applications to the boundedness of operators. *Appl. Comput. Harmon. Anal.*, DOI: 10.1016/j.acha.2017.10.001, 2018.

[58] (with C. R. Jacobsen, J. Møller and M. G. Rasmussen), Investigations of the effects of random sampling schemes on the stability of generalized sampling. *Appl. Comput. Harmon. Anal.*, 45(2):453–461, 2018.

[59] (with E. S. Ottosen), Nonlinear approximation with nonstationary Gabor frames. *Adv. Comput. Math.*, 44(4):1183–1203, 2018.

[60] (with J. Møller, E. Porcu and E. Rubak), Determinantal point process models on the sphere. *Bernoulli*, 24(2):1171-1201, 2018. DOI: 10.3150/16-BEJ896.

[61] (with A. G. Georgiadis), Spectral multipliers on spaces of distributions associated with non-negative self-adjoint operators. *J. Approx. Theory*, 234:1-19, 2018.

[62] (with G. Cleanthous and A. G. Georgiadis), Fourier multipliers on decomposition spaces of modulation and triebel–lizorkin type. *Mediterranean J. of Math.*, 15(3):122, May 2018.

[63] (with M. G. Rasmussen), Projection operators on matrix weighted L^p and a simple sufficient Muckenhoupt condition.. *Math. Scand.*, 123(1):72-84, 2018.

[64] (with H. Šikic.), Muckenhoupt class weight decomposition and BMO distance to bounded functions. *Proc. Edinb. Math. Soc.* , 62(4): 1017–1031, 2019.

[65] (with G. Cleanthous and A. G. Georgiadis), Molecular decomposition of anisotropic homogeneous mixed-norm spaces with applications to the boundedness of operators. *Appl. Comput. Harmon. Anal.*, 47(2):447–480, 2019.

[66] (with Z. Al-Jawahri), On homogeneous decomposition spaces and associated decompositions of distribution spaces *Math. Nachr.*, 292(12):2496-2521, 2019.

[67] (with J. Holm, T. Arildsen, and S. L. Nielsen), Orthonormal, Moment Preserving Boundary Wavelet Scaling Functions in Python. *SN Applied Sciences*, 2(12), [2032], 2020.

[68] (with Z. Al-Jawahri), On homogeneous decomposition spaces and associated decompositions of distribution spaces *Math. Nachr.*, 292(12):2496-2521, 2019.

[69] (with J. Holm, F. Chiariotti, and P. Popovski), Lifetime Maximization of an Internet of Things (IoT) Network based on Graph Signal Processing. *IEEE Communications Letters*, 25(8):2763-2767, 2021.

[70] (with H. Šikic), Muckenhoupt matrix weights. *J. Geom. Anal.*, 31(9):8850–8865, 2021.

[71] (with Z. Al-Jawahri), On a discrete transform of homogeneous decomposition spaces. *Appl. Comput. Harmon. Anal.*, 55:41–70., 2021.

[72] Unconditional bases for homogeneous α-modulation type spaces *Mediterr. J. Math.*, Paper No. 55, 18, 2022.

[73] (with R. Gribonval, G. Kutyniok, and F. Voigtlaender.), Approximation spaces of deep neural networks *Constr. Approx.*, 55(1):259–367, 2022.

Articles in proceedings with peer review

[74] (with L. Borup), Nonseparable wavelet packets. In *Approximation theory X: Wavelets, splines, and applications (Nashville, TN, 2002)*, Innov. Appl. Math., pages 51–61. Vanderbilt Univ. Press, Nashville, TN, 2002.

[75] (with R. Gribonval), Sparse decompositions in "incoherent" dictionaries. Proc. IEEE Intl. Conf. on Image Proc. (ICIP'03), Barcelona, Spain, September 2003.

[76] (with R. Gribonval), Approximation with Highly Redundant Dictionaries Wavelets: Applications in Signal and Image Processing, Proc. SPIE'03 Vol. 5207:216-227, San Diego, USA, August 2003.

[77] (with R. Gribonval), On the strong uniqueness of highly sparse expansions from redundant dictionaries. Proc. Int. Conf. Independent Component Analysis (ICA'04), September 2004. Springer-Verlag LNCS series.

[78] (with L. Borup and R. Gribonval) Nonlinear approximation with bi-framelets. In *Approximation theory XI: Gatlinburg 2004*, Mod. Methods Math., pages 93–104. Nashboro Press, Brentwood, TN, 2005.

[79] (with G. Cleanthous and A. G. Georgiadis) Spaces of distributions with mixed Lebesgue norms. Proceedings of the 15th Panhellenic Conference of Mathematical Analysis, pages 29-38, Heraklion, Greece, 2016.

Other writings

[80] (with R. Gribonval), Sparse approximations in signal and image processing (editorial). *Signal Processing*, 86(3):415–416, 2006.

Invited talks

1. Oct. 1997. Washington University in St. Louis, Wavelet seminar (1 hour): *Pointwise convergence of wavelet packet expansions*.
2. Apr. 1998. University of Copenhagen, Analysis seminar (1 hour): *Size Properties of wavelet packet expansions*.
3. Apr. 1998. Aalborg University, Denmark, Colloquium (1 hour): *Pseudo-differential operators and time-frequency analysis*.
4. Dec. 1998. Royal Institute of Technology, Stockholm, Colloquium (1 hour): *Size Properties of wavelet packet expansions*.
5. May 1999. University of Aarhus, Denmark, Analysis seminar (1 hour): *Convergence of wavelet packet expansions*.
6. Sept. 1999. University of South Carolina-Columbia, Analysis seminar (1 hour): *Wavelet packet expansions*.
7. Nov. 1999. City University of Hong Kong, Workshop on Wavelets (45 min.): *Wavelet packet expansions*.
8. June 2000. Chinese University, Hong Kong, Analysis seminar (1 hour): *Some new results on wavelet packet expansions*.
9. June 2000. City University of Hong Kong, Colloquium (1 hour): *Some new results on wavelet packet expansions*.
10. Sept. 2000. University of Wisconsin-Madison, IDR workshop, (2x45 min): *Greedy algorithms*.
11. Nov. 2000. AMS 2000 Southeastern Section Meeting, Birmingham, Alabama (25 min): *Approximate weak greedy algorithms*.

12. Mar. 2001. AMS 2001 Southeastern Section Meeting, Columbia, South Carolina (25 min): *On the construction of finite orthogonal quadrature filters.*

13. Mar. 2001. 10th International Conference on Approximation, St. Louis, Missouri (20 min): *Frequency localization of finite orthogonal quadrature filters.*

14. Mar. 2001. University of South Carolina-Columbia, Analysis seminar (1 hour): *Nonlinear approximation with Schauder bases.*

15. Aug. 2002. Wavelet workshop, Aalborg University (50 min): *Nonlinear approximation with redundant dictionaries.*

16. Apr. 2003. Analysis seminar, Technical University of Denmark (50 min):, *Nonlinear approximation with redundant dictionaries.*

17. June 2003. Workshop "Applicable Harmonic Analysis", Banff, Canada (50 min): *Nonlinear approximation with framelet systems.*

18. Aug. 2003. Workshop on wavelets and their generalizations Aalborg University (50 min): *Nonlinear approximation with general MRA wavelet frames.*

19. May 2004. 11th International Conference on Approximation, Gatlinburg, Tenn. (20 min): *On nonlinear approximation with localized frames.*

20. Oct. 2004. Workshop "Data representation using redundant systems", Aalborg University (50 min): *Sparse data representation using redundant dictionaries.*

21. June 2005. Workshop "Modern Methods of Time-Frequency Analysis", ESI, Vienna (50 min): *Banach frames for multivariate α-modulation spaces.*

22. Sept. 2006. Washington University in St. Louis, Wavelet seminar (50 min): *Frame decomposition of decomposition spaces.*

