Institute for Mathematical Sciences
Copenhagen University

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G. Grubb

SHORT CURRICULUM VITAE FOR GERD GRUBB.

Studies and degrees: Undergraduate studies in mathematics, physics, chemistry and astronomy at Copenhagen University 1956-59. Magister (in mathematics) at Århus University 1963. Ph.D. at Stanford University, California, 1966 (advisor Ralph S. Phillips), "A characterization of the non-local boundary value problems associated with an elliptic operator". Dr. phil. at University of Copenhagen 1975, "Semiboundedness and other properties of normal boundary problems for elliptic partial differential operators".

Positions: Teaching assistant at Århus Univ. 1959-1963. Research and teaching assistant at Stanford Univ. 1963-66. Research fellowship at Univ. of Copenhagen 1966-69 (the year 1968-69 was spent at Université de Paris). Associate professor at Univ. of Copenhagen from 1969 (first half of 1979 spent at Ecole Polytechnique, Palaiseau), various promotions at Copenhagen Univ. through the years ending with full profesorship from 1994.

Awards: Marie Lønggaards Rejselegat 1980. The Hermer Prize in 1985 (awarded jointly by Univ. of Copenhagen, Denmark's Technical Univ. and the Royal Agricultural School). Docteur Honoris Causa at Université de Reims 1988.

Grants and networks: Fulbright Travel Grant 1963-1966 for Ph.D. studies at Stanford U. Many grants from the Danish Nat. Sci. Found. (and other sources, e.g., EU) for travels, workshops and invitations of guests through the years. Member of Danish (Science Foundation funded) and international (EU or EMS funded) networks for scientific collaboration and exchanges.

Currently: member of the network "Mathematical Physics" 2009–2011 funded by FNU.

Teaching: Many subjects in analysis, from undergraduate up to Ph.D. level. Advisor of master's and Ph.D. theses.

Research in functional analysis and in particular partial differential equations (linear and nonlinear) and pseudodifferential equations, and their boundary problems — and applications of these theories to, e.g., mathematical physics, hydrodynamics, geometric analysis, spectral theory, noncommutative geometry.

Participation (often giving an invited talk) in numerous international meetings and conferences. Invited short or long stays at universities in France, USA, Italy, Sweden, Japan, Russia, Germany, Great Britain, Poland, Finland, Iceland ...

Member of various committees evaluating dissertations, evaluating applicants for positions (from stipends up to full professorships), organizing international meetings (primarily in France, Germany, Iceland, Denmark and joint Danish-Swedish meetings). Many reviewing and referee tasks.

Administrative tasks: 5 years as chairman of the mathematics studies committee, chairman of the committee planning the mathematics-economics studies at Copenhagen Univ.,

4 year's membership of FLUNA (the ministerial advisory board on natural sciences in Denmark), 4 year's membership of the mathematics committee for the Swedish Natural Science Foundation. Member 1993–2002 and chairman 1996-2002 of the Copenhagen Univ. Natural Sciences Faculty committe on Ph.D. studies. Administrator of the Danish Network in PDE (supported by SNF) 2003–2005.

Selected recent publications

[GS95] G. Grubb and R. T. Seeley, *Weakly parametric pseudodifferential operators and Atiyah-Patodi-Singer boundary problems*, Inventiones Math. **121** (1995), 481–529.

[G96] G. Grubb, *Functional Calculus of Pseudodifferential Boundary Problems, Second Edition*, Progress in Mathematics, vol. 65, Birkhäuser, Boston, 1996, 522 pp.

[G01] G. Grubb, *Nonhomogeneous Dirichlet Navier-Stokes problems in low regularity L_p Sobolev spaces*, J. Math. Fluid Mech. **3** (2001), 57–81.

[G03] G. Grubb, *Spectral boundary conditions for generalizations of Laplace and Dirac operators*, Comm. Math. Phys. **240** (2003), 243–280.

[GSc04] G. Grubb and E. Schrohe, *Traces and quasi-traces on the Boutet de Monvel algebra*, Ann. Inst. Fourier **54** (2004), 1641–1696.

[G05] G. Grubb, *On the logarithm component in trace defect formulas*, Comm. Part. Diff. Equ. **30** (2005), 1671–1716.

[G06] G. Grubb, *Known and unknown results on elliptic boundary problems*, Bull. Amer. Math. Soc. **43** (2006), 227–230.

[G08] G. Grubb, *The local and global parts of the basic zeta coefficient for pseudodifferential boundary operators*, Math. Ann. **341** (2008), 735–788.

[BGW09] B.M. Brown, G. Grubb and I. G. Wood, *M-functions for closed extensions of adjoint pairs of operators, with applications to elliptic boundary problems*, Math. Nachr. **282** (2009), 314–347.

[G09] G. Grubb, *Distributions and Operators, Graduate Texts in Mathematics 252*, Springer-Verlag, New York, 2009, 461 pp.