

Jan Philