

# Curriculum Vitae – Hans G. Kaper

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## Current Address

Division of Mathematical Sciences  
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## Education

Ph.D. 1965 Mathematics and Physical Sciences (cum laude)  
Rijksuniversiteit Groningen, Netherlands  
M.S. 1960 Mathematics and Physical Sciences  
Rijksuniversiteit Groningen, Netherlands  
B.S. 1957 Mathematics (minors: Physics and Astronomy)  
Rijksuniversiteit Groningen, Netherlands

## Professional Interests

Applied mathematics, mathematical analysis, scientific computing  
Nonlinear differential equations, bifurcation phenomena  
Sound synthesis and scientific sonification

## Current Positions

Senior Mathematician, Argonne National Laboratory  
Program Director, National Science Foundation  
Senior Fellow, Computation Institute of Argonne National Laboratory  
and the University of Chicago  
Adjunct Professor, School of Music, University of Illinois at Urbana–Champaign

## Employment History

Argonne National Laboratory MCS Division Director, 1987–91  
Senior Mathematician, 1982–present  
Mathematician, 1969–82  
Rijksuniversiteit Groningen Associate Professor, 1967–69  
Assistant Professor, 1965–67

## Visiting and Temporary Positions

Program Director	National Science Foundation, 2001–2004, 2005–present
Visiting Professor	Université Bordeaux 1, Bordeaux, France, 2000
Visiting Professor	Université Toulouse I, Toulouse, France, 1995
Visiting Professor	Université Claude Bernard, Lyon, France, 1993
Adjunct Professor	Northern Illinois University, 1982–92
Visiting Professor	Northwestern University, 1978–80, 1984–85
Visiting Professor	Universität Wien, Vienna, Austria, 1976–77
Visiting Professor	Universiteit van Amsterdam, 1976–77
Sr. Scientific Officer	Mathematisch Centrum, Amsterdam, 1976–77
Research Associate	Stanford University, 1966–67
Research Assistant	Rijksuniversiteit Groningen, 1962–65
Research Assistant	CEA, Fontenay-aux-Roses, France, 1961–62
Teaching Assistant	Rijksuniversiteit Groningen, 1958–61
Summer Employee	Philips, Eindhoven, 1959

## Honors

Corresponding Member – Koninklijke Nederlandse Academie van  
Wetenschappen (Royal Netherlands Academy of Arts and Sciences)  
Foreign Assignment, Argonne National Laboratory, 1976–77  
NATO Science Fellowship, 1966–67  
EURATOM Research Fellowship, 1961

## Languages

Fluent in Dutch, English, French, German

## Professional Societies

American Mathematical Society (AMS)  
Society for Industrial and Applied Mathematics (SIAM)  
Wiskundig Genootschap (Amsterdam)  
International Computer Music Association (ICMA)  
International Community for Auditory Display (ICAD)

## Professional Activities

Associate Editor	Integral Equations and Operator Theory Transport Theory and Statistical Physics J. of Engineering Mathematics
Editor-at-Large	Applied Mathematics, Marcel Dekker, Inc.
Reviewer	NSF, DOE
Referee	Various professional journals
Reviewer	Mathematical Reviews, 1974–84
Visiting Lecturer	SIAM, 1978–84
Consultant	Reactor Centrum Nederland, 1967–69

## Committee Activities

- Chairman – *Arts at Argonne*; Argonne, 1988–2005
- Chairman – Review Committee for Mathematics Research in the Netherlands; August 2002
- Member – Committee of Visitors, Division of Mathematical Sciences, National Science Foundation; February 2001
- Co-Chairman – Organizing Committee, Theory Institute *Dimension Reduction for Chemical Kinetics*; Argonne, June 2000
- Member – Program Panels, Division of Mathematical Sciences, National Science Foundation; 1999, 2000, 2005
- Co-Chairman – Organizing Committee, Theory Institute *Reduction Mechanisms in Chemical Kinetics*; Argonne, June 1999
- Co-Organizer – Minisymposium *Challenging Problems in Large-Scale Computing*; ICIAM 99, Edinburgh, Scotland, July 1999
- Member – Illinois Arts Council, Presenters Development Program Panel; 1998–1999
- Co-Organizer – Minisymposium *Large-Scale Scientific Computing in Physics and Engineering*; SIAM 45th Anniversary Meeting, Stanford University, July 1997
- Co-Chairman – Organizing Committee, Theory Institute *Computational Superconductivity*; Argonne, March 1996
- Member – Physical Research Senior Advisory Group; Argonne, 1993–1994
- Chairman – Organizing Committee, Theory Institute *The Earth's Climate as a Dynamical System*; Argonne, September 1992
- Director – NATO Advanced Research Workshop *Asymptotic-induced Numerical Methods for Partial Differential Equations, Critical Parameters, and Domain Decomposition*; Beaune, France, May 1992
- Chairman – Organizing Committee, Theory Institute *Mathematics of the Ginzburg–Landau Equation*; Argonne, January 1992

- Member – Policy Board, Concurrent Supercomputing Consortium (CCSC), 1991
- Member – Executive Committee, NSF S&T Center for Research in Parallel Computing (CRPC), 1987–91
- Organizer – Minisymposium *Nonlinear Diffusion Equations*; ICIAM 91, Washington D.C., July 1991
- Organizer – Minisymposium *Global Climate Modeling*; ICIAM 91, Washington D.C., July 1991
- Chairman – Organizing Committee, Workshop *Partial Differential Equations on the Sphere*; Argonne, August 1990
- Co-Chairman – Organizing Committee, Workshop *Asymptotic Analysis and Numerical Methods for Partial Differential Equations*; Argonne, February 1990
- Chairman – Organizing Committee, 26th Midwest Partial Differential Equations Conference; Argonne, November 1989
- Member – Organizing Committee, Seventh Int'l Conf. on Mathematical and Computer Modeling; Chicago, August 1989
- Chairman – Organizing Committee, Focused Research Program *Spectral Theory and Boundary Value Problems*; Argonne, September 1986–August 1987
- Chairman – Job Applicant Screening and Selection Committee; MCS Division, Argonne National Laboratory, 1986–1991
- Chairman – Organizing Committee, 13th Midwest Differential Equations Conference; Argonne, October 1984
- Chairman – Organizing Committee, Workshop *Spectral Theory of Sturm–Liouville Differential Operators*; Argonne, May–June, 1984
- Chairman – Library Committee; MCS Division, Argonne National Laboratory, 1982–88, 1994–97
- Chairman – Ad-Hoc Committee for Library Computer Usage; Argonne National Laboratory, 1982
- Chairman – Program Committee, SIAM–1981 Fall Meeting; Cincinnati (Ohio), October 1981
- Member – SIAM National Program Committee, 1979–82
- Member – Ad-Hoc Committee for Theory; Argonne National Laboratory, 1981
- Chairman – Program Committee for Applied Analysis; Office of Basic Energy Sciences, U.S. Dept. of Energy, 1977–80
- Co-Chairman – Organizing Committee; SIAM–1976 National Meeting, Chicago, June 1976
- Member – Undergraduate Curriculum Committee for Mathematics and the Physical Sciences; Rijksuniversiteit Groningen, 1967–69