#### Curriculum vitae

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Family name von Heijne

Given names Nils Gunnar Hansson

Birth date 10 June 1951

Birth place Gothenburg, Sweden

Citizenship Swedish

Address Gulsparvsvägen 1, S-161 42 Bromma, Sweden

#### **Exams**

- Master of Science (chemistry) Royal Institute of Technology, Stockholm, 16 January 1975
- Ph.D. (theoretical physics) Royal Institute of Technology, Stockholm, 6 February 1980
- Docent (theoretical biophysics) Royal Institute of Technology, Stockholm, 16

  March 1983

# **Professional positions**

- Assistent (teacher) at the Department of Theoretical Physics, Royal Institute of Technology from July 1975 through June 1980
- Postdoc, Department of Microbiology and Immunology, University of Michigan, Ann Arbor from July 1980 to July 1981.
- Assistant Professor (Research grant NFR "Biomolecular structure-function relationships") from July 1981 (half-time from January 1982 through June 1985) through December, 1988
- Science correspondent for the Swedish National Radio (half-time) from January 1982 through June 1985
- Visiting Professor, Molecular Biology Institute, UCLA, January through June 1987
- Associate Professor (Särskild forskartjänst, NFR) in Theoretical Molecular Biology, January 1989-June 1994
- Visiting Professor, Protein Engineering Research Institute, Osaka, Japan, August through October 1990
- Group Leader, Karolinska Institute Center for Structural Biochemistry, NOVUM, Huddinge, October 1991-June 1994

Professor of Theoretical Chemistry, Stockholm University, July 1994-present Director of Stockholm Bioinformatics Center, 2000–2006

Director of the Center for Biomembrane Research, 2006-2016

Vice Director, Science for Life Laboratory Stockholm, 2009- 2015

Director of the Science for Life Laboratory National Cryo-EM Facility, Stockholm, 2015 – 2020.

Visiting Professor, Rockefeller University, New York, 2013 - present

### **Publications**

~380 original articles and reviews

#### Scientific work

Has worked mainly on problems related to protein sorting and membrane protein biogenesis and structure. The work includes both bioinformatics methods development (e.g. methods for prediction of signal peptides and other sorting signals as well as prediction of membrane protein topology) and experimental studies in *E. coli* and eukaryotic systems.

The most important achievements include the discovery and experimental validation of the so-called "(-1,-3)-rule" (describes signal peptide cleavage sites; EJB 133:17, JMB 184:99) and the "positive inside" rule (describes membrane protein topology; EMBO J 5:3021, Nature 341:456, Cell 62:1135, Cell 77:401), the development of widely used prediction methods (e.g., TopPred, SignalP, TargetP, TMHMM; JMB 225:487, Prot. Engineer. 10:1, JMB 300:1005, Nature Meth. 8:785, JMB 305:567, JMB 327:735, JMB 340:783, PNAS 105:7177), the first proteome-wide theoretical and experimental studies of membrane protein topology in E. coli and S. cerevisiae (Protein Sci. 7:1029, Science 308:1321, JMB 35:489, PNAS 103:11142), the first quantitative analysis of the energetics of membrane protein assembly in vivo (Nature 433:377, Science 307:1427, Nature 450:1026, PNAS 106:11588; Nature Struct.Mol.Biol 19:1018; PNAS 113:10559), theoretical and experimental studies of so-called dualtopology membrane proteins and their role in the evolution of membrane protein structure (Nature Struct.Mol.Biol. 13:112, Science 315:1282, Science 328:1698, PNAS 114:7987), demonstration of dynamics in protein topology (Nature Chem Biol,, in press), and studies of cotranslational protein folding

and secretion (*Nature Struct.Mol.Biol.* 19:1018; *PNAS* 110:14640; *Nature Struct.Mol.Biol.* 22:145; *Cell Rep.* 12:1533; *Nature Struct.Mol.Biol.*, 24:221).

According to Web of Science (Google Scholar), the cumulated work has been cited  $\sim$ 74,200 ( $\sim$ 106,000) times, h-index = 102 (122).

# Supervised Ph.D. theses

Ylva Gavel, 1991 (Royal Institute of Technology, together with Prof. Clas Blomberg)

Helena Andersson, 1993 (Karolinska Institutet)

Wim van Klompenburg, 1997 (Utrecht University, Promotor together with Prof. Ben de Kruijff)

Henrik Nielsen, 1999 (Stockholm University)

Annika Sääf, 1999 (Stockholm University)

Erik Wallin, 1999 (Stockholm University)

IngMarie Nilsson, 1999 (Karolinska Institutet)

Marie Johansson, 1999 (Stockholm University)

Magnus Monné, 2001 (Stockholm University)

Olof Emanuelsson, 2003 (Stockholm University)

Marika Cassel, 2005 (Stockholm University)

Tara Hessa, 2006 (Stockholm University)

Mikaela Rapp, 2006 (Stockholm University)

Karin Melén, 2007 (Stockholm University)

Andreas Bernsel, 2008 (Stockholm University)

Carolina Boekel, 2009 (co-supervisor IngMarie Nilsson, Stockholm University)

Marie Österberg, 2010 (Stockholm University)

Susanna Seppälä, 2011 (Stockholm University)

Salomé Calado Botelho, 2013 (Stockholm University)

Pilar Lloris-Garcerá, 2013 (Stockholm University)

Johannes Reithinger 2013 (Stockholm University; co-supervisor with Prof.

Hyun Kim, Seoul National University)

Patrik Björkholm, 2014 (Stockholm University)

Bill Söderström, 2014 (Stockholm University; co-supervisor with Prof. Daniel Daley, Stockholm University, and Jerker Widengren, The Royal Institute of Technology)

Karin Öjemalm, 2015 (Stockholm University)

Rickard Hedman, 2015 (Stockholm University)

Nina Schiller, 2017 (Stockholm University)

### **Current PhD students**

Felix Nicolaus

Hena Sandhu (co-supervisor with Dr. Mikaela Rapp, Medivir AB)

# Postdocs, past & present

Paul Whitley

Nese Bilgin

Ismael Mingarro

Guro Gafvelin

Paula Braun

Hans Kiefer

Jan-Willem de Gier

Susana Cristobal

Susanne Witt

Tomas Urbig

Chen-ni Chin

**Daniel Daley** 

Hyun Kim

Nadja Meindl-Beinker

Mirjam Lerch

Yoko Sato

Roger Draheim

Morten Nørholm

Joanna Slusky

Katrin Halling

Nurzian Ismail

Carmen Galian

Florian Cymer

Annika Müller-Lucks

Ola Nilsson

Luigi Notari

Renuka Kudva (present)

Grant Kemp (present)

Nir Fluman (present)

José Farias (present)

Ane Metola (present)

Daphne Mermans (present)

# **Expert Committees (Sakkunniguppdrag)**

Faculty examiner (Fakultetsopponent)

Tommy Nilsson, Uppsala University, 1990

Siv Andersson, Uppsala University, 1990

Harald Stenmark, Oslo University, 1991

Maria Sandkvist, Umeå University, 1992

Ron Kusters, Utrecht University, 1992

Marjo Simonen, University of Helsinki, 1994

Tracy Elizabeth Chantson, University of Witwatersrand, 1998

Malin Persson, Linköping University, 1998

Magnus Larsson, Royal Institute of Technology, 1999

Pål Puntervoll, University of Bergen, 2001

Ramneek Gupta, Technical University of Denmark, 2001

Christine Toutain, Université Paris-Sud, 2001

Per Thorén, Chalmers University of Technology, 2003

Charlotta Agaton, Royal Institute of Technology, 2003

Jhansi Kota, Karolinska Institutet, 2007

A. J. Venkatakrishnan, Cambridge University, 2013

Ane Metola Martinez, University of the Basque Country, 2017

# Referee for academic appointments (Tjänstetillsättningar)

Assistant professorship (Forskarassistent) in "Protein Engineering", Uppsala University, 1992

Associate professorship (Högskolelektor) in "Macromolecular Chemistry", University of Lund, 1992

Professorship in Biochemistry, Oslo University, 1993

Professorship in Molecular Biotechnology, Linköping University, 1999

Professorship in Bioinformatics, Skövde University College, 2001

Professorship in Theoretical Chemistry, Lund University, 2002

Two professorships in Quantitative Systems Biology, Chalmers University of Technology, 2006

# **Teaching**

Has taught classes in undergraduate courses given by the Department of Biochemistry and Biophysics (SU) since 1994, including Advanced Biochemistry, Bioinformatics, Modern Methods in Chemistry, and Membrane Biochemistry.

#### Other science-related activities

- Popular-science writing and articles on science policy in major newspapers, magazines, and on Swedish radio. During my time as a producer with the Swedish National Radio, I produced and presented some 50 popular science programs.
- Co-author of a book on "the new biology" and its social implications (von Heijne & Israel: "Skapelsens Herre eller Genernas Slav", Ordfront, 1985).
- Consultant for the Nobel Committee for Chemistry (1989 and 1994) and for the Nobel Committee for Physiology or Medicine (1995).
- Participant in the exhibition "Gen Etik", Kulturhuset, Stockholm, 1991.
- Member of Statens Kulturråds Fackbokskommitté (an agency that distributes government subsidies to science-related books), 1991-1995
- Member of the Chemistry Committee (PuK) of the Swedish Natural Sciences Research Council, 1992-1998
- Chairman of the Information Committee (IK) of the Swedish Natural Sciences Research Council, 1996-1999
- Member of the Committee for Molecular Biology (KOMBI; an inter-agency committe set up to coordinate the support for molecular biology from the various Swedish research councils), 1992-1999
- Secretary of the National Committe for Molecular Biology of the Swedish Academy of Sciences, 1994-1999
- Member of the expert group on "General Bioscience" within the Foundation for Strategic Research, 1994-1996

Member & chairman of the Bioscience Group within the Foundation for Strategic Research, 1996-1999

Member of the Steering Committee for the Swedish EMBnet node 1995-1999

Member of the Editorial Board of Molecular Membrane Biology, 1993-2020 Editor FEBS Letters, 1994-2003

Member of the Editorial Board of EMBO Journal, 1996-1998

Member of the Advisory Board of European Journal of Biochemistry, 1996-

Member of the Advisory Board of BBA Reviews on Biomembranes, 1996-2018

Member of the Editorial Board of Journal of Molecular Biology, 1997-2006

Member of the board of the Center for Parallel Computing, KTH, 1998-

Member of the Nobel Committee for Chemistry 1998-2009 (Chairman 2007-2009; Secretary 2014-present), 2014-present.

Member of International Review Board for the Max Delbrück Center, Berlin, 1998

Member of the board of the Manne Siegbahn Laboratory, 1999-

Member of the board of the International Society for Computational Biology, 1999-2002

Vice chairman of the Department of Biochemistry, Stockholm University, 1999 -

Member of International Review Board for the Biotechnology Program of the Norwegian Research Council, Oslo, 2000

Member of International Review Board for the Genomics Program of the Helmholz Foundation, Bonn, 2000

Member of the European Science Foundation working group on Proteomics, 2000

Swedish representative in the EU-COST program "Protein-Lipid Interactions", 2000 - present.

Member of the Scientific Advisory Board, Callistogen AG, 2000 - present.

Member of the EMBO Young Investigator Programme Selection Committee, 2001 - 2003.

'Science advisor' for the weekly journal 'Dagens Forskning', 2001 – 2003.

Chairman of the Scientific Advisory Committee, Applied Bioinformatics Unit, Bergen University, 2002 – present.

Member of the Review Board for the Structural and Computational Biology Unit, EMBL, Heidelberg, 2002.

- Member of the Scientific Advisory Board of BioCity Turku, 2003-2009.
- Member of "Forskarkollegiet", the Swedish Foundation for Strategic Research, 2003-present.
- Member of the EMBO Council, 2004-2009.
- Member of the Review Committee for the Chalmers Bioscience Effort, March 2004.
- Member of the Bioinformatics Advisory Committee, European Bioinformatics Institute, 2004 2009.
- Member of the Scientific Advisory Committee for the FP6 Interaction Proteome project 2004 – present.
- Member of the Advisory Panel for the FP6 European Membrane Protein (E-MeP) Consortium 2004 2013.
- Member of the Review Committee for the Department of Biochemistry, University of Zurich, January 2005.
- Member of the Scientific Advisory Board, New York Consortium on Membrane Protein Structure, 2005 – 2014
- Member of the Scientific Advisory Board, Neuroscience Research Center, University of Aarhus, 2005 –
- Member of the Editorial Board of Biological Chemistry, 2005 2008
- Scientific Advisor, Scientific Computing Ltd., Espoo, Finland, 2006 2008
- Member of the Review Board for the Structural and Computational Biology Unit, EMBL, Heidelberg, 2006.
- Member of the UniProt Database Scientific Advisory Board, 2006 2010
- Member of the International Science Advisory Board, Institut Pasteur, 2006-2013
- Chairman of the Biotechnolology Section, Royal Swedish Academy of Engineering Sciences, 2005-2008
- Member of the board of the Hagberg Foundation, 2005-
- Member of the Board of Directors, Xbrane Bioscience AB, 2008-2011
- Member of the International Advisory Committee, the Solvay Institutes, 2008-present.
- Member of the Gordon Research Conferences Council, 2009-2011.
- Member of the European Research Council LS1 Panel for Advanced Grants, 2009 2013.