23. Oct. 2006. University of South Carolina, IMI seminar (50 min): *Frame decomposition of function spaces.*

24. Nov. 2006. Saint Louis University, seminar (50 min): *Sparse representation of Data.*

25. Jan. 2007. Louisiana State University, Baton Rouge, Wavelet workshop (30 min): *Uniformly Bounded Quasi-greedy systems.*

26. Mar. 2007. Washington University in St. Louis, Wavelet seminar (50 min): *Greedy bases.*

27. Nov. 2007. University of Zagreb, Colloquium (50 min): *Sparse Representation of Data.*

28. April 2010. IRISA/INRIA, Rennes, Seminar (50 min): *Decomposition of Smoothness Spaces.*

29. September 2012. Workshop "Modern Methods of Time-Frequency Analysis II", ESI, Vienna (50 min): *Decomposition type smoothness spaces.*

30. February 2013. CAS, Oslo, Workshop (50 min): *Some new results on approximation with finite dictionaries.*

31. April 2013. Approximation Theory 14, San Antonio, USA (20 min): *Decomposition type smoothness spaces.*

32. May 2013. University of Cambridge, UK (50 min): *Approximation with redundant dictionaries.*

33. June 2013. Constructive theory of functions 2013, Sozopol, Bulgaria (50 min): *Nonlinear Approximation with finite dictionaries.*

34. May 2014. Technical University of Denmark (50 min): *Sparse Approximation with Finite Dictionaries.*

35. January 2015. CIRM, Marseille (50 min): *Some new results on decomposition spaces.*
36. May 2017. University of Zagreb, Seminar (50 min): *Function spaces with mixed-norms.*
37. June 2019. University of Zagreb, Invited talk (45 min): *Muchenhoupt weights.*

Teaching Experience

- Fall 1999. *Vector calculus* (Univ. South Carolina, 35 students)
- Fall 2000. *Elementary differential equations* (Univ. South Carolina, 37 students)
- Spring 2001. *Elementary differential equations* (Univ. South Carolina, 34 students)
- Fall 2002. *Calculus and differential equations* (Aalborg University, 130 students)
- Spring 2003. *Linear Algebra* (Aalborg University, 130 students)
  Gabor analysis (Aalborg University, 10 students)
- Fall 2003. *Calculus and differential equations* (Aalborg University, 132 students)
- Spring 2004. *Linear Algebra (Aalborg University*, 132 students) *Time-frequency analysis with dictionaries* (Aalborg University, 14 students)
- Fall 2004. *Modern mathematical analysis* (Aalborg University, 40 students)
- Spring 2005. *Introduction to functional analysis* (Aalborg University, 6 students)
- Fall 2005. *Advanced calculus* (Aalborg University, 19 students) *Modern mathematical analysis* (Aalborg University, 24 students)
  Introduction to generalized functions (Aalborg University, 3 students)
- Spring 2007. *Elementary differential equations* (Washington University in St. Louis, 9 students) *Calculus II* (Washington University in St. Louis, 14 students)
- Fall 2007. *Calculus* (Aalborg University, 125 students)
- Spring 2008. *Linear Algebra* (Aalborg University, 125 students)
- Fall 2008. *Calculus* (Aalborg University, 128 students)
- Spring 2009. *Linear Algebra* (Aalborg University, 120 students)
- Fall 2009. *Calculus* (Aalborg University, 110 students) Advanced Graduate Math. for Engineering Students (Aalborg University, 40 students)
- Spring 2010. *Linear Algebra* (Aalborg University, 110 students)
- Spring 2011. *Calculus* (Aalborg University, 128 students)
- Summer 2012. *Advanced Graduate Math. for Engineering Students* (Aalborg University, 20 students)
- Spring 2013. *Calculus* (Aalborg University, 160 students)
- Fall 2014. *Linear Algebra* (Aalborg University, 155 students)
- Spring 2014. *Calculus* (Aalborg University, 180 students)
- Fall 2014. *Linear Algebra* (Aalborg University, 180 students)
- Fall 2015. *Advanced Graduate Math.* for Engineering Students (Aalborg University, 28 students)
- Spring 2015. *Calculus* (Aalborg University, 190 students)
- Spring 2015. *Applied Harmonic Analysis* (Aalborg University, 15 students)
- Fall 2015. *Advanced Graduate Math.* for Engineering Students (Aalborg University, 25 students)
- Spring 2016. *Applied Harmonic Analysis* (Aalborg University, 10 students)
- Fall 2016. *Applied Harmonic Analysis* (Aalborg University, 10 students)

- Fall 2016. *Advanced Graduate Math.* for Engineering Students (Aalborg University, 22 students)
- Fall 2017. *Advanced Engineering Mathematics* (Aalborg University, 132 students)
- Spring 2017. *Applied Harmonic Analysis* (Aalborg University, 10 students)
- Spring 2017. *Compressive Sensing* (Aalborg University, 11 students)
- Fall 2017. *Advanced Engineering Mathematics* (Aalborg University, 128 students)
- Spring 2018. *Applied Harmonic Analysis* (Aalborg University, 10 students)
- Spring 2018. *Compressive Sensing* (Aalborg University, 7 students)

Postdocs Supervised

- Lasse D. Borup, August 2003–August 2006.
- Athanasios G. Georgiadis, August 2014–July 2017.

Ph.D. Students Supervised

- Chr. Robert Jacobsen, graduated June 15, 2012.
- Kenneth Niemann Rasmussen, graduated June 29, 2012.
- Emil S. Ottosen, graduated May, 2018.

Graduate Students Supervised

- Henry Bertelsen, M.Sc., June 2006, Aalborg University
- Hanne Lyngby Laursen, M.Sc., June 2006, Aalborg University
- Kenneth Niemann Rasmussen, M.Sc., June 2006, Aalborg University
- Helene Pilgaard Larsen, M.Sc., June 2006, Aalborg University
- Linda Østervig Jensen, M.Sc., June 2006, Aalborg University.
- Anders G. Aaen, M.Sc., June 2009, Aalborg University.
- Heng Yang, M.Sc., June 2011, Aalborg University
- Emil S. Ottosen, M.Sc., February 2015, Aalborg University
- Lærke H. Rasmussen, M.Sc., January 2017, Aalborg University
- Kristian N. Jakobsen, M.Sc., January 2017, Aalborg University
- Zeineb Al-Jahwari, M.Sc., January 2017, Aalborg University.

Administrative experience

- Manager of the workpackage "Application of Wavelet (Packet) Techniques to Feature Identification in Signals" under the WAVES project co-sponsored by the Danish Technical Research Council, June 2003–July 2005.
- Main organizer of the international workshops on wavelets and their generalizations, August 2002 and August 2003 at Aalborg University.
- Guest editor, EURASIP Signal Processing Journal, Volume 86, Issue 3, Pages 415-638 (March 2006), special issue on "Sparse Approximations in Signal and Image Processing."

External Grants

- Grant #9701481: "Application of Wavelet (Packet) Techniques to Feature Identification in Signals". Workpackage under the WAVES project co-sponsored by the Danish Technical Research Council. Aug. 2002-Aug. 2005.
- Grant: "Partial Differential Equations - Analysis, Modelling, and Applications" sponsored by the Danish Science Foundation. Jan. 2003-Jan. 2006.

- Danish Research Council's special grant for graduate studies abroad, 1996-1999.

Professional Affiliations
- American Mathematical Society
- European Mathematical Society
- Danish Mathematical Society

Other activities
- Reviewer for Mathematical Reviews (30+ reviews)
- Referee for:
  - Appl. Comput. Harm. Anal.
  - Constr. Approx.
  - J. Approx. Theory
  - J. Fourier Anal. Appl.
  - J. Math. Anal. Appl.
  - East J. Approx.
  - EURASIP Signal Processing Journal
  - Glasnik matematicki
  - IEEE Trans. Inform. Th.
  - Int. J. Wavelets Multiresolut. Inf. Process.