

## CURRICULUM VITAE for GESTUR ÓLAFSSON

### Personal Data

Born: January 19, 1952 in Reykjavík, Iceland, Icelandic citizen, US. permanent resident.  
Address: Department of Mathematics, Louisiana State University, Baton Rouge LA 70803  
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### Study

1973–74 Studied Mathematics and Physics at the University of Iceland, Reykjavik  
1975–82 Studied Mathematics at the University of Göttingen  
11/79 ‘Diplomprüfung’ in Mathematics, University of Göttingen  
Second fields Physics and Probability/Statistics.  
11/82 Ph.D. in Mathematics, University of Göttingen  
Advisor: Prof. H.S. Holdgrün.  
7/90 Habilitation at the University of Göttingen

### Professional Experience

75-82 TA at the University of Göttingen  
2/83 Visiting position at the University of Iceland and the Science Institute in Reykjavík, Iceland  
10/83 “Wissenschaftlicher Mitarbeiter” at the University of Göttingen  
7/85 “Hochschulassistent” at the University of Göttingen  
1/91 “Oberassistent” (Assistant professor) at the University of Göttingen  
8/91 Tenured associate Professor (Lektor) at IMFUFA, Roskilde University, Denmark.  
1/93 Associate Professor, Louisiana State University. Tenure, Spring 1994.  
1996 - Full Professor, Louisiana State University  
2006 - 2011 Hubert Butts Departmental Alumni Professor of Mathematics  
2011 - Julian R. & Sidney Nicolle Carruth Endowed Alumni Professor of Mathematics.

Visits and visiting Professor at the following universities, in some cases several times:

- 1) Max Plank Institute, Bonn, August 2011.
- 2) Visiting professor (professor invité), University of Metz (France), one month, combined spring 2009/2010.
- 3) Visiting professor, University of Nancy, one month summer 2008.
- 4) The University of Aarhus, Denmark, several times,
- 5) The University of Bochum, Germany, several times. The visits were partially supported by the Sonderforschungsbereich in Bochum,
- 6) University of Erlangen, Germany. One week during the summer 2010.
- 7) The University of Marseilles, Luminy, France,
- 8) The University of Nancy, France,
- 9) The University of Odense, Denmark, several times,

- 10) Ohio State University, two times. Last time one week in May, 2011.
- 11) The University of Paderborn, Germany. Several short time (approximately one week) visits.
- 12) The University of Poitiers, France,
- 13) The University of Tokyo and the University of Kyoto, Japan, five weeks in 2006.

## Publications

### a. In Print

#### a-1. Books:

1. (With J. Hilgert) Causal Symmetric Spaces, Geometry and Harmonic Analysis. Perspectives in Mathematics **18**, Academic Press, 1996

#### a-2. Refereed Articles and Refereed Chapters in Books and Special Volumes:

74. (with A. Pasquale) The  $\text{Cos}^\lambda$  and  $\text{Sin}^\lambda$  Transforms as Intertwining Operators between generalized principal series Representations of  $SL(n+1, K)$ . *Advances in Math*, online first 2011.
73. (with H. Schlichtkrull) Local Paley-Wiener theorem for distributions on compact symmetric spaces. *Math. Scand.* **109** (1) (2011), 93–113.
72. (with S. Dann) Paley-Wiener Theorems with respect to the spectral parameter. *Contemporary Math.* 544 (2011), 55–84.
71. (with J. Wolf) Extension of Symmetric Spaces and Restriction of Weyl Groups and Invariant Polynomials. *Contemporary Math.* **544** (2011), 85–100.
70. (with J. G. Christensen) Coorbit spaces for dual pairs. *Applied and Computational Harmonic Analysis* **31** (2011) 303-324.
69. (with H. Schlichtkrull) Fourier Series on Compact Symmetric Spaces:  $K$ -Finite Functions of Small Support. *Journal of Fourier Anal. and Appl.* **16** (2010), 609–628.
68. (with D. Larson, and P. Massopust) Three-way tiling sets in two dimensions. *Acta Appl. Math.* **108** (2009), no. 3, 529–546.
67. (with J. G. Christensen) Examples of coorbit spaces for dual pairs. *Acta Appl. Math.* **107** (2009), 25–48.
66. (with B. Rubin) Invariant functions on Grassmanians. *Contemporary math.* **464** (2008), 201–212.
65. (with S. Zheng) Harmonic Analysis Related to Schrödinger Operators. *Contemporary Math.* **464** (2008), 213–230.
64. (with M. Dobrescu) Coxeter groups, wavelets, multiresolution and sampling. In *Frames and operator theory in analysis and signal processing*, 119–135, *Contemp. Math.*, **451**, Amer. Math. Soc., Providence, RI, 2008.

63. (with H. Schlichtkrull) A local Paley-Wiener theorem for compact symmetric spaces. *Adv. Math.* **218** (2008), no. 1, 202–215.
62. (with H. Schlichtkrull) Representation theory, Radon transform and the heat equation on a Riemannian symmetric space. *Group Representations, Ergodic Theory, and Mathematical Physics; A Tribute to George W. Mackey*. In: *Contemp. Math.*, **449** (2008), 315–344.
61. (with H. Schlichtkrull) The Segal-Bargmann transform for the heat equation associated with root systems. *Adv. Math.* **208** (1) (2007), 422–437.
60. (with M. Aristidou and M. Davidson) Laguerre functions on symmetric cones and recursion relations in the real case. *J. Computational and Applied Mathematics.*, **199** (2007), 95–112.
59. (with S. Zheng) Function spaces associated with Schrödinger Operators: The Pöschl-Teller Potential. *J. Fourier Anal. and Appl.* **12** (2006), 653–674
58. (with S. Gindikin and B. Krötz) Holomorphic horospherical transform on non-compactly causal spaces. *IMRN* **2006** (2006), 1–47.
57. (with E. Ournycheva, and B. Rubin) Higher-ranked wavelet transforms, ridgelets transforms, and Radon Transform on the space of matrices. *Applied and Computational Harmonic Analysis* **21** (2006) 182–203.
56. (with M. Davidson and M. Aristidou) Differential Recursion Relations for Laguerre Functions on Symmetric Cones. *Bull. Sci. math.* **130** (2006), 346–263.
55. (with R. Fabec and A. Sengupta) Fock spaces corresponding to positive definite linear transformations. *Math. Scand* **98** (2006) 262–282.
54. (with S. Gindikin and B. Krötz) Horospherical model for the holomorphic discrete series and the horospherical Cauchy transform. *Compositio Mathematica* **142** (2006) 983–1008.
53. (with A. Pasquale) Support properties and Holmgren’s uniqueness theorem for differential operators with hyperplane singularities. *J. Funct. Anal.* **239** (2006), 21–43.
52. (with M. Dobrescu) Wavelets without groups. *Contemp. Math.* **405** (2006), 27–40.
51. (with T. Branson and A. Pasquale) The Paley-Wiener Theorem and the local Huygens’ principle for compact symmetric spaces. *Indagationes* **16** (2005), 393–428. Special volume of *Indagationes* in honor of G. van Dijk.
50. (with T. Branson and A. Pasquale) The Paley-Wiener Theorem for the Jacobi Transform and the Local Huygens’ Principle for Root Systems with Even Multiplicities. *Indagationes* **16** (2005), 429–442. Special volume of *Indagationes* in honor of G. van Dijk.
49. Continuous action of Lie groups on  $\mathbb{R}^n$  and frames. *International Journal of Wavelets, Multiresolution and Information Processing* **3** No. 2 (2005), 211–235.
48. (with B. Krötz and R. Stanton) The image of the heat kernel transform on Riemannian symmetric spaces of the noncompact type. **22** (2005), 1307–1329 *International Mathematics Research Notices*.

47. (with S. Gindikin and B. Krötz) Holomorphic  $H$ -spherical distribution vectors in principal series representations. *Inventiones Mathematicae* **158** (2004), 643–682.
46. (with S. Gindikin and B. Krötz) Erratum: Holomorphic  $H$ -spherical distribution vectors in principal series representations. *Inventiones Mathematicae* **158** (2004), 683–684.
45. (with A. Pasquale) A Paley-Wiener Theorem for the  $\Theta$ -spherical Transform: The Even Multiplicity case. *Journal de mathématiques pures et appliquées* **83** (2004), 811–954.
44. (with D. Speegle) Wavelets, wavelet sets, and linear actions on  $\mathbb{R}^n$ , *Contemporary Mathematics (AMS)* **345**, *Wavelets, Frames and Operator Theory*, Eds: C. Heil, P. Jorgensen, D. Larson, 2004, 253–281.
43. (with A. Pasquale) Paley-Wiener theorems for the  $\Theta$ -spherical transform: An overview. *Acta Applicandae Mathematicae* **81** (2004), 275–309.
42. (with M. Davidson) The Generalized Segal-Bargmann transform and Special Functions *Acta Applicandae Mathematicae*, **81** (2004), 29–50.
41. (with B. Krötz) The  $c$ -function for non-compactly causal symmetric spaces and its relations to harmonic analysis and representation theory Ed. S.G. Gindikin, Lie groups and symmetric spaces, In memory of F.I. Karpelevich. AMS Translations **210**, 171–194 (2003).
40. (with Mark Davidson) Differential recursion relations for Laguerre functions on Hermitian matrices. *Integral Transforms and Special Functions* **14** (2003) 469–484.
39. (with M. Davidson and G. Zhang) Laplace and Segal-Bargmann transforms on Hermitian symmetric spaces and orthogonal polynomials. *J. Funct. Anal.* **204** (2003), 157–195.
38. (with N. B. Andersen and H. Schlichtkrull) On the inversion of the Laplace and Abel Transforms for causal symmetric spaces. *Forum Math.* **15** (2003), 679–699.
37. (with S. Gindikin and B. Krötz) Hardy spaces for non-compactly causal symmetric spaces and the most continuous spectrum. *Math. Ann.* **327** (2003), 25–66.
36. (with R. Fabec) The continuous Wavelet transform and symmetric spaces. *Acta Applicandae Mathematicae* **87(1)** (2003), 261–277.
35. (with B. Krötz) The  $c$ -function for non-compactly causal symmetric spaces. *Invent. Math.* **149** (2002) 3, 647–659.
34. (with M. Davidson and G. Zhang) Laguerre polynomials, restriction principle, and holomorphic representations of  $SL(2, \mathbb{R})$ . *Acta Applicandae Mathematicae* **71** (3) (2002) 261–277.
33. (with A. Pasquale) Regularity properties of generalized Harish-Chandra expansions. In: A. Strasburger et al. (eds.), *Geometry and analysis on finite- and infinite-dimensional Lie groups*, Banach Center Publications 55 (2002), 335–348. Banach Center Publications, 2002.
32. (with F. Betten) Causal Compactification and Hardy Spaces for Spaces of Hermitian Type. *Pacific J. Math.* **200** (2001), 273–312.

31. (with B. Krötz and K-H. Neeb) Spherical Functions on Mixed Symmetric Spaces. *Representation Theory*, **5** (2001), 43-92.
30. (with A. Pasquale) On the meromorphic extension of the spherical functions on noncompactly causal symmetric spaces. *J. Funct. Analysis* **181** (2001), 346–401.
29. (with N. Andersen) A Paley-Wiener Theorem for the Spherical Laplace Transform on Causal Symmetric Spaces of Rank One. *Proceedings of the AMS*. **129** (2001), 173–179.
28. Analytic Continuation in Representation Theory and Harmonic Analysis. In: Global Analysis and Harmonic Analysis, ed. J. P. Bourguignon, T. Branson, and O. Hijazi. *Seminars et Congr*, vol 4, (2000), 201–233. Pub.: The French Math. Soc.
27. (with A. Neumann) Minimal and Maximal Semigroups Related to Causal Symmetric Spaces. *Semigroup Forum* **61** (2000) 57–85.
26. (with P. Jorgensen) Unitary representations and Osterwalder-Schrader Duality. Ed. R. S. Doran, V. S. Varadarajan: The Mathematical Legacy of Harish-Chandra: A Celebration of Representation Theory and Harmonic Analysis, PSPM, AM, 2000.
25. (with P. Jorgensen) Osterwalder-Schrader Axioms - Wightman Axioms. *Encyclopaedia of Mathematics, Supplement II* Kluwer, Jan. 2000.
24. (With B. Ørsted) Causal Compactification and Hardy Spaces. *Trans. AMS* **351** (1999), 3771-3792.
23. (with T. Branson) Asymptotics of the D'Alembertian with Potential on a Pseudo-Riemannian Manifold. *Proceedings of the AMS* **127** (1999), 1339-1345.
22. (With A. G. Helminck, J. Hilgert, A. Neumann) A Conjugacy Theorem for Symmetric Spaces. *Mathematische Annalen* **313** (1999), 785-791.
21. (with P. Jorgensen) Unitary Representations of Lie Groups with Reflection Symmetry. *J. Funct. Anal.* **158** 26-88 (1998).
20. Open Problems in Harmonic Analysis on Causal Symmetric Spaces. p. 249-270. In: Positivity in Lie Theory; Open Problems. Ed. J. Hilgert, J. D. Lawson, K-H. Neeb, E. B. Vinberg, De Gruyter 1998.
19. (with B. Krötz and K-H. Neeb) Spherical Representations and Mixed Symmetric Spaces. *Representation Theory* **1**, 424-461 (1997).
18. (with T. Branson): Helmholtz Operators and Symmetric Space Duality. *Invent. Math.* **129**, 63-74 (1997).
17. (with B. Ørsted) Generalization of the Bargmann Transform. Proceedings of a “Workshop on Lie Theory and its Applications in Physics” Clausthal, August 1995. Ed. Dobrev, Döbner, Hilgert. World Scientific, 1996

16. (with T. Branson and B. Ørsted): Spectrum Generating Operators, and Intertwining Operators for Representations Induced from a maximal Parabolic Subgroup. *J. Funct. Anal.* **135** (1996) 163-205.
15. (with T. Branson and H. Schlichtkrull): Huyghens' Principle in Riemannian Symmetric Spaces. *Math. Ann.* **301**, 445-462 (1995)
14. (with J. Faraut): Causal Semisimple Symmetric Spaces: The Geometry and Harmonic Analysis. In: Ed. Hofmann, Lawson, Vinberg: "Semigroups in Algebra, Geometry and Analysis", 3-32, 1995.
13. (with J. Faraut and J. Hilgert): Spherical functions on ordered symmetric spaces. *Ann. Inst. Fourier* **44** (1994), 927-966
12. (with T. Branson and H. Schlichtkrull): A bundle valued Radon transform, with applications to invariant wave equations. *Quart. J. Math. Oxford* **45** (1994) 429-461.
11. (with J. Hilgert) Analytic extensions of representations, the solvable case. *Jap. Journ. Math.* **18** (1993) 213-290
10. (with B. Ørsted) Analytic continuation of Flensted-Jensen Representation. *Manuscripta Math.* **74** (1992), 5-23.
9. (with H. Schlichtkrull) Wave propagation on Riemannian symmetric space. *J. Funct. Anal.* **107** (1992) 270-278.
8. (with T. P. Branson) Equipartition of Energy for Waves in Symmetric Spaces. *J. Funct. Anal.* **97** (1991), 403-416.
7. (with J. Hilgert and B. Ørsted) Hardy Spaces on Affine Symmetric Spaces. *J. reine und angew. Math.* **415** (1991), 189-218
6. (with B. Ørsted) The holomorphic discrete series of an affine symmetric space and representations with reproducing kernels, *Trans. Amer. Math. Soc.* **326** (1991), 385-405.
5. Symmetric Spaces of Hermitian Type. *Differential Geometry and Applications* **1** (1991), 195-233
4. (Habilitation) Causal symmetric spaces. *Mathematica Gottingensis* **15** (1990)
3. (with B. Ørsted) The holomorphic discrete series for affine symmetric spaces I. *Journal of Funct. Anal.* **81** (1988), 126-159.
2. Fourier and Poisson transformation associated to a semisimple symmetric space. *Invent. Math.* **90** (1987) 605-629.
1. Die Langlands-Parameter für die Flensted-Jensensche fundamentale Reihe. *Math. Scand.* **55** (1984) 229-244.

### a-3. Book Reviews:

3. *Analysis and Probability; Wavelets, Signals, Fractals* by P. E. T. Jorgensen. Graduate Text in Mathematics, Springer, 2006. *Journal of Approximation Theory*, **162** (2010), 233–236.
2. *Holomorphy and Convexity in Lie Theory* by K.-H. Neeb, De Gruyter Expositions in Mathematics, 8, Berlin, New York, 2000 *Jahresbericht der DMV* **104** (2002)
1. *Lie Groups, Convex Cones and Semigroups*, by J. Hilgert, K.H. Hofmann and J.D.Lawson. Oxford Univ. Press. 1989. *Jahresbericht der DMV* **95**, (1992), 5-8

#### a-4. Non Refereed Chapters in Books and Other Publications:

12. (with H. Schlichtkrull) Preface to *The Selected Works of Surður Helgason*, ix–x, AMS, 2009. Editors: G. Ólafsson and H. Schlichtkrull.
11. Fourier-greining á víxlnum grúpum . *Verpill* 2009, 34–36. (Verpill is a journal for students in mathematics and physics at the University of Iceland. The English translation of the title is: Fourier analysis on Abelian groups.)
10. (with E. Grinberg, P. Jorgensen, D. Larson, P. Massopust, T. Quinto, B. Rubin) Preface. In: Radon Transforms, Geometry, and Wavelets. *Contemporary Mathematics* **464**, vii–ix,AMS, 2008, Chief Editor: G. Ólafsson, editors E, Grinberg, P. Jorgensen, D. Larson, P. Massopust, T. Quinto, B. Rubin.
9. (with T. Quinto) Introduction. In: Ed. G. Olafsson and T. Quinto: The Radon Transform, Inverse Problems, and Tomography. *Proceedings of Symposia in Applied Mathematics*. AMS.
8. (with H. Feichtinger, P. Jorgensen and D. Larson) Introduction to *Mathematisches Forschungsinstitut Oberwolfach Report No. 10/2004, Mini-Workshop: Wavelets and Frames, February 15th-February 21st, 2004*, Oberwolfach, 2004, 3–5
7. Groups, Wavelets, and Function Spaces. In: *Mathematisches Forschungsinstitut Oberwolfach Report No. 10/2004, Mini-Workshop: Wavelets and Frames, February 15th-February 21st, 2004*, Oberwolfach, 2004, 33–36
6. The  $c$ -function for symmetric spaces. A Contribution in *Proceedings of an International Workshop on Lie Theory and its applications in physics*. Ed. H-D. Dobner, V. K. Dobrev, J. Hilgert. World Scientific, 2001
5. Unitary Representations with Reflection Symmetry. In: *Proceedings of an International Workshop on Lie Theory and its applications in physics*. Ed. H-D. Dobner, V. K. Dobrev, J. Hilgert. World Scientific, 1999
4. Causal Symmetric Spaces. Habilitation, *Mathematica Gottingensis* **15**, 1990.
3. (with B. Ørsted) Is there an orbit method for affine symmetric spaces? In: *The Orbit Method in Representation Theory*, Proceedings of a Conference held in Copenhagen August to September 1988, Ed. M. Duflo, N.V. Pedersen, M. Vergne. Birkhäuser, 1990.

2. Ph D Thesis, Die Langlands-Klassifizierung, unitäre Darstellungen und die Flensted-Jensensche fundamentale Reihe. Göttingen, 1982.
1. Several publications in *Mathematica Gottingensis*, publication of the *Sonderforschungsbereich Geometry and Analysis* at the University of Göttingen and material posted on my webpage.

**b. Accepted for Publication/in Print**

1. (with K. Wiboonton) The heat equation for injective limit of compact symmetric spaces.

**c. Submitted for Publication**

6. (with J. Christensen and A. Mayeli) Coorbit description and atomic decomposition of Besov spaces (submitted to *Numerical Functional Analysis and Optimization*).
5. (with M. Dawson and J. Wolf) Direct Systems of Spherical Functions and Representations (submitted to *Compositio Mathematica*).
4. (with A. Pasquale) Ramanujan's Master Theorem for Riemannian symmetric spaces (submitted to *Invent. Math.*
3. (with J. Christensen) Sampling in Spaces of Bandlimited Functions on Commutative Spaces.
2. (with R. Quiroga-Barranco) On the smallest dimension of isometric actions of noncompact simple groups and  $SO_0(p, q)$ -actions. Submitted to *Transformation Groups*.
1. (with J. Wolf) The Paley-Wiener Theorem and Limits of Symmetric Spaces

**e: Electronic Dissemination of Our Research, Talks and Lecture Notes**

Several lecture notes on Banach spaces, harmonic analysis and related topics are available on my webpage. Several of my talks are also available. Furthermore, Prof. R. Fabec and I have created a webpage for students in harmonic analysis where our lecture notes can be downloaded. The list of material includes:

13. Spherical functions and spherical Laplace transform on ordered symmetric spaces (25 citations).
12. Lecture notes for Math 2025, Wavelet made easy. This includes the complete course as a pdf-file.
11. (With R. Fabec), lecture notes for Math 7390, Abstract harmonic analysis.
10. Several lectures on the heat equation.
9. Lecture notes on Lie groups.
8. Lectures on Frames.
7. Three lectures to the The Radon Transform.



6. Math 7320, Lie groups and their representations.
5. Measure and integration.
4. Notes on Banach spaces.
3. Notes on Hilbert spaces.
2. Notes on Fourier series.
1. The book with J. Hilgert which has been out of print for several years.

#### f. Editorial Work

5. (with H. Schlichtkrull) Selected works of S. Helgason. AMS. 2009,
4. Main editor (with E. Grinberg, D. Larson, P.E.T. Jorgensen, P. Massopust, E.T. Quinto, and B. Rubin) *Radon Transforms, Geometry, and Wavelets*, Proceedings of the Conferences on Harmonic Analysis and Applications and two special sessions at the Annual conference in New Orleans. Contemporary Math. AMS, 2008
3. (with Ola Bratteli, Palle Jorgensen, David Kribs, and Sergei Silvestrov) Operator methods in fractal analysis, wavelets and dynamical systems Banff, December 2007, 2006. Springer. Special volume of Acta Appl. Math.
2. (with T. Quinto): The Radon transform, inverse problems, and tomography. Papers from the American Mathematical Society Short Course on the Radon Transform and Applications to Inverse Problems held in Atlanta, GA, January 3–4, 2005. Proceedings of Symposia in Applied Mathematics, **63**. AMS Short Course Lecture Notes. American Mathematical Society, Providence, RI, 2006. xii+158 pp. ISBN: 0-8218-3930-6 44-06 (44A12)
1. (with H. Feichtinger, P. Jorgensen and D. Larson) *Mathematisches Forschungsinstitut Oberwolfach Report No. 10/2004, Mini-Workshop: Wavelets and Frames, February 15th-February 21st, 2004*, Oberwolfach, 2004

#### g. Presentations

##### 2011:

164. 05/18: Sampling on Symmetric Spaces. International Symposium in Approximation Theory in conjunction with the 26th Annual Shanks Lecture, Vanderbilt, TN, May 17–20.
163. 05/12: Ohio State University: Not all limits of spherical functions are spherical.
162. 03/12-13: Sampling for bandlimited functions for Gelfand pairs. Southeastern Section Meeting of the AMS.
161. 01/06 Ramanujan's master theorem for symmetric spaces. AMS annual meeting, New Orleans.

**2010:**

160. 11/19: Tilings, Groups and Analysis. MAA meeting Pencacola.
159. 10/16: Reflection positivity and conformal symmetry. NSF supported Lie group seminar at University of California, Berkeley.
158. 06/25: Intertwining operators and the  $\cos^\lambda$ -theorem. Erlangen, Germany.
157. 06/08: Intertwining operators and the  $\cos^\lambda$ -theorem. Paderborn, Germany.
156. 03/25-26: Representations and function spaces. Journées MNRS, Strasbourg, France
155. 02/18-19: Function spaces and representations. February Fourier Talks 2010. The Norbert Wiener Center
154. 01/16: Function spaces and representations, Annual Joint AMS/MAA meeting. San Francisco.

**2009:**

153. 12/12: Invariants and inductive limits of symmetric spaces. NSF supported Lie group seminar at University of California, Berkeley.
152. 11/27: Invariants, limits of symmetric spaces, and applications. VII workshop in Lie theory and applications, Argentina.
151. 10/17: *Invariants and Application to Harmonic Analysis* AMS Sectional Meeting, Baylor University, Oct. 16–18.
150. 09/15: *Representation Theory and Function Spaces*. Colloquium University of Lund, Sweden.
149. 04/02: Wavelet sets, tilings, and groups. Seminar, Texas A&M.
148. 5/26: Reflection Positivity. Seminar talk, Technical University, Darmstadt, Germany.
147. 4/9: Invariants and application to harmonic analysis. International Conference on Lie Groups, Representations and Conformal Geometry On the Occasion of the 60th Birthday of Bent Ørsted Göttingen, Germany, April 6 - 10, 2009
146. 03/13: Wavelet Sets, Tilings, and Groups. SLU.

**2008:**

145. 11/03/08: *The Segal-Bargmann transform for limits of compact symmetric spaces*. Harmonic analysis, operator algebras and representations. Luminy,
144. 07/26: *Local Paley Wiener theorem for compact symmetric spaces*. Conference honoring Prof. Clerc, Luminy (France).
143. 06/23, 26, and 28: Series of introductory talks on harmonic analysis on compact symmetric space. Nancy.

142. 06/22: Paley Wiener type theorem for compact symmetric spaces. Seminar, Nancy
141. 3/28-30: The heat equation on Riemannian symmetric spaces and the Radon transform AMS meeting, Baton Rouge.
140. 03/29: Paley-Wiener type theorem for  $K$ -finite functions on compact symmetric spaces. AMS Sectional meeting, Baton Rouge.
139. 03/30: The heat equation on symmetric spaces and the Radon transform.
138. 1/9: Three-way tiling sets in the plane. Annual AMS meeting, San Diego.

**2007:**

137. 11/17: Local Paley-Wiener Theorem for compact symmetric spaces. VI Workshop on Lie Theory and Geometry, Cordoba, Argentina.
136. 10/6, Wavelets and three-way tiling sets in two dimensions. AMS meeting, Chicago.
135. 8/18, *Holomorphic extension, the Radon transform, the heat equation and other problems in harmonic analysis*. International Conference on Integral Geometry, Harmonic Analysis and Representation Theory in honor of Sigurdur Helgason on the occasion of his 80th birthday. Reykjavik, August 15-18.
134. 5/20, *The Paley-Wiener Theorem on Compact Symmetric Spaces and Applications*. The Midwest Geometry Conference in honor of T. Branson, University of Iowa, May 17-May 20.
133. 4/33, *Paley-Wiener Theorem for Compact Symmetric Spaces*, NSF-supported workshop on Lie Groups, Lie Algebras and their Representations, Santa Barbara, April 21–22.
132. 3/24, *The heat equation on finite and infinite dimensional symmetric spaces*. NSF-supported conference on Analysis on Homogeneous Spaces Tucson, Arizona, March 22-25, 2007.
131. 1/8, *Complex methods in harmonic analysis on symmetric spaces*, Special session in honor of G. Mackey at the joint meeting New Orleans,
130. 1/5, *Triple wavelet sets*. Workshop on *Harmonic Analysis and Applications*, Baton Rouge

**2006:**

129. 11/17, *Complex methods in harmonic analysis on symmetric spaces*, University of Iceland, Reykjavik.
128. 11/2, *Holomorphic properties of the Radon transform*, University of Aarhus.
127. 8/13, *Open problems in Harmonic Analysis, Paley-Wiener type theorems and more*. Workshop, Tambara, 8/12-8/15, Japan.
126. August 10, *Holomorphic Aspects of the Abel/Radon Transform*. Tsukuba Conference on Integral Geometry and Harmonic Analysis. Tsukuba, 8/7-10, Japan.

- 125. 7/25, *The Image of the Segal-Bargmann transform on Symmetric Spaces and Generalizations*. Lie Group and Representation Theory Seminar, RIMS, Kyoto, Japan.
- 124. 7/7 and 7/31: Two talks on *The Heat equation, the Segal-Bargmann transform and generalization*.
- 123. 5, Colloquium in Göttingen in honor of Professor Holdgrün's retirement.
- 122. 4/8-9, *The Segal-Bargmann transform for the heat equation associated with root systems and symmetric spaces*, AMS-meeting, University of Notre Dame.
- 121. 3/9, *The heat equation on symmetric spaces* MIT, Brandeis-Harvard-MIT-Northeastern Colloquium.
- 120. 3/8, *Holomorphic aspects of the Radon transform and harmonic analysis on symmetric spaces*. Lie group seminar, MIT
- 119. January, *Wavelets, multiresolution analysis and finite reflection groups*. The annual AMS meeting in San Antonio, Texas.
- 118. 11/12 *Wavelets and Radon Transform*, AMS meeting, Eugene, Oregon
- 117. 10/9 *Differential Recursion Relations for Laguerre Functions on Symmetric Cones*. AMS Sectional meeting, Annandale-on-Hudson, New York.

**2005:**

- 116. 06/17 *The image of the heat transform for symmetric spaces*. Metz, France.
- 115. 06/15 *Jordan algebra, Representations and Special Functions*. International conference on harmonic analysis in Strassbourg, France: *Analyse harmonique sur les groupes de Lie et les espaces symétriques, en l'honneur de Jacques Faraut*
- 114. 06/02 *Abstract harmonic analysis and wavelets* University of Aarhus, Denmark
- 113. 05/19 *The image of the heat transform on symmetric spaces*, University of Paderborn, Germany
- 112. 04/11 *Inversion of the Radon transform with wavelets*, Workshop on "Group theoretical methods, operator theory, and non-orthogonal expansions" which was a part of the special semester on *Modern Methods of Time-Frequency Analysis* at the *Erwin Schrödinger International Institute for Mathematical Physics*, Vienna.
- 111. 04/09 *The Radon transform and wavelets on the space of matrices*. Workshop on "Harmonic Analysis and Applications" GSF-Research Center for Environment and Health, Institute of Biomathematics and Biometry. Germany
- 110. 03/10 *The image of the Heat transform on Riemannian symmetric spaces*. Colloquium, Iowa
- 109. 03/08 *Paley-Wiener Theorem for compact symmetric spaces* Mathematical Physics seminar, Iowa
- 108. 01/30, *The image of the heat transform* Lie group seminar, Berkeley,

107. 01/06–01/09, The image of the Heat transform on Riemannian symmetric spaces. The Franco-Nordic Congress in Reykjavik. Special session on Lie Groups/Harmonic Analysis.
106. We had several other invitations, that we were not able to accept. Those include: Two talk at a conference in Tambov, Russia and the conference *Quantum Theory and Symmetries*, Varna, Bulgaria, 15-21 August 2005,

**2004:**

105. August 23–August 27: Holomorphic H-spherical distribution vectors and Hardy spaces. *Harmonic Analysis and Homogeneous Spaces*, retirement conference for Professor G. van Dijk, Department of Mathematics, University of Leiden.
104. : August 10-14, Horospherical realization of the holomorphic discrete series. *Lie Groups and Representation Theory*, Department of Mathematics and Computer Science, University of Southern Denmark, August 10-14, 2004.
103. Complex methods in harmonic analysis. July 31–August 5: Banff International Research Station for Mathematical Innovation and Discovery, workshop on *Conformal Geometry*.
102. July 19-23: Lagurre functions and polynomials of several variables. *Special Functions in Harmonic Analysis and Applications*. Kloster Irsee, Germany
101. June 11-12 *Paley-Wiener theorem for compact symmetric spaces with even multiplicities, and applications*. Seminar Sophus Lie, Metz, France
100. May 29 (With our student, M. Dobrescu) Wavelets without Groups. GPOTS, Texas A&M.
99. May 13–15: Wavelets without Groups, Sixth Joint Meeting of the AMS and SMM, Huston: Designing Frames and Wavelets: From Theory to Digitiazation.
98. April 12–19: Groups, Wavelets, and Harmonic Analysis on  $\mathbb{R}^n$ . AMS Conf. at Rider, Lawrenceville NJ, *Tomography and integral geometry*
97. February 26: Multivariable Laguerre functions and representation theory. Analysis Seminar, University of Copenhagen, Denmark
96. 02/24 The Fuglede Conjecture and related problems. Colloquium, University of Copenhagen
95. Groups, Wavlets, and Function Spaces. Oberwolfach, Feb. 20. Miniworkshop on Wavelets and Frames, Oberwolfach February 15–21. Organizers: H. Feichtinger, P. Jorgensen, D. Larson, and G. Ólafsson.
94. 01/16 Harmonic analysis on symmetric spaces and the Gelfand-Gindikin program. University of Colone, Germany
93. 01/07 Complex methods in the Harmonic Analysis. Colloquium, University of Bochum

**2003:**

- 92. 10/13 Tutorial on *Wavelets and Groups* at a workshop on *Wavelets, frames and operator theory* at Georgia Tech., Atlanta
- 91. 2/6 *Wavelets, frames, and Representations*. Colloquium, Saint Louis University
- 90. 1/17 *Groups and Frames* Annual meeting of the AMS, Baltimore, January 2003.

**2002:**

- 89. 12/9–13 *The Generalized Segal-Bargmann Transform and Special Functions*. Conference on *Representations of Lie groups, harmonic analysis on homogeneous spaces and quantization*. Lorentz Center, The Netherlands
- 88. 11: Series of lectures on *frames*. Harmonic analysis seminar, LSU
- 87. 11/9–11/10 *Group action on  $\mathbb{R}^n$  and frames*. AMS Meeting, Orlando, Florida, special session on *Wavelets, frames. and functional analysis*
- 86. 11/7 Gateway to the Major: Math 2025, Introduction to wavelets and applications. AMSmer-Workshop on 'Excellence in Undergraduate Mathematics: Diversification of Upper-Level Mathematics Programs' November 7-10, Baton Rouge.
- 85. 7/19 *Wavelets and Representation Theory*, Concentration Week on *Frames, Wavelets and Operator Theory*, Texas A& M
- 84. 7/14 Some Generalizations of the Segal-Bargmann Transform. Workshop in *Linear Analysis and Probability*, Texas A& M, July 12–July 17
- 83. 7/5 Generalization of the Laguerre Polynomials. Colloquium talk, Clausthal-Zellerfeld (Germany)
- 82. June/July: Series of lectures at the University of Bochum, Germany
- 81. 6/15-6/22 : Generalization of the continuous wavelet transform and symmetric spaces. *Analysis and Probability Related to solvable Lie Groups*, Zakopane, Poland, June 15–22, 2002
- 80. 4/20 *Wavelets and representation theory*. Miniconference on *Wavelets and frames* at Texas A& M.
- 79. 3/8-3/10 *Wavelets, Representations, and Symmetric Spaces*. AMS Meeting, Georgia Tech. Special session on *Frames, Wavelets, and Operator Theory*

**2001:**

- 78. 10/27 *Wavelets, Lie groups, and representation theory*. Workshop: *Lie Groups, Lie Algebras and their Representations*, University of California, Berkeley, October 27-28, 2001
- 77. 10/18 *Causal compactification and Hardy spaces*. MSRI, Berkeley
- 76. 8/17 *Unitary representations with reflection symmetry*. University of Cordoba, Argentina
- 75. 8/10 *Restriction principle and orthogonal polynomials*. At the conference *XIV COLOQUIO LATINOAMERICANO DE ALGEBRA*, Sierras de Cordoba, Argentina, 7/31 – 8/10, 2001

74. 4/27 – 4/29 The Huyghens' Principle

73. (with A. Pasquale) Paley-Wiener type theorems for the  $\Theta$ -spherical Laplace transform. and Symmetric space duality. The 11<sup>th</sup> Midwest Geometry Conferenc. Wichita, KS, USA

### 2000:

72. 11/26 Holomorphic representations and Hardy spaces. Seminar talk. Oklahoma State University, Stillwater

71. 11/27 The Bargmann transform and the restriction principle. Colloquium, Oklahoma State University, Stillwater

70. 07/13 The  $H$ -spherical distribution character of a holomorphic discrete series representation of an affine symmetric space. Oberwolfach. Conference *Harmonische Analysis und Darstellungstheorie topologischer Gruppen* 07.09–07.15

69. June : 6 lectures, each 90 min, at the University in Bochum, Germany, on analytic continuation in harmonic analysis and representation theory. Supported by DFG, *Globale Methoden in der komplexen Geometry*

68. 04/26 (presentation given by the co-author, A. Pasquale) The analytic continuation of spherical functions on NCC spaces. Oberwolfach. International conference *Representation Theory and Complex Analysis* 04.23–04.29

### 1999:

67. 12/22: Analytic Continuation in Representation Theory and Harmonic Analysis. The 1999 Twente Conference on Lie Groups, Dec. 20-22, 1999. University of Twente

66. 12/17: Die Harisch-Chandra  $c$ -Funktion (the Harisch-Chandra  $c$ -function). Clausthal-Zellerfeld.

65. 11/29 and 12/5: Introduction to Wavelets. University of Iceland.

64. 08/27: The  $c$ -function for non-compactly causal symmetric spaces. At: Workshop: Analysis on Lie Groups and Symmetric Spaces. Copenhagen, August 26-27, 1999

63. 07/13: The  $c$ -function for non-compactly causal symmetric spaces. At: III. International Workshop on Lie Theory and Its Applications in Physics, 07/11-07/14/1999, Clausthal-Zellerfeld, Germany.

62. 06/30: Unitary Representations with Reflection Symmetry. At: Harmonic Analysis on Homogeneous real and complex Manifolds. Zakopane, Poland, June 28 – July 3, 1999

61. 06/23 and 06/24: Introduction to symmetric spaces. University of Wroclaw, Poland. Lecture for general audience

60. 06/08: A conjugacy theorem for symmetric spaces. At: Journée Analyse Harmonique et Analyse Globale. Nancy

59. 06/01: Unitary representations with reflection symmetry. Luminy, Analyse harmonique et analyse sur les varietes, 05/31-06/05/1999

58. 05/26: Nancy: The  $c$ -function for non-compactly causal symmetric spaces

### 1998:

57. 05/26: Odense University: Analytic Continuation of Representations and Reflection Positivity.

56. 05/12: Ohio State University, Causal Compactification and Hardy Spaces

55. 04.3-04.4: Philadelphia, AMS-meeting, The Segal-Bargmann Transform on Bounded Symmetric Domains and Reflection Positivity

54. 03/25: Odense, The Danish Lie Group Seminar: Causal Compactification and Hardy Spaces.

53. 02/23-02/27: Iowa,6 talks as *Distinguished visitor* on “Harmonic Analysis and Positivity”

52. The joint annual meeting of the AMS and MAA in Baltimore, January 1998: Unitary Representations of Lie groups with Reflection Symmetry.

### 1997:

51. 11/03: The University of Iceland, Reykjavik/Iceland, The Laplace Transform on Symmetric Spaces.

50. 10/31-11/1: Reykjavik/Iceland, The 50th anniversary of the Icelandic Mathematical Society and S. Helgason’s 70th Birthday. Title: The Life and Work of S. Helgason.

49. 08/19-08/23: Copenhagen, Analysis on Lie Groups and Homogeneous Spaces. Title: Inversion Formula for the Spherical

48. (with A. Pasquale) Paley-Wiener type theorems for the  $\Theta$ -spherical Laplace transform. Laplace Transform.

47. 08/17-08/19: Clausthal-Zellerfeld, International Workshop on Lie Theory and its Applications in Physics. Title: Unitary Representations with Reflection Positivity.

46. 05/04-05/10: Oberwolfach, Harmonic Analysis and Representation Theory of Topological Groups. Title: Inversion Formula for the Spherical Laplace Transform.

### 1996:

45. 10/5-10/6: AMS conference in Lawrenceville, New Jersey: *Wave propagation on symmetric spaces*.

44. 4/18: Institut seminar, Institut Mittag-Leffler, Sweden: The wave equation, Huygens’ principle and symmetric space duality.

43. 3/09-3/11: Paris Workshop “Journées Programme de Gelfand-Gindikin”: Causal compactification and Hardy spaces.

42. 2/20: Institut seminar, Institut Mittag-Leffler, Sweden: Causal compactification and Hardy spaces



**1995:**

41. 6/20: Colloquium talk, Odense, Denmark: Wave Propagation and Symmetric Space Duality
40. May, University of Marseilles, Luminy: Spherical Functions on Ordered symmetric Spaces.
39. May, University of Marseilles, Luminy: Wave Propagation and Symmetric Space duality
38. 1/6-1/7: Seminar Sophus Lie, Darmstadt: The spherical Laplace transform on ordered symmetric spaces.

**1994:**

37. 11/4: Danish Lie groups seminar, Copenhagen: An Inversion Formula for the Spherical Laplace Transform on Ordered Symmetric Spaces
36. 10/29: AMS meeting, Stillwater, Oklahoma: Spherical Laplace Transforms and inversion formulas
35. 8/18: Third Analysis Colloquium, Bern. Harmonic analysis on causal symmetric spaces

**1993:**

34. 10/14: Oberwolfach, Germany: The geometry of causal symmetric spaces.
33. 5/29: Colloquium talk, Nice, France: Wave propagation on symmetric spaces
32. Seminar talk, MIT,USA, 2.16.1993: Spherical functions on ordered symmetric spaces
31. 5/27: Seminar Straßbourg-Nancy, Nancy, France: Harmonic analysis on causal symmetric spaces and the Character formula for the holomorphic discrete series
30. 5/17: Iowa: The Character formula for the holomorphic discrete series and harmonic analysis on causal symmetric spaces

**1992:**

29. 11/19: Colloquium talk, Aarhus, Denmark: Analysis on Causal Symmetric Spaces
28. 11/17: Colloquium talk, Copenhagen, Denmark: Harmonical Analysis on Ordered Spaces.
27. 9/17: Colloquium talk, Aalborg, Denmark: Huyghens princip
26. 7/22: Colloquium talk, Eichstätt: Wellenausbreitung in symmetrischen Räumen.
25. 6/3 and 8/5: The Danish Lie Group Seminar, RUC: The Character of a Holomorphic Discrete Series Representation on Symmetric Space
24. 1/16: Colloquium Göttingen: Das Prinzip von Huyghens

**1991:**

23. 11/26: Iowa: Hardy Spaces of Semisimple Symmetric Spaces

22. 11/25: Iowa, USA: Huygens' Principle on Symmetric Spaces
21. 8/26-8/30: Conference on Harmonic analyse on Lie groups, Sandbjerg, Denmark: Harmonic analysis on ordered symmetric spaces.
20. 2/14: Seminar Straßbourg-Nancy, Straßbourg: H-invariant distribution character of the holomorphic discrete series.
19. 2/3: Graduiertenkolleg in Bielefeld: Spherical functions on ordered symmetric spaces.
18. 1/1: Oberwolfach: Spherical distributions on symmetric spaces.

**1990:**

17. 12/18: Colloquium, Paterborn, Germany: Kausale Geometry und Analysis
16. 12/13: Colloquium, Darmstadt, Germany: Kausale Geometry und Analysis
15. 10/20-10/31: Potiers, France, Together with B. Ørsted (Odense) 10 lectures on 'Geometry and analysis on ordered symmetric spaces'
14. 10/9: 1990, Luminy, France: Holomorphic representations and Hardy spaces
13. 5/6: Iowa: Invariant cones and symmetric spaces
12. 5/5: Iowa: Harmonic Analysis on Symmetric spaces
11. 4/9: Colloquium Reykjavik, Iceland: Cones and harmonic analysis
10. 4/5: Copenhagen: Cones and symmetric spaces.
9. 3/9: Paris: Cones and Problems in Harmonic Analysis
8. 1/9: Srni, Czechoslovakia: Hardy spaces and holomorphic representations associated to semisimple symmetric spaces.

**1989:**

7. 5/32: Danish Lie group seminar, Odense, Denmark: Hardy Spaces on Affine Symmetric Spaces.

**1988:**

6. 3/24: Odense, Denmark: The Poisson transformation on symmetric spaces.
5. 11/4: Colloquium talk, Göttingen: Die holomorphen diskrete Reihe eines symmetrischen Raumes.

**1987:**

4. 10/21, 10/23, 11/5, 11/7: Odense, Denmark: The holomorphic discrete series for affine symmetric spaces.

3. 10/9: Danish Lie group seminar, Odense, Denmark: The Poisson transformation associated to an affine symmetric space.

#### 1986:

2. 4/11: Amsterdam, Holland: The analytic continuation of the Poisson and Fourier transformation associated to a semisimple symmetric space.

#### 1984:

1. 11/6: Odense, Lie group seminar, Denmark: On a series of representations related to a symmetric space.

### h. Significant Participation in Other Professional Meetings

5. Workshop Dec. 2–7, 2006, on *Operator methods in fractal analysis, wavelets and dynamical systems*, Banff, Canada. I was one of the organizers.
4. A workshop at the *American Institute of Mathematics*, Palo Alto, on *The Kadison-Singer Problem*, September 25–29, 2006.
3. Workshop on *New Mathematics and Algorithms for 3-D Image Analysis*, Jan 9–12, 2005 at *The Institute of Mathematics and its Applications*. I was one of the organizers and did not give a talk.
2. Short course on *The Radon Transform and Applications to Inverse Problems* at the Annual AMS meeting in 2005. I was one of the organizers.
1. I participated in several workshops and meetings of the Focused Research Group on Wavelets, frames and operator theory, without giving a talk.

## Grant History

### Overview

- Continuous NSF grant support, including conference grants and international travel/research grants, since we started to apply in 1996.
- Three of the grants are educational grants. In two of them, the money goes to support undergraduate students and graduate students. The VIGRE grant includes also support for postdoctoral associates.
- During the summer 1999, supported by an Polish grant for an extended visit to Poland.
- One of few member of the Department of Mathematics, LSU, of who has had *two* NSF research grants at the same time.
- Combined NSF support, including conferences and travel grants: \$4,451,049 and as PI \$4,416,249
- PI or Co-PI on *all* VIGRE proposals submitted by the department of mathematics. The Department was awarded VIGRE in spring 2008.
- International travel support from Argentina, Denmark, France, Germany, Japan, and Poland.

### NSF Grants

13. (Pending) Representation Theory and Harmonic Analysis on Homogeneous Spaces, \$270,555.
12. 2010: PI, DMS-1048571, PI (Co-PI: Boris Rubin) Workshop in Analysis and Geometry. \$33,090.
11. 2007: PI, Louisiana State University VIGRE proposal, EMSW21-VIGRE, DMS-0739382, \$3,741,924.
10. 2007: PI, Geometry and harmonic analysis related to symmetric spaces. DMS-0801010, \$269,884.
9. DMS-0637383 Workshop on Harmonic Analysis and Applications. (Co-PI Boris Rubin), \$17,603.
8. DMS-0402068 Harmonic Analysis and Lie groups, \$100,000.
7. 2002, Co-PI on NSF grant DMS-0139783, **COLLABORATIVE RESEARCH:** Focused Research on Wavelets, Frames, and Operator Theory. LSU part: \$105,529.  
Joint proposal with: A. Aldroubi (Vanderbilt), L. W. Baggett (University of Colorado), J. Benedetto (University of Maryland), C. Heil (Georgia Institute of Technology) P. E. T. Jorgensen (University of Iowa) D. R. Larson (Texas A& M University), and Y. Wang (Georgia Institute of Technology). The follow up proposal, submitted fall 2004 was declined.
6. 2001, Co-PI DMS-0202812, Midwest Geometry Conference: 2002-2004. PI: L. J. Peterson, North Dakota State University. \$34,800.
5. 2000, NSF Grant, DMS-0070607, Harmonic Analysis on Lie Groups and Spectral Symmetry. \$86,409.
4. 1998-2001: PI of the NSF-grant: Midwest Geometry Conference, 1998-2001. DMS-980377, \$40,000.
3. 1997-2000: PI (with T. Branson, P. Gilkey, P. Jorgensen) NSF-US. Cooperative Science. Spectral Theory. INT-9722779, \$14,900.
2. 1996-98: NSF Grant, No DMS-9626541, Harmonic Analysis on Causal Symmetric Spaces, \$40,000.
1. 6/1/92-11/30/95: Co-investigator in the NSF Grant No. INT-9114401, "US-Western Europe Cooperative Research in Spectral Theory (Applied Mathematics)" directed by T. Branson and P. Jorgensen (Iowa).

### Other Grants, and Travel Support

11. 2008/09, Co-PI, *Board of Regents*, Enhancing Student Professional Success. PI, L. Smolinsky. \$50,000.
10. 2006/07, PI of the *Board of Regents*, EPSCoR grant *Enhancing the LSU VIGRE proposal*, \$9,996.
9. Member of the MSRI. October 2001. Participated in the program *Integral Geometry*, MSRI, October 2001. Around \$2,000 and travel costs up to \$500.
8. August, 2001: Travel costs to visit the University of Cordoba for one month.
7. Nov-Dec. 1999: Support from the Science Institute in Reykjavik, Iceland, to visit the University of Iceland.

6. 1996-98: LEQSF(1996-99)-RD-A-12, \$25,694.
5. Spring 1996: January-May visit at the Mittag-Leffler institut. Supported by the Royal Swedish Academy of Science and the Danish Research Council, \$15,000.-
4. 8/1/91-7/31/95: One of the CoPI for the ‘Danish Lie Group’ grant supported by the Danish Research Council.
3. 2/20/1990: With T. Branson and B. Ørsted, NATO Collaborative Research Grant, No 0720/84 with the title “Conformal Spectral Theory”.
2. 86-92: Fellowship at the ‘Sonderforschungsbereich 170, Geometrie und Analysis’ Göttingen. Supported by the German Research Council. Paid for travel from Denmark to Göttingen during the time I had tenure in Denmark.
1. 2/83-9/83: Fellowship at the Science Institut, University of Iceland.

#### Other Federal Grant Activities

8. 2010 (with M. Davidson and L. Smolinsky (PI)): Enhancing LSU’s VIGRE Program. \$76,686. Board of Regents proposal. Declined.
7. 2005, PI of the VIGRE application, DMS-0602182, \$3381656. Submitted Oct. 2005. Declined.
6. 2003, PI on the NSF grant application DMS-0502220 Louisiana State University VIGRE Proposal EMSW21-VIGRE, \$3,141,921.- Site visit, Feb. 18, 2005. Declined, August 2005. We were also the PI of the VIGRE proposal, submitted in 2003.
5. 2002, PI of the VIGRE proposal, DMS-0354307, \$3311349. Declined.
4. 2001, Co-Pi on NSF grant, DMS-0135265, PI, J. Lawson: Vertical Integration of Research and Education in the Mathematical Sciences - VIGRE: Vertical Integration Through Research and Education Modules. \$2,531,934. Declined
3. 2001: CRDF, Joint proposal with V. Molchanov, Tambov State University, Russia: Harmonic Analysis and Canonical Representations. \$90,000. Declined
2. 1999, Co-PI on NSF grant 9983667. PI, J. Lawson: Vertical Integration through Research and Education Modules. \$2,357,292. Declined
1. 1999, NSF Grant, DMS-9972209, Analysis and representation theory related to special symmetric spaces. \$81,956. Declined

## Professional Recognition

### a. Awards

- 2009 LSU Rainmaker  
Distinguished Research Master
- 2008 LSU Rainmaker
- 2006 Hubert Butts Departmental Alumni Professor of Mathematics
- 2001 Featured review of our paper with P. Jorgensen: Unitary representations and Osterwalder-Schrader Duality. Ed. R. S. Doran, V. S. Varadarajan: The Mathematical Legacy of Harish-Chandra: A Celebration of Representation Theory and Harmonic Analysis, PSPM, AM, 2000
- 2000 Alpha Lambda Delta Freshman Honor Society, for Superior Instruction of Freshman Students in the Fall of 2000
- 1999 *LSU Distinguished Faculty Award 1999*
- 1998: Alpha Lambda Delta Freshman Honor Society, for Superior Instruction of Freshman Students in the Fall of 1998
- 1993: Award from the University of Roskilde for special efforts during the year 1992.

### b. Special visits and lectures

- 2008: Invited to give series of lecture on *harmonic analysis on compact symmetric spaces* at the University in Nancy.
- 2000: Invited to give a lecture series on my work on *Analytic continuation in harmonic analysis and representation theory*. This series of lectures lead to one of my most cited paper [28].
- 1998: Invited to give 5 lectures as *Distinguished Visitor* at the Department of Mathematics, The University of Iowa, February 1998. \$ 1,500.-
- 1990 Invited, together with B. Ørsted, to Potiers, France, to give a series of 10 lectures on ‘Geometry and analysis on ordered symmetric spaces’.

### c. Invitations

#### 2011

32. Visited Ohio State University, and the Max Planck Institute in Mathematics, Bonn.

#### 2010

31. Visited the University of Metz (France), Colone, Erlangen, and Paderborn (Germany).

**2009**

30. University of Lund, Sweden.
29. Visiting professor, University of Metz (May).
28. Technical University Darmstadt (one week).

**2008**

27. Visiting the University of Metz.
26. Visiting Professor, four weeks, at the University of Nancy.
25. One week visit at the University of Copenhagen, July.

**2007**

24. One week visit to the University of Copenhagen. Working with H. Schlichtkrull.
23. Two weeks visit to the University of Iceland in connection with the international conference on harmonic analysis.
22. Several shorter visits.

**2006:**

21. 3 weeks in Denmark, visiting the University of Copenhagen (working with H. Schlichtkrull) and Aarhus (working with B. Ørsted).
20. 5 weeks visit to Japan. The visit was supported by the University of Tokyo and the University of Kyoto (hosts T. Oshima and T. Matsuki).

**2005:**

19. Visit in Paderborn and Bochum Germany,
18. Visit to the University of Copenhagen and Aarhus, Denmark,
17. Visit to the University of Metz, France, working with A. Pasquale.

**2004:**

16. Part of research in pairs, Oberwolfach, with B. Krötz, University of Oregon. June, 2004. Partially supported by Oberwolfach.

**2003:**

15. October 2003, 5 hour tutorial on *wavelets, groups, and representations* at a workshop on wavelets and frames at the Georgia Institute of Technology, Atlanta.

**2003:**

14. August, two weeks at the *Sonderforschungsbereich Transregio 6029* of the Ruhr-Universität Bochum Bochum, Germany. Gave series of tutorial lectures.
13. June, one week at the workshop on wavelets and frames at the University of Colorado, Boulder.
12. May, one week at the workshop on wavelets and frames at Vanderbilt University, Nashville.

**2002:**

11. Visit to the University Clausthal-Zellerfeld, Germany.
10. Visit at the University of Bochum, Germany

**2001:**

9. One month stay in October at the MSRI, Berkeley.

Summer 2000, 2002, 2003 and 2005: Visit to the University of Bochum and the "Sonderforschungsbereich" there: *Globale Methoden in der komplexen Geometrie* and *Sonderforschungsbereich Tr-12, Symmetrien und Universalität in mesoskopischen Systemen*. Those visits were up to 1 month and included several tutorial talks and presentations.

**1999:**

8. 3 weeks in Nov./Dec. visit at the University of Iceland during my sabbatical. Partially supported by *The Science Institute of Iceland*.
7. June, visiting Professor at the University of Nancy
6. Visiting the University of Copenhagen, June, and the University of Wrocław, June/July.

Visit at the University of Odense 1987, 1988, 1989, 1996, 1997, 1999 and 2004. Mostly supported by the *Danish Research Council*.

Visits at the University of Iowa 1990, 1991 and 1993, 1995, 1996, 1997, 1998, 2004.

**1998:** One week visit to Ohio State University during the spring;

**1996:** Stay at the Mittag-Leffler Institut, the Swedish Royal Academy of Science, January - May.

**1994:**

5. Visiting Professor at the University of Marseilles, Luminy. Shorter visit again 1995.

**1993:**

4. Visit at the University in Nancy and at the University of Marseilles.

**1991:**

3. Visit to the University in Strassbourg;



**1990:**

2. Visit at the University 6 in Paris.
1. Visiting Professor at the University of Poitiers in October. Gave a series, jointly with Prof. Bent Ørsted, of 10 lectures on Hardy spaces on compactly causal symmetric spaces.

## Service

### a. Organization of Conferences and Workshops, Other Scholarly Contributions

34. With P. Jorgensen (University of Iowa), S. Silvestrov (Lund, Sweden), G. Kutyniok (University of Osnabrueck, Germany) one week workshop on Operator Algebras and Representation Theory: Frames, Wavelets and Fractals at the Research Center Oberwolfach, Germany. March 28–April 1, 2011.
33. With Milen Yakimov Workshop on Lie Groups, Lie Algebras and their Representations, LSU February 12–13, 2011 (supported by NSF).
32. With Gaik Ambartsoumian, University of Texas, Arlington, Eric Todd Quinto, Tufts University, and Boris S. Rubin, LSU. Special session on Integral Geometry: Analysis and Applications at the annual AMS meeting, January 2011.
31. With P. Jorgensen (University of Iowa) and D. Larson (Texas A&M), special session on Wavelets, Tilings, and Iterated Function Systems at the annual AMS meeting, January 2011.
30. With B. Rubin (LSU) workshop on Workshop in Analysis and Geometry, LSU, January 4-5, 2011. Supported by NSF and the LSU Council on Research.
29. B. Brenken (University of Calgary), T. Giordano (University of Ottawa), P. Jorgensen, (University of Iowa), and S. Silvestrov (Lund University, Sweden) organized a workshop at Banff International Research Station for Mathematical Innovation and Discovery, October 9 and 10, 2010.
28. The lead organizer of the AMS sectional meeting in Baton Rouge, March 28-30, 2008. (One of the biggest sectional meetings of the AMS, over 380 talks in 22 special sessions.)
27. With P.E.T. Jorgensen, D.R. Larson, and D. Speegle, special session at the AMS meeting in Baton Rouge, March 28–30, 2008, on *Wavelets, frames and multi-scale constructions*
26. Chair of the organizing committee for a conference on *Harmonic analysis in honor of Helgason's 80th birthday* in Iceland, August 2007.
25. Member of the advisory committee for the *Midwest Geometry Conference in honor of Thomas P. Branson*, to be held May 18-20, 2007.
24. With P. E. T. Jorgensen, D. Larson, P. R. Massopust, special session on *Frames and Wavelets in Harmonic Analysis, Geometry, and Applications*. AMS annual meeting, New Orleans, January 2007.
23. With E. Grinberg, P. Kuckment, E. Quinto and B. Rubin, special session on *Radon Transform, Convex Geometry and Geometric Analysis*. AMS annual meeting, New Orleans, January 2007
22. Together with B. Rubin (LSU) organization of the NSF-supported workshop on *Harmonic Analysis and Applications*, Baton Rouge, Jan 4-5, 2007

21. Together with O. Bratteli (Oslo), P. Jorgensen (Iowa), D. Kribs (Ontario), and S. Sergei (Lund), organization of a workshop Dec. 2–7, 2006, on *Operator methods in fractal analysis, wavelets and dynamical systems*, Banff, Canada
20. Organizer of a workshop on *Harmonic analysis and fractal geometry* in Baton Rouge, February 24–26, 2006
19. (Together with L. Butler (Chemistry, LSU) and T. Quinto (Mathematics, Tufts)) Workshop on *New Mathematics and Algorithms for 3-D Image Analysis*, Jan 9–12, 2006 at *The Institute of Mathematics and its Applications*
18. Member of the Scientific Committee for the retirement conference in honor of J. Faraut, Strassbourg/Nancy June 10–15, 2005. Will also speak. The other members of the Scientific Committee are J-L. Clearc (Nancy) and K-H. Neeb (Darmstadt).
17. (Together with T. Quinto ) organize a short course on *The Radon Transform and Applications to Inverse Problems* at the Annual AMS meeting in 2005.
16. Together with A. Faridani and T. Quinto, organized a special session at the annual meeting in Atlanta, January 2005, on *The Radon Transform and Inverse Problems*.
15. Part of an international organizing team for a special semester at the Erwing Schrödinger Institute, Vienna, Spring 2005
14. Together with H. Feichtinger, P. Jorgensen, and D. Larson, organizer of a *Mini workshop* on wavelets and frames, at Oberwolfach, Feb. 15–21, 2004
13. Together with Les Butler, Physics LSU, and T. Quinto (Math. Tufts) organization of a workshop on *3D-image reconstruction*. LSU, September, 2003
12. Organizer of the special session *Frames, Wavelets, and Tomography*, the AMS-meeting Baton Rouge, March 14–16, 2003
11. Organizer of the workshop *Frames and wavelets*, Baton Rouge, March 12-13, 2003
10. One of the organizers of the *Twelfth Midwest Geometry Conference*, Univ. of North Dakota, Grand Forks, North Dakota, April 2002
9. With F. Neubrander, A. Ludu and G. Lumer, organizer of the special session on *Integral Transforms* at the AMS meeting in New Orleans, January 2001
8. One of the organizers of the *Midwest Geometry Conference* in Iowa, Nov. 2000
7. Together with T. Branson, A. Sengupta and L. Smolinsky organizer of the *Midwest Geometry Conference 1998*. Louisiana State University, October 1998
6. Together with M. Flensted Jensen, Denmark, P. Sjögren, Sweden, and B. Ørsted, Denmark, organizer of the special year on “Analysis on Lie Groups” during the academic year 1995/96 at the Mittag-Leffler Institut, Sweden. Scientific organizer for the period Januar 1996 to May 1996.

5. Together with H. Schlichtkrull, organization of the “Danish Lie Group Seminar” Nov. 4 - Nov. 7. 1994
4. Organization of the ‘Danish Lie group seminar, RUC’, academic year 1991/92.
3. Together with M. Flensted-Jensen, organization of the conference ‘Fourier and Radon Transformation on symmetric spaces, in honor of Professor S. Helgason 65<sup>th</sup> birthday. Roskilde 9.10.-9.12. 1992.
2. Organization of the conferences ‘Harmonische Analyse auf Lie Gruppen und symmetrischen Räumen’, Göttingen, 1988, and ‘Harmonische Analyse und Liesche Gruppen’, Göttingen, 1991.
1. With Prof. Kneser and Prof. Patterson, organization of the conference ‘Algebraic groups and representation theory’, Göttingen, 1986.

#### **b. Professional Service, Including Referee Work**

- On the editorial board of *Journal of Lie Theory, Analysis and Mathematical Physics*, *ISRN Mathematical Analysis*.
- Referee for NSF.
- Referee for following journals, some of them several times:
  39. *Acta Applicandae Mathematicae*,
  38. *Advances in Computational Mathematics*,
  37. *Advances in Mathematics*
  36. *Acta Mathematica*,
  35. *Annals of Mathematics*
  34. *Annales de l’institut Fourier*,
  33. *Banach Center Publications*,
  32. *Canadian Journal of Mathematics*,
  31. *Chaos, Solitons and Fractals*
  30. *Communications in Analysis and Geometry*,
  29. *Communications in Mathematical Physics*;
  28. *Contemporary Mathematics*,
  27. *Contemporary Mathematical Physics*,
  26. *Indagationes Mathematicae*

25. *International Journal of Mathematics and Mathematical Sciences*;
  24. *International Mathematics Research Notices*,
  23. *Inventiones Mathematicae*,
  22. *Inverse Problems in Science and Engineering (IPSE)*,
  21. *ISRN Mathematical Analysis*,
  20. *Journal of Mathematical Analysis and Applications*,
  19. *Journal für die reine und angewandte Mathematik, (Crelle Journal)*,
  18. *Journal of Fourier Analysis and Applications*,
  17. *Journal of Functional Analysis*,
  16. *Journal of Geometric Analysis*,
  15. *Journal of Lie Theory*,
  14. *Journal of Mathematical Physics*,
  13. *Mathematica Scandinavica*,
  12. *Mathematische Annalen*,
  11. *Mathematische Nachrichten*,
  10. *Mathematische Zeitschrift*,
  9. *Monatshefte für Mathematik*,
  8. *Representation Theory*,
  7. *Reviews in Mathematical Physics*,
  6. *SIGMA*
  5. *Semigroup Forum*,
  4. *Science in China, Series A: Mathematics*
  3. *Trans. AMS*
  2. *Transformation Groups*,
  1. *Proceedings of the AMS*.
- Referee for the *John Simon Guggenheim Memorial Foundation* in 2003.
  - Referee *Austrian Science Fund* and *The Icelandic Center for Research*

- Referee for the *International Science Foundation*.
- I have refereed book projects for *Oxford University Press* and *SIAM*. I have also refereed two textbooks for well-known publishers;

### c. University and Departmental Service

44. Member of the *Council on Research*, January 2006–fall 2011 (usual service is 3 years). Chair 2009.
43. Chaired a group to rewrite the description of the LSU Rainmaker Awards, summer 2011.
42. Chair of the *Research Development Group in Physical Sciences*, January 2006–fall 2006.
41. Member of the *CDLS Selection Committee*, 2010-.
40. Member of the *Equipment Maintenance Fund* selection committee, 2008-fall 2011.
39. Member of the *Porcelli Lecture and Scholarship Committee*, Department of Mathematics.
38. Member of the *Research-Related Administrative Procedures (RRAPR)* Committee, 2004-2007.
37. Chair of the promotion committee for assistant professor H. He. 2009/2010.
36. Chair of the promotion committee for associate professor Milen Yakimov, 2008/2009.
35. Chair of the mentoring committee for assistant professor R. Oberling, 2010- .
34. Chair of the mentoring committee for assistant professor Hongyu He, 2009–2010.
33. Member of the mentoring committee for assistant professor Phuc Cong Nguyen, 2009–.
32. Member of the IRC, Department of Mathematics, 2009/2010.
31. Chair of the VIGRE Steering committee and VIGRE director, 2008- .
30. Member of the Executive Committee, Department of Mathematics several times, latest term 2011-2014.
29. 2004- Member of the *Committee on Mentoring and Evaluation*, Department of Mathematics.
28. Chair of the *IRC*, Department of Mathematics, 2006/2007.
27. Member of the Porcelli Lecture and Scholarship Committee 2006- .
26. Member of the *IRC*, Department of Mathematics, 2004/2005.
25. Member of the *P&T committee* at the A&S, 2002-2006.
24. President of the *A&S-senate* (2003/2004).
23. Member of the *Council of Policy Committees* (2003/2004).

22. Chair of the *Academic Oversight Committee* College of A&S, 2003/2004.
21. First vice-president of the A&S-senate (2002/2003).
20. Chair of the *Faculty Welfare Committee*, A&S-senat
19. Chair of the *VIGRE committee*, Department of Mathematics, 2002–.
18. Member of the *Executive committee*, Department of Mathematics, 2002–2004.
17. Member of the College Senate, Fall 2001-end of summer 2005. Member of the *Steering Committee*, 2002–2005.
16. Member of the *Academic Freedom and Scholarship* committee, 2001/2002.
15. Member of the Committee on salaries at the Department of Mathematics, Spring 2001.
14. One of the organizers and initiators for the Mathematics-Physics-Computer Science seminar, during the spring 2000. The other organizer was Ludu (Physics).
13. Initiated and now edit the new *Electronic Preprint Series* at the Department of Mathematics.
12. Chair of the *Applied Mathematics Committee*, Oct. 1999-2000.
11. Member of the Executive committee, Department of Mathematics, 1998-2000.
10. Chair of the promotions committee for L. Smolinsky, 19998 and 1999.
9. Member of the small hiring committee at the Department of Mathematics, LSU, 1998-.
8. Member of the hiring committee at the Department of Mathematics, RUC, 1992.
7. Student advisor in Göttingen from 89-91.
6. Evaluation of the course in elementary calculus at the University at Roskilde, 1992.
5. Referee for the PhD Thesis of J.Kockmann, Göttingen, and F. Betten. Göttingen. Referee for the Habilitation Thesis of H. Thorleifsson, Göttingen, 1994.
4. Member of several Doctoral committees at LSU.
3. 2009– : Member of the *Habilitation Committee* for P. Massopust, Technical University, Munic.
2. 2001: Member of the *Habilitation Committee* for A. Pasquale, Clausthal Zellerfeld, Germany.
1. 2001: Member of the Ph.D. committee for M. Y. Angeli, Nancy. The title of his thesis is *Analyse harmonique sur les cones stélites*.

### c. Theses/Dissertations Directed and Student Mentoring

Students in Mathematics at LSU do usually select a thesis option for an MS degree.

9. J. Christensen (August 2009) Function Spaces, Wavelets and Representation Theory. Postdoc, Univ. of Maryland, College Park, Maryland and Tufts University August 2011–.
8. K. Wiboonton (August 2009) The Segal-Bargmann Transform on Inductive Limits of Compact Symmetric Spaces. At an University in Thailand
7. M. Aristidou (August 2005): *Laguerre Functions Associated to Euclidean Jordan Algebras*. Assistant Professor, Digipen Institute of Technology, Redmond, Washington.;
6. M. Dobrescu (August 2005): *Wavelet Sets with and without Groups and Multiresolution Analysis*. Tenure track at Christopher Newport University, Virginia.;
5. T. Johansen (August 2004): *Orbit Structure on the Silov Boundary of a Tube Domain and the Plancherel Decomposition of a Causally Compact Symmetric Space, with Emphasis on the Rank One Case*. HARP-sponsored Research Post-Doc in harmonic analysis at Universität Paderborn (Germany), with a 1-term visit at the University of Iowa for spring, 2005. Now Assistant Professor at Christian-Albrechts Universität zu Kiel, Germany.;
4. I. Hossain (MS with concentration in Applications): *Query by Image Content Using Wavelets and Gibbs-Markov Random Fields*.
3. Co-advisor, main advisor Prof. H. Holdgrün: F. Betten (Göttingen, 1996): *Kausale Kompaktifizierung kompakt kausaler Räume* (Causal compactification of compactly causal spaces).
2. Co-advisor, main advisor Prof. H. Holdgrün: J. Kochmann
1. Co-advisor, main advisor Prof. H. Holdgrün: H. Thorleifsson (Göttingen, 1987): *Die Langlandsparameter der Leiterdarstellung von  $U(p, q)$*  (The Langlands parameters of the Ladder representation of  $U(p, q)$ ).

We are chairing the following graduate student committees at the moment:

4. A. Cross.
3. S. Dann. Will graduate August 2011. Postdoctoral position at the University of Missouri.
2. M. Dawson.
1. W. Vivian He.

Other mentoring work:

2. Mark Lambert, *Chancellor's Future Leaders in Research* program.
1. V. Taravella, sophomore at St. Josephs Academy. Together with I. Hossain, I am working with her on a Science Fair project on imaging.

#### **d: Educational service at LSU**



1. We are advising 4 PhD students now.
2. Previously, chair of 5 Doctoral committees at LSU.
3. Deans representative on 3 Doctoral committees at LSU.
4. Have been member of several Doctoral committees at Department of Mathematics at LSU. At the moment I am a member of the committee for Se-Jong Kim.
5. Actively participated in and/or initiated several changes and initiatives at the graduate level. In particular, together with L. Smolinsky, initiated the Graduate Education & Acclimation the University eXperience (GEAUXmath@ LSU) program that started in August 2007.
6. Mentored several new faculty members in grant writing.
7. Mentoring one undergraduate student in the program *Chancellor's Future Leaders in Research*.
8. Advised 3 students in *Communicating Math..*
9. Organized a multidisciplinary course on 3D-imaging together with faculty members from Chemistry, Biology, and Computer Sciences.
10. Have actively participated in setting up the mentoring system for graduate students to prepare them for job applications and write a CV.
11. Actively participated in curriculum discussion and development during my tenure at LSU, in particular as a member, and since 2002 chair, of the Departmental VIGRE committee which has been driving force in the curriculum discussion and has proposed several new initiatives at the Department, both on the graduate and undergraduate level.
12. The PI of four VIGRE proposals. Two of them resulted in a site visit. All of those proposals have lead to important changes in the graduate and undergraduate program at LSU.
13. PI or Co-PI in all VIGRE proposals submitted by the department.
14. Chaired the *Applied Mathematics Committee* 1999-2000 as the program *Master with Concentration in in Application* was designed.
15. Designed the gateway class **Math 2025, Wavelet Made easy** and taught it the first 3 years. Wrote the lecture notes that are still used and posted them on my webpage.
16. Designed the graduate class **Applied Harmonic Analysis and Wavelets** and taught the class several times.
17. Together with R. Fabec, I designed a one year graduate class on **Abstract Harmonic Analysis and Representation Theory**. We wrote lecture notes for the class. Those notes are available on the internet. We have contact the AMS for publication of the notes as a text book. Evaluations are not included for HNRS 3035 as 5 instructors were involved.

**e: Evaluations**

Semester	Course Section	Technical Quotient	TQ Dep. av.	Attitude Quotient	AQ Dep. av.	Overall Rating	OR Dep. av.
S 2009	No teaching because of grant activities						
F 2008	7390-1	4.4	4.3	4.6	4.5	4.7	4.6
	1550-22	4.4	4.1	4.6	4.2	4.6	4
S 2008							
F 2007	7390	4.3	4.0	4.4	4.3	4.0	3.9
	2058	5.5	4.5	4.5	4.5	4.6	4.6
S 2007	Grant buy-out to prepare the VIGRE proposal						
F 2006	On Sabbatical						
S 2006	7390-1	4.8	4.24	5	4.52	5	4.36
	7390-2	4.8	4.24	4.80	4.52	5	4.36
	4032-1	3.94	4.24	4.71	4.52	4.47	4.36
F 2005	2057-5						
S 2005	No teaching duties because of grant relive and previous overload						
F 2004	1552-9	4.1		3.9		4.2	4.3
	1552-12	4.2		4.2		4.3	4.3
	2025-1	4.3		4.4		4.4	4.3
S 2004	No teaching, President of the A&S Senate						
F 2003							
S 2003	7390	4.8	4.6	4.7	4.6	4.8	4.6
F 2002	2090-6	3.40	3.65	3.10	3.51	3.36	3.71
	2025-1	3.48	3.48	2.83	2.83	2.89	2.89
S 2002	4325-1	3.67	3.67	3.58	3.58	3.73	3.73
	7370-1	3.83	3.83	3.70	3.17	3.80	3.80
F 2001	2025-1	3.63	3.63	3.25	3.25	3.44	3.44
S 2001	2025-1	3.41	3.41	3.05	3.05	3.13	3.13
	7390-1	New teacher evaluation for graduate courses					
F 2000	1550-25	Lost, only the comments from the students could be found					
	1550-30	3.45	3.33	3.11	2.85	3.21	2.96
S 2000	7312-1	3.77	3.77	3.59	3.59	3.86	3.86
	7390-1	3.79	3.79	3.79	3.79	3.71	3.71
F 1999		On sabbatical leave					
S 1999	2065-2	3.68	3.46	3.42	3.16	3.63	3.27
	7390-1	New teacher evaluation for graduate courses					
F 1998	7390-1	New teacher evaluation for graduate courses					
	1552-9	3.50	3.41	3.09	3.08	3.35	3.24
S 1998	7312-1	New teacher evaluation for graduate courses					

F 1997	2070-1	3.71	3.67	3.60	3.50	3.80	3.75
	2070-2	3.64	3.67	3.40	3.50	3.69	3.75
S 1997	2057-4	3.45	3.44	3.25	3.17	3.43	3.29
	7390-2	3.60	3.80	3.75	3.88	3.60	3.80
F 1996	1552-8	3.53	3.21	3.00	2.89	3.44	3.03
	2065-5	3.69	3.31	3.27	2.94	3.50	3.03
S 1996		On leave in Sweden					
Semester	Course Section	Technical Quotient	Technical Quotient all sections	Attitude Quotient	Attitude Quotient all sections	Overall Rating	Overall Rating all sections
F 1995	1550-15	3.61	3.27	3.06	2.79	3.29	2.79
	7370-1	3.84	3.84	3.75	3.75	3.50	3.50
S 1995	1550-10	3.12	3.34	2.66	3.17	2.88	3.29

## f. Teaching History

The table below lists the courses we have taught at LSU, in most cases together with the number of students enrolled in each section. Usually we conduct around 2 or 3 reading classes with graduate students per semester. Those, and work with PhD students, are not contained in the following list. The reading classes have been on material like *complex analysis*, *distribution theory*, and *wavelets and applied harmonic analysis*. All classes are in mathematics. I usually have NSF summer support and have therefore never taught classes during the summer except a reading class during the summer 2006 to prepare two students for their graduate study.

Courses taught			
Semester	Number	Name	Enrollments
F 2009	2025-2	Wavelets made easy	31
	7370-1	Representations of Lie Groups	9
	4999-1	(With Prof. He) VIGRE Vertically Integrated Research: Physics and Group Representation	8
	Two graduate PhD students finish in August		
S 2009	No teaching		
F 2008	1550-22	Calculus	39
F 2008	7390-1	The Heat Equation	9
S 2008	7350-1	Complex Analysis	
	HNRS-3035	3D Image Acquisition and Analysis: A Multidisciplinary Field with Broad Applications in Science and Medicine	10
F 2007	7390-1	Harmonic Analysis, Representation theory	
F 2007	2058	Honor class in Calculus II	
S 2007	No teaching		
F 2006	On Sabbatical		
Summer 2006	4999-2	Reading class Advanced Calculus	2
S 2006	4032-1	Advanced Calculus II	27
S 2006	7390-1	Abstract harmonic analysis II	7
S 2006	7390-2	Deep reading seminar	6

Courses taught			
Semester	Number	Name	Enrollments
F 2005	2057-5	Calculus III	35
S 2005	No classes. Overload and grant relive		
F 2004	1552	Calculus II	
F 2004	1552	Calculus II	
	2025-1	Wavelets made easy	
S 2004	No teaching, A&S senate President		
	One MS student and one PhD student finish in August		
F 2003	2025-1	Wavelet made easy	25
	7390	Harmonic Analysis I	5
S 2003	7390	Applied Harmonic Analysis and Wavelets	7
F 2002	2025-1	Integral transform and their applications	17
	2090-6	Elementary Differential Equations	36
S 2002	4325-1	Fourier Analysis	16
	7370-1	Lie groups and their Representations	8
F 2001	2025-1	Integral transform and their applications	15
	First 1/3 of 4038-1	Mathematical Methods in Engineering	
S 2001	2025-1	Integral transforms and their applications	25
F 2000	7390-1	Harmonic Analysis	5
	1550-25	Calculus	
	1550-30	Calculus	
S 2000	7312-1	Measure Theory	13
	7390-1	Applied Harmonic Analysis and Wavelets	9
F 1999	Sabbatical leave		
S 1999	2065-2	Elementary Differential Equations	31
	7390-1	Applied Harmonic Analysis and Wavelets	6
F 1998	7390-2	Harmonic Analysis	7
	1552-9	Calculus	30
S 1998	7312-1	Real Analysis	14
F 1997	2070-1	Mathematical Methods in Engineering	29
	2070-2	Mathematical Methods in Engineering	20
S 1997	2057-4	Multidimensional Calculus	33
	7390-4	Harmonic Analysis	5
F 1996	1552-8	Calculus II	37
	2065-5	Elementary Differential Equations	29
S 1996	Scientific Organizer at the Mittag-Leffler Institute in Sweden		
F 1995	1550-15	Calculus I	30
	7370-1	Lie Groups	7
S 1995	1550-10	Calculus	39
F 1994	2090-4	Elementary Differential Equations	38
	7550-1	Remanning Geometry	7
S 1994	Leave at the University of Roskilde, Denmark		
F 1993	2070-1	Mathematical Methods in Engineering	
	4031-2	Advanced Calculus	
S 1993	2057-7	Multidimensional Calculus	
	2065-4	Elementary Differential Equations	