Member of the Editorial Committee Annual Reviews of Biochemistry, 2010-2024.

Member of the Editorial Board of BBA – Biomembranes, 2010-2012.

Member of the Board of the Salén Foundation, 2010-present.

Member of the Korea Basic Science Institute Advisory Committee, 2010-present.

Member of the Review Board for Chemistry Research at the University of Groningen, 2010.

Chair of the Review Board for Department VIB6 at the VUB, Brussels, 2010.

Member of the Editorial Advisory Board of ChemBioChem, 2011-2015.

Chair of the Review Panel for the Bioinformatic Service Activities at EMBL-EBI, Hinxton, 2011.

Member of the Board of Directors, Nobel Media AB, 2011 – 2016

Member of the Scientific Advisory Board of ELIXIR, 2012 – 2015

Member and Chair of the Review Board for the Wallenberg Fellows program, 2012 – 2014.

Member of the Scientific Advisory Board of Biocenter Finland, 2013 – 2016.

Member of the Life, Environmental and Geo-Sciences (LEGS) Scientific Committee of Science Europe, 2013.

Member of the jury for the architects' competition "Nobel Centre in Stockholm", 2013.

Member of the Computational Biology Advisory Group, Francis Crick Institute, 2013-

Member of the ISCB Fellows Committee, 2013-

Member of the Scientific Advisory Board of the MOSTMICRO unit at the Instituto de Tecnologia Química e Biológica, Lisbon, 2014 –

Member of the Board of the Nobel Centre Foundation, 2014 -

Adjunct member of the Board of the Nobel Foundation, 2015 –

Member of the Board of Nobelhuset AB, 2015 –

Member of the Review Panel for the Bioinformatic Service Activities at EMBL-EBI, Hinxton, 2015.

Member of the Review Board for the Structural Biology Department at VIB, Brussels, 2015

Member of the Protein Society Executive Council, 2016-2018.

- Member of the Scientific Advisory Council for the Knut and Alice Wallenberg Foundation, 2016 –
- Member of the Review Panel for the European Bioinformatics Institute, Hinxton, 2017.
- Member of the Review Panel for Life Sciences Research at Utrecht University, 2017.
- Member of the Review Panel for the Department of Biology, ETH Zurich, 2017.
- Member of the Prize Committee for the Novo Nordisk Foundation Novozymes Prize, 2019-

### **Scholarships**

- Post-doctoral scholarship (NFR) at the Department of Microbiology & Immunology, University of Michigan Medical School, Ann Arbor from July 1980 through June 1981
- Scholarship from the Knut and Alice Wallenberg Foundation for research at the Department of Microbiology & Immunology, Harvard Medical School, Boston, February through April 1984
- Scholarship from the Sweden-America Foundation for research at the Department of Biological Chemistry, UCLA School of Medicine, Los Angeles, January through June 1987

#### Awards and honors

The T. Svedberg Award, The Swedish Biochemical Society, 1990

Elected EMBO member, 1994

The Göran Gustafsson Prize, The Royal Swedish Academy of Sciences, 1995

The Arrhenius Medal, The Swedish Chemical Society, 1997

Elected member of the Royal Swedish Academy of Sciences, 1997

Elected member of the Academia Europaea, 1998

The Björkén Prize, Uppsala University, 1998

Elected member of the Royal Swedish Academy of Engineering Sciences, 2000

EMBL Distinguished Visitor Lecturer, 2002

"Excellence" Award, the Swedish Research Council, 2002

The George W. Raiziz Biochemical Rounds Lecture, University of Pennsylvania School of Medicine, 2004

EMBO Lecture, Danish Society for Biochemistry and Molecular Biology, 2006

"Friday Lecturer", Rockefeller University, 2007

Kroc Lecturer, MIT, 2008

Honorary Doctorate, Åbo Akademi, 2008

The van Deenen Medal, Utrecht University, 2009

The NCMLS Lecture, Nijmegen Centre for Molecular Life Sciences, 2012

The Accomplishment by a Senior Scientist Award of the International Society for Computational Biology, 2012

The Vallee Foundation Visiting Professorship, 2012

Fellow of the International Society for Computational Biology, 2012

Wallenberg Scholar, 2013-2017 & 2018-2022

"Seminaires Prestiges", University of Toulouse, 2013

Opening Plenary Lecture at the 10<sup>th</sup> European Biophysical Congress EBSA, 2015

FEBS National Lecture Award, DFG-GBM Symposium, Germany, 2016

The Novo Nordisk Foundation Novozymes Prize, 2018

The Johanna Quandt Young Academy Distinguished Senior Scientist Award. Goethe University, Frankfurt, 2018

The Frederic M. Richards Lecture, Yale University, 2018

The Linus Pauling Lecture. Istituto Italiano di Tecnologia, Genoa, 2019

Honorary Doctorate, University of Valencia, 2019

The Biophysical Society Anatrace Membrane Protein Award, 2019

Max-Planck-Institute of Biochemistry Martinsried Distinguished Lecturer, 2020

### Scientific meetings

Summer School on Biophysical and Biochemical Approaches in Molecular Biology. Jablonna, Poland, September 1977

EMBO Workshop on Accuracy. Grignon, France, September 1978

Workshop on "Statistical Methods Applied to Protein Structure" (invited lecture). Pont-a-Mousson, France, October 1978

- Cold Spring Harbor "Membrane Biogenesis Meeting" (invited lecture). Cold Spring Harbor Laboratory, Cold Spring Harbor, May 1979
- Biochemical Society Meeting No. 592 "Mobility and Migration of Biological Molecules" (invited lecture). London, England, December 1980
- EMBO Workshop on "Pattern Analysis in Nucleic Acid and Protein Sequences". Saint-Agnan, France, October 1981
- The Darwin Centenary Conference. Cambridge, England, June 1982
- Special Biophysics Course on "Analysis of Protein Conformation" (two invited lectures). University of Michigan, Ann Arbor, May 1983
- FEBS Advanced Course on "Mathematical Modeling of Cellular Processes" (invited lecture). Elbingerode, GDR, October 1984
- Special FEBS Meeting "Metal Ions, Proteins and Membranes" (invited lecture). Algarve, Portugal, April 1985
- Gordon Conference "Molecular Membrane Biology" (invited lecture). Proctor Academy, New Hampshire, July 1985.
- Gordon Conference "Theoretical Biology and Biomathematics" (invited lecture). Tilton School, New Hampshire, June 1986
- 8<sup>th</sup> European Transformation Meeting on Genetic Exchange (invited lecture).
  Uppsala, Sweden, August 1986
- 17th FEBS Meeting (invited lecture). Berlin (West), FRG, August 1986
- Aspen Workshop on "Molecular Interactions in Membranes" (invited lecture).

  Aspen, Colorado, September 1986
- Symposium "The Central Dogma, 30 Years After" (invited lecture). University of Rochester, New York, January 1987
- Symposium "Genetics of Regulation and Protein Export" (invited lecture), Woods Hole, Massachussetts, March 1987
- NATO Advanced Study Institute "New Perspectives in the Assembly of Biomembranes" (two invited lectures). Cargèse, Corsica, August 1987
- IUB 14<sup>th</sup> International Congress of Biochemistry (invited lecture), Prague, Czechoslovakia, July 1988
- Joint Meeting of the Swedish and Dutch Biophysical Societies "Molecular Biophysics" (invited lecture), Lunteren, The Netherlands, October 1988

- FEBS Advanced Course "Protein-Lipid Interactions and Molecular Aspects of Protein Insertion and Translocation in Membranes" (invited lecture). Utrecht, The Netherlands, January 1989
- BioScience 89 (invited lecture). Malmö, Sweden, April 1989
- Bioscience Days 1989 (invited lecture). Helsinki, Finland, May 1989.
- Gordon Conference "Molecular Membrane Biology". Proctor Academy, New Hampshire, July 1989.
- 8<sup>th</sup> International Congress on Photosythesis (invited lecture). Stockholm, Sweden, August 1989.
- "Molecular Models, Origins and Evolution of Photosynthesis", satellite meeting to the 8<sup>th</sup> International Congress of Photosynthesis (invited lecture). Stockholm, Sweden, August 1989.
- Sonderforschungsbereich Colloquium "Components and Mechanisms of Intracellular Protein Transport" (invited lecture). Munich, FRG, September, 1989.
- NATO-FEBS Meeting "Plant Molecular Biology" (invited lecture). Munich, FRG, May 1990.
- 3<sup>rd</sup> International CBT Symposium on "Intracellular Routing of Protein Molecules" (organizer). Stockholm, Sweden, May 1990.
- 8<sup>th</sup> International Conference on "Methods in Protein Sequence Analysis" (invited lecture). Kiruna, Sweden, July 1990.
- Annual Meeting of the Japanese Biochemical Society (invited lecture). Osaka, Japan, September 1990.
- Population Genetics Group Meeting (invited lecture). Manchester, UK, January 1991.
- Joint Meeting of the German Microbiological Societies (invited lecture). Freiburg, FRG, March 1991.
- 1st European Research Conference on "The Molecular Basis of Membrane Protein Structure and Function" (vice chairman, invited lecture). Acqua fredda di Maratea, Italy, April 1991.
- Joint Meeting of the Swedish and Dutch Biophysical Societies (invited lecture). Göteborg, Sweden, June 1991.
- Meeting of the Scandinavian Society for Plant Physiology (invited lecture). Ulvik, Norway, August 1991.

- CBT/CSB Summer School "Understanding Protein Structure" (organizer). Stockholm, Sweden, August 1991.
- 12<sup>th</sup> International Long Ashton International Symposium on "Transport and Receptor Proteins of Plant Membranes: Molecular Structure and Function" (invited lecture). Bristol, UK, September 1991.
- Naito Foundation Conference "Protein Translocation in the Cell" (invited lecture). Nagoya, Japan, October 1991.
- ASBMB/Biophysical Society Joint Meeting (invited lecture). Houston, Texas, February 1992.
- 25<sup>th</sup> Jerusalem Symposium in Quantum Chemistry and Biochemistry
  "Membrane Proteins: Structures, Interactions and Models" (invited lecture). Jerusalem, Israel, May 1992.
- BMC Summer School "PCR-Assisted Methods in DNA Analysis and Molecular Diagnosis" (invited lecture). Uppsala, Sweden, June 1992.
- ISI Workshop "Biological Sequences: Finding Structure and Function by Neural Networks" (invited lecture). Turin, Italy, July 1992.
- EMBO/INSERM Parctical Course "Current Methods in Membrane Protein Research" (invited lecture). Le Vésinet, France, July 1992.
- NATO Advanced Study Institute "Molecular Mechanisms of Receptor Function" (invited lecture). Spetsai, Greece, August 1992.
- CSB Summer School "Understanding Protein Folding" (organizer). Stockholm, Sweden, August 1992.
- Linderstrøm-Lang Conference "Membrane Traffic and Protein Translocation" (invited lecture). Oslo, Norway, September 1992.
- ESF Workshop "Bacterial Transport Proteins and Protein Transport" (invited lecture). Schiermonnikoog, The Netherlands, September 1992.
- SERC 1992 Annual Workshop "Molecular Basis of Biological Membrane Function" (invited lecture). Birmingham, UK, September 1992.
- Biochemical Society Conference "Membrane Structure" (invited lecture). Glasgow, UK, September 1992.
- ESF Symposium "Protein Targeting to Mitochondria" (invited lecture). Munich, FRG, October, 1992.

- 2<sup>nd</sup> European Research Conference on "The Molecular Basis of Membrane Protein Structure and Function" (organizer/chairman). Acqua fredda di Maratea, Italy, April 1993.
- NATO Advanced Study Institute "Structure, Biogenesis and Dynamics of Biological Membranes" (two invited lectures). Cargèse, Corsica, June 1993.
- CNRS Conference Jaques Monod "Protein-protein Interactions in the Photosynthetic Apparatus" (invited lecture). Aussois, France, June 1993.
- 22<sup>nd</sup> FEBS Meeting (invited lecture). Stockholm, Sweden, July 1993.
- NATO Advanced Study Institute "The Biophysics of the Cell Membrane" (three invited lectures). Vancouver, Canada, August 1993.
- International Symposium on Cellular and Molecular Biology of Phosphate and Phosphorylated Compounds in Microorganisms (invited lecture). Woods Hole, USA, September 1993.
- Minisymposium "Swedish Theoretical Chemistry -93" (invited lecture). Lund, Sweden, October 1993.
- BioCity Symposium "Molecular Recognition in Biology" (invited lecture). Åbo, Finland, December 1993.
- Annual Meeting of the Norwegian Biochemical Society (invited plenary lecture). Beito, Norway, January 1994.
- Workshop "Computational Chemistry and Molecular Modelling in Pharmaceutical Research" (invited lecture). Lund, Sweden, March 1994.
- Workshop on "Membranes: Theory, Simulation, Experiment". Monte Verita, Switzerland, April 1994.
- NOMBA Symposium "Control of Gene Expression" (invited lecture). Fulgsø, Denmark, May 1994.
- FEBS Special Meeting on Biological Membranes (invited lecture). Helsinki, Finland, June 1994.
- $16^{\mathrm{th}}$  IUBMB Congress (invited lecture). New Delhi, India, September 1994.
- 2<sup>nd</sup> symposium on "Distance-Based Approaches to Protein Structure Determination" (invited lecture). Copenhagen, Denmark, November 1994.

- 5<sup>th</sup> KVCV Symposium on "Expression and Secretion" (invited lecture). Leuven, Belgium, February 1995.
- 3<sup>rd</sup> European Research Conference on "The Molecular Basis of Membrane Protein Structure and Function" (invited lecture). Seeheim, FRG, April 1995.
- 1st European Symposium of the Protein Society (invited lecture). Davos, Switzerland, May 1995.
- Biochemical Society Meeting on "Membrane Protein Insertion" (invited lecture). Manchester, UK, July 1995.
- CSB Summer School "Understanding Membrane Proteins" (invited lecture). Huddinge, Sweden, August, 1995.
- 23<sup>rd</sup> FEBS Meeting (invited lecture). Basel, Switzerland, August 1995.
- Endocytobiology VI Congress (invited lecture). Tübingen, FRG, September 1995.
- Swedish and British Biophysical Societies meeting on "Molecular Recognition and Signalling" (invited lecture). Bath, UK, December 1995.
- INPEC 1996 Meeting (invited lecture). Melbourne, Australia, February 1996.
- 21<sup>st</sup> Lorne Conference on Protein Structure and Function (invited lecture). Lorne, Australia, February 1996.
- ASM Meeting 1996 (invited lecture) New Orleans, USA, May 1996
- EMBO Practical Course "Current Methods in Membrane Protein Research" (invited lecture). Heidelberg, FRG, June 1996.
- 24<sup>th</sup> FEBS Meeting (invited lecture). Barcelona, Spain, July 1996.
- 12<sup>th</sup> International Biophysics Congress (invited lecture). Amsterdam, The Netherlands, August 1996.
- 11<sup>th</sup> International Conference on Proteolysis and Protein Turnover (invited lecture). Turku, Finland, September 1996.
- 1st Cell Biology Symposium of the MDC "Protein Transport and Stability" (invited lecture). Berlin, FRG, September 1996.
- 5<sup>th</sup> European Gastroenterology Week (invited lecture). Paris, France, November 1996.
- Annual Meeting of the Norwegian Biochemical Society (invited plenary lecture). Lillehammer, Norway, January 1997.
- INPEC 1997 Meeting (invited lecture). Lillehammer, Norway, January 1997.

- Keystone Symposia "Protein Folding, Modification, and Transport in the Early Secretory Pathway" (invited lecture). Taos, USA, March 1997.
- Winter School "Protein Folding" (invited lecture). Storlien, Sweden, April 1997.
- 4<sup>th</sup> European Research Conference on "The Molecular Basis of Membrane Protein Structure and Function" (invited lecture). Albufeira, Portugal, April 1997.
- 18<sup>th</sup> Rauischholzhausen Symposium "Intracellular Protein Transport, Exoand Endocytosis" (invited lecture). Marburg, FRG, May 1997.
- ASTRA Symposium "Ion Motive ATPases" (invited lecture). Gothenburg, Sweden, August 1997.
- 4<sup>th</sup> Sweden-German Photosynthesis meeting (invited lecture). Vilm, FRG, September 1997.
- 1st European Research Conference on "Protein Targeting" (invited lecture, vice chairman). Albufeira, Portugal, October 1997.
- Conference of the German Society for Cell Biology (invited lecture). Saarbrücken, FRG, March 1998.
- Fundacion Juan March workshop "Membrane protein insertion, folding and dynamics" (invited lecture). Madrid, Spain, March 1998.
- EMBO Practical Course "Current Methods in Membrane Protein Research" (invited lecture). Heidelberg, FRG, June 1998.
- Summer School in Physics of Molecular Biology (invited lecture). Kogerup, Denmark, August 1998.
- International Conference "Genes, Proteins & Computers V" (invited lecture). York, UK, September 1998.
- EMBO Workshop "Talking Proteins: Sequence Analysis" (invited lecture). Heidelberg, FRG, September 1998.
- GCB 98 "Computer Science and Biology (invited lecture). Cologne, FRG, October, 1998.
- ASBMB Fall Symposium "Membrane Biogenesis" (invited lecture). Lake Tahoe, USA, October 1998.
- EMBO Practical Course "Membrane Lipids: Organization, Dynamics and Interactions with Proteins" (invited lecture). Utrecht, Holland, November 1998.

- Conference on "Molecular Genetics of Microbial Systems" (invited lecture).

  Amalfi, Italy, April 1999.
- NATO Advanced Study Institute "Protein, Lipid and Membrane Traffic: Pathways and Targeting" (two invited lectures). Cargèse, Corsica, June 1999.
- 26<sup>th</sup> FEBS Meeting (invited lecture). Nice, France, June 1999.
- INSERM Workshop "Innovative Methods for the Structural Study of Membrane Proteins" (invited lecture). Paris, France, June 1999.
- 2<sup>nd</sup> FASEB Conference on Transport ATPases (invited lecture). Snowmass, USA, July 1999.
- HUGO Workshop "Functional Annotation in Genomes" (invited lecture). Heidelberg, FGR, August 1999.
- The Norwegian Research Council Workshop "The Future of Bioinformatics". Oslo, September 1999.
- 2<sup>nd</sup> European Research Conference on "Protein Targeting" (chairman). Obernai, France, October 1999.
- Annual Meeting of the British Biophysical Society "Biophysics Past and Future" (invited lecture). London, UK, December 1999.
- Workshop on "Conjugation Systems Viewed as Protein Secretion Pathways" (invited lecture). Munich, FRG, May 2000.
- Swedish Society for Biochemistry and Molecular Biology Annual Meeting (invited lecture). Gothenburg, Sweden, June 2000.
- EMBO Practical Course "Current Methods in Membrane Protein Research" (invited lecture). Heidelberg, FRG, June 2000.
- International Summer School on "Membrane Chemistry" (invited lecture). Copenhagen Denmark, July 2000.
- IUBMB/FEBS Congress 2000 "Beyond the Genome" (invited lecture). Birmingham, UK, July 2000.
- SPP Student Conference "Plant Physiology, Today & Tomorrow" (invited lecture). Tanum, Sweden, August 2000.
- MECABD workshop on "Protein function at atomic level" (invited lecture). Marburg, FRG, October 2000.
- GBM Meeting 2000 (two invited lectures). Munich, FRG, October 2000.

- 150<sup>th</sup> Anniversary Symposium "The Impact of Structural Biology in Cell Biology and Genetics" (invited lecture). Copenhagen, Denmark, November 2000.
- Symposium "Frontiers in Structural Biology of Membrane Proteins" (invited lecture). Galveston, US, November 2000.
- SIK Biotechnology Workshop on "Biomolecular Recognition as an Analytical Tool" (invited lecture). Helsinki, Finland, December 2000.
- PDC Symposium "Simulation and Visulaisation in the Life Sceinces" (invited lecture). Stockholm, Sweden, December 2000.
- The Norwegian Academy of Engineering Sciences Meeting on "Bioteknologi i framtiden" (invited lecture). Trondheim, Norway, March 2001.
- Biochemical Society Meeting "Molecular Communications" (invited lecture).

  Bristol, UK, April 2001.
- Microbial Genomics and Proteomics Workshop (invited lecture). Iowa State University, April, 2001.
- Ernst Schering Research Foundation Workshop "Bioinformatics and Genome Analysis" (invited lecture). Berlin, FRG, June 2001.
- 11<sup>th</sup> International Congress on "Genes, Gene Families, and Isozymes" (invited lecture). Stockholm, Sweden, June 2001.
- Summer School "Advanced Biophysics School on Lipid-Protein Interactions and the Organization of Membranes" (invited lecture). Szeged, Hungary, June 2001.
- ISMB 2001 (invited keynote lecture). Copenhagen, Denmark, July 2001.
- Spetsai Summer School "Protein Biology: From Synthesis to Structure,
  Recognition, Misfolding and Disease" (invited lecture). Spetsai,
  Greece, September 2001.
- 3<sup>rd</sup> European Research Conference on "Protein Targeting" (invited lecture).

  Maratea, Italy, September 2001.
- 4<sup>th</sup> International Workshop on Advanced Genomics (invited lecture). Kyoto, Japan, November 2001.
- Bologna Winter School "Predicting the 3D Structure of Difficult Proteins" (invited lecture). Bologna, Italy, February 2002.
- XIV International Biophysics Congress (invited lecture). Buenos Aires, Argentina, April 2002.

- Symposium "Membrane Proteins: Experimental and Computational Approaches" (invited lecture). Urbana, US, May 2002.
- Matti Saraste Memorial Symposium (invited lecture). Heidelberg, FRG, May 2002.
- ISU Symposium "Plant Proteomes: Structure, Changes, Interactions and Functions" (invited lecture). Ames, USA, June 2002.
- ELSO 2002 Meeting (invited lecture). Nice, France, June 2002.
- FASEB Conference "Molecular Biophysics of Cellular Membranes" (invited lecture). Saxton River, US, July 2002.
- Birgitta Forum "Genome & Language" (invited lecture). Vadstena, August 2002.
- 1<sup>st</sup> EMBO YIP PhD Course "Spotlight on Current Biology" (invited lecture). Heidelberg, FRG, August 2002.
- EMBL PhD Students International Symposium "Membranes and Compartments in Biology" (invited EMBO lecture). Heidelberg, FRG, November 2002.
- Annual Meeting of the Norwegian Biochemical Society (plenary lecture). Geilo, Norway, January 2003.
- Bologna Winter School "Hot Topics in Structural Genomics" (invited lecture). Bologna, Italy, February 2003.
- Symposium on Membrane Proteomics (invited lecture). Frankfurt, FRG, February 2003.
- PSB Workshop, ESRF, Grenoble, France, February 2003.
- 5<sup>th</sup> European Protein Society Meeting (invited lecture). Florence, Italy, March 2003.
- 19<sup>th</sup> IUBMB Congress (invited lecture). Toronto, Canada, July 2003. Meeting cancelled.
- 17<sup>th</sup> Protein Society Meeting (invited lecture). Boston, MA, July 2003.
- 4<sup>a</sup> EuroConference "Protein Targeting: Structural and Mechanistic Aspects of Protein Translocation" (invited lecture). Spa, Belgium, September 2003.
- 1<sup>st</sup> ESF-JSPS Frontiers in Science Conference (organizer). Sant Feliu, Spain, October 2003.
- 3<sup>rd</sup> NCCR Symposium "New Trends in Structural Biology" (invited lecture). Zürich, Switzerland, November 2003.

- JAERI-NAIST Symposium "Frontiers in Bioinformatics" (invited lecture). Kyoto, Japan, February 2004.
- 48<sup>th</sup> Annual Meeting of the Biophysical Society (invited lecture). Baltimore, US, February 2004.
- SFB Symposium "Structure and Function of Membrane Proteins" (invited lecture). Konstanz, FRG, March 2004
- Course on "Membrane Protein Biophysics" (invited lecture). Aalborg, Denmark, April 2004.
- Ph.D. School in Protein Science (invited lectures). Spetsai, Greece, May 2004.
- HHMI Symposium "Membranes, Membrane Proteins, and Membrane Associated Molecular Machines". Chevy Chase, USA, May 2004.
- 3D-SIG Workshop "Structural Bioinformatics" (invited lecture). Glasgow, UK. July 2004.
- The Society of General Physiologists Symposium "Lipid Signalling in Physiology" (invited lecture). Woods Hole, US, September 2004.
- The George W. Raiziss Biochemical Rounds Lecture, University of Pennsylvania School of Medicine. September 2004.
- Workshop on "Proteomics of Integral membrane Proteins" (invited lecture).

  Marburg, FRG. September 2004.
- Horizon Symposium "A living frontier exploring the dynamics of cell membranes" (invited lecture). Verona, Italy. October 2004.
- KVL Bioinformatics Workshop (invited lecture). Copenhagen, Denmark. December 2004.
- Bijvoet Symposium (invited lecture). Utrecht, the Netherlands, April 2005.
- Symposium "Cellular protein translocation experiments and theory" (invited lecture). University of Warwick, UK. April 2005.
- Wenner-Gren Symposium "Cell-penetrating Peptides and Applications" (invited lecture). Stockholm, Sweden. May 2005.
- ISMB 2005 (invited keynote address). Detroit, US. June 2005.
- Biochemical Society "BioScience 2005" (invited lecture). Glasgow, UK. July 2005.
- NorFa Workshop "Molecular approaches to membrane transport" (invited plenary lecture). Sigtuna, Sweden. August 2005.
- Tampere Institute of Medical Technology 10<sup>th</sup> Anniversary Symposium (invited lecture). Tampere, Finland. September 2005.

- ESF course "Membrane Proteins: the rocky road from gene to structure" (invited lectures). Oerias, Portugal. September 2005.
- SFB Symposium "From Transport Machineries to Dynamic Assemblies and Networks" (invited lecture). Frankfurt, FRG. October 2005.
- 9<sup>th</sup> International Dahlem Symposium "Cellular Signal Recognition and Transduction" (invited lecture). Berlin, FRG. October 2005.
- International Conference "Life of Proteins" (invited lecture). Awaji Island, Japan. November 2005.
- 16<sup>th</sup> International Conference on Genome Informatics (invited keynote address). Yokohama, Japan. December 2005.
- NIGMS Protein Structure Initiative Workshop (invited lecture). Bethesda, US. April 2006.
- Symposium on "Membran Protein Structure and Function" (invited lecture).

  Mount Verita, Switzerland. May 2006.
- 3<sup>rd</sup> KEY symposium "Membrane Transport Proteins in Health and Disease" (invited lecture). Stockholm, Sweden. May 2006.
- EMBO Workshop "Cell Membrane Organization and Dynamics" (invited lecture). Bilbao, Spain. June 2006.
- Gordon Conference "Bacterial Cell Surfaces" (invited lecture). New London, NH, US. June 2006.
- Gordon Conference "Ion Channels" (invited lecture). New England, US. July 2006.
- Klaus Tschira Foundation Symposium "Molecular Forces of Life" (invited keynote lecture). Heidelberg, FRG, September 2006.
- Danish Society for Biochemistry and Molecular Biology Symposium "Membrane Proteins: Structure and Function" (invited EMBO Lecture). Ebberup, Denmark. October 2006.
- EMBO Workshop "Protein Targeting" (invited lecture). Gdansk, Poland. October 2006.
- SFB Symposium "Membrane Proteins and Cellular Dynamics" (invited lecture). Osnabrück, FRG. November 2006.
- National Congress of the Mexican Society of Biochemistry (invited plenary lecture). Monterrey, Mexico. November 2006.
- "Friday lecture", Rockefeller University, New York, USA. February 2007.

- Okazaki Symposium "Ion Channels" (invited lecture). Okazaki, Japan. March 2007.
- The European Society for Clinical Investigation Workshop on Phagocytosis (invited lecture). Uppsala, Sweden. April 2007.
- EMBO Conference "The Biology of Molecular Chaperones" (invited lecture). Tomar, Portugal. June 2007.
- International Summer School on Biomembranes (two invited lectures). Cargèse, Corsica, June 2007.
- Gordon Conference "Molecular Membrane Biology" (invited lecture).

  Proctor Academy, NH, USA. July 2007.
- Harden Conference "Protein folding and assembly *in vitro* and *in vivo*" (invited lecture). St. Martin's College, Ambleside, UK. August 2007.
- 48<sup>th</sup> International Conference on the Bioscience of Lipids (invited lecture). Turku, Finland. September 2007.
- TRAMP Symposium (invited lecture). Aarhus, Denmark. October 2007.
- Agora Jubilee Conference "The Linnean Tradition in Modern Biology" (invited lecture). Stockholm, Sweden. October 2007.
- International meeting "The Unbearable Complexity of Life" (invited lecture). Tel Aviv, Israel. February 2008.
- Gordon conference "Ligand Recognition and Molecular Gating" (invited lecture). Ventura, USA. March 2008.
- International conference "Bioinformatics 2008" (invited plenary lecture). Warsaw, Poland. April 2008.
- INPEC Meeting 2008 (invited lecture). Turku, Finland. June 2008.
- Meeting of the UK, Spanish & Portugese Biophysical societies (invited plenary lecture). Lisbon, Portugal. July 2008.
- FASEB Conference "Molecular Biophysics of Cellular Membranes" (invited lecture & chair). Saxton River, USA. July 2008.
- Horizon symposium (invited lecture). Göttingen, Germany. September 2008.
- EMBO Conference on Protein Translocation (invited lecture). Sainte-Maxime, France. October 2008.
- The 34<sup>th</sup> Lorne Conference on Protein Structure (invited lecture). Lorne, Australia. February 2009.

- Workshop on "Membrane Biology Frontiers: Dynamics, Energy, Structure and Technology" (invited lecture). Mykonos, Greece. June 2009.
- VIII European Symposium of the Protein Society (invited lecture). Zürich, Switzerland. June 2009.
- ISMB/ECCB Meeting 2009 (honorary chair, session chair and invited lecture). Stockholm, Sweden. June 2009.
- 23<sup>-d</sup> Annual Symposium of the Protein Society (invited lecture). Boston, USA. July 2009.
- Meeting on "Structure and Function of Membrane Proteins" (invited lecture). Freiburg, FGR. September 2009.
- Heidelberg Molecular Life Science Conference "Cellular Protein Transport" (invited lecture). Heidelberg, FRG. October 2009.
- IB Conference on Biomembranes 2009 (invited award lecture). Utrecht, Netherlands. October 2009.
- Leibniz Graduate School of Molecular Biophysics Annual Meeting (invited keynote lecture). Freiburg, FRG. March 2010.
- Annual Meeting and Conference of the Canadian Society of Biochemistry, Molecular and Cellular Biology (invited keynote lecture). Banff, Canada. April 2010.
- Distinguished Seminar Series of the Max Planck Institute for Developmental Biology, Tübingen (invited lecture). May, 2010.
- 35<sup>th</sup> FEBS Congress (invited lecture). Gotheburg, Sweden. June 2010.
- Symposium "Evolution of Transport Systems" (invited lecture). Frankfurt, FRG. July 2010.
- 18<sup>th</sup> Meeting on Methods in Protein Structure Analysis (invited lecture). Uppsala, Sweden. August 2010.
- 11<sup>th</sup> conference of the International Society for Endocytobiology (EMBO plenary lecture). Tromsø, Norway. August 2010.
- International Symposium on Protein Community (invited lecture). Nara, Japan. September 2010.
- Frontiers in Membrane and Membrane Protein Biophysics Symposium: Experiments and Theory (invited lecture). Irvine, USA. September 2010.

- TranSys Conference Membrane Protein Structure, Biogenesis and Bioinformatics (invited lecture). Acquafredda di Maratea, Italy.

  October 2010
- 3<sup>rd</sup> Annual NIH Roadmap Structural Biology Membrane Protein Technology Meeting (invited keynote lecture). La Jolla, USA. November 2010.
- The Biochemical Society Annual Symposium "Advances in Membrane Biochemistry". Cambridge, UK. January 2011.
- Opening symposium of the Aarhus University Biomembrane Center (invited lecture). Aarhus, Denmark. April 2011.
- EMBO Conference on protein transport systems: structures, mechanisms, and medical aspects (invited lecture). Sardegna, Italy. April 2011.
- Cold Spring Harbor Asia meeting "Membrane Proteins: Structure & Function" (invited keynote lecture). Suzhou, China. May 2011.
- German/Swedish Biophysical Societies meeting "Dynamics, Function, and Design of Biological Macromolecules" (invited lecture). Hünfeld, Germany. June 2011.
- Carlsberg Laboratories 200<sup>th</sup> Anniversary Symposium (invited lecture). Copenhagen, Denmark. September 2011.
- 105<sup>th</sup> International Titisee Conference "Lipids as organizers of cell membranes" (invited lecture). Titisee, Germany. March 2012.
- Gordon Research Seminar "Protein Transport across Cell Membranes" (invited keynote lecture). Galveston, USA. March 2012.
- ASBMB Annual Meeting (invited lecture). San Diego, USA. April 2012.
- 2<sup>nd</sup> Prague Protein's Spring workshop (invited lecture). Prague, CZ. May 2012.
- 8<sup>th</sup> International Transport Colloqium of the GBM (invited lecture). Giessen, Germany. May 2012.
- FASEB Meeting, "Molecular Biophysics of Membranes" (invited keynote lecture). Snowmass Village, USA. June 2012.
- ISMB 2012 (invited award lecture). Long Beach, CA, USA. July 2012.
- 2nd International Symposium "Mechanisms of gene expression: assembly, transport, and degradation of polypeptides" (invited lecture). Homburg, Germany. September 2012.
- 4<sup>th</sup> Annual NIH Roadmap Structural Biology Membrane Protein Technology Meeting (invited keyonte lecture). San Francisco, USA. November 2012.

- ISCB Asia 2012 (invited lecture). Shenzhen, China. December 2012.
- Nagoya Symposium: Frontiers in Structural Physiology (invited lecture).

  Nagoya, Japan. January 2013.
- EMBO conference "The Biology of Molecular Chaperones" (invited lecture). Santa Margherita di Pula, Sardinia, Italy. March 2013.
- Symposium "50 years of allosteric control" (invited lecture). Paris, France. May 2013.
- FinMIT International Summer School "Mitochondira and Organelle Communication" (invited lecture). Lahti, Finland. June 2013.
- Spanish Biophysical Society Meeting 2013 (invited plenary lecture). Valencia, Spain. June 2013.
- Symposium on the occasion of the 65<sup>th</sup> birthday of Felix Wieland (invited lecture). Heidelberg, Germany. June 2013.
- Benzon Symposium "Membrane Proteins: Structure, Function and Dynamics" (invited lecture). Copenhagen, Denmark. August 2013.
- Symposium "Current Status in Biomembranes", Helsinki, Finland (invited lecture). September 2013.
- Minisymposium "Membrane proteins: From phylogeny to structure" (invited lecture). Lund University, October 2013.
- 23<sup>-d</sup> Solvay Conference on Chemistry "New Chemistry and New Opportunities from the Expanding Protein Universe" (invited chair). Brussels, Belgium. October 2013.
- Gordon Research Conference "Protein Folding Dynamics" (invited lecture). Galveston, USA. January 2014.
- Italian Bioinformatics Society Annual Meeting (invited keynote lecture).

  Rome, Italy. February 2014.
- Gordon Research Conference "Protein Transport across Cell Membranes" (invited lecture and session chair). Galveston, USA. March 2014.
- DYNAMO International Symposium "The Evolution, Biogenesis and Dynamics of Energy Transducing Membranes" (invited lecture). Paris, France. April 2014.
- Royal Swedish Academy of Sciences 275 Years Anniversary Symposium "Protein Structure and Protein Evolution" (invited lecture).

  Stockholm, Sweden. June 2014.

- UNAM Research Week (invited lecture). Mexico City, Mexico. September 2014.
- EMBO Conference "From Structure to Function of Translocation Machines" (invited lecture). Dubrovnik, Croatia. March 2015.
- Gordon Research Conference "Membrane Protein Folding" (invited lecture). Waltham, USA. June 2015.
- 10<sup>th</sup> European Biophysical Congress EBSA (invited opening plenary lecture).

  Dresden, Germany, July 2015.
- 40<sup>th</sup> FEBS Congress (invited lecture). Berlin, Germany. July, 2015.
- The Young Academy of Europe Annual Meeting (invited lecture). Darmstadt, Germany. September 2015.
- Annual Meeting of the Biophysical Society, symposium on "Translation Dynamics and Nascent Proteome Behavior" (invited lecture). Los Angeles, USA. February, 2016.
- Gordon Research Conference "Protein Transport across Cell Membranes" (invited lecture). Galveston, USA. March 2016.
- 10<sup>th</sup> International Transport Colloquium of the GBM (invited lecture). Giessen, Germany. April 2016.
- The 21<sup>st</sup> Annual Meeting of the RNA Society (invited lecture). Kyoto, Japan. June 2016.
- FASEB Conference "Molecular Biophysics of Membranes." (invited lecture). Snowmass, CO, USA. July 2016.
- 41<sup>st</sup> FEBS Congress (invited symposia chair and lecture). Ephesus, Turkey. September, 2016. (Congress was cancelled by FEBS)
- Biophysical Society Meeting "Liposomes, Exosomes, and Virosomes: From Modeling Complex Membrane Processes to Medical Diagnostics and Drug Delivery" (invited lecture). Monte Verita, Switzerland. September 2016.
- EMBO Conference "Protein Translocation and Cellular Homeostasis" (invited lecture). Dubrovnik, Croatia. March 2017.
- Scientific Retreat am Comer See (invited lecture). Lago di Como, Italy. May 2017.
- FOR Summer School "Ribosome dynamics in regulation of speed and accuracy of translation" (invited keynote lecture). Erice, Italy, June 2017.

- Biochemical Society focus meeting "Nascent Chains and Folding on the Ribosome (invited lecture). Cambridge, UK, December 2017.
- Inauguration Symposium of the Centre for High-resolution Electron

  Microscopy (invited lecture), Shanghai Tech University, May 2018.
- 2018 Symposium of the Society of General Physiologists "Molecular physiology of the cell membrane: an integrative perspective from experiment and computation" (invited keynote lecture). Woods Hole, MA, USA. September 2018.
- SYNERGY Symposium "Protein-membrane co-structures: Structure, function and targeting" (invited lecture). Copenhagen, Denmark.

  November 2018.
- Novozymes Prize Symposium "Protein Folding on the Ribosome" (organizer). Stockholm, 2018.
- EMBO Workshop "Protein Targeting" (invited lecture). Sant Feliu de Guixols, Spain, March 2019.
- The 2020 Vallee Summer Symposium (invited lecture). June 2020. Cascais, Portugal.
- FASEB Conference "Protein Folding in the Cell" (invited lecture). July 2020. Malahide, Ireland.
- "Focused symposium on membrane protein biophysics" (invited lecture).

  July 2020. Seoul, Korea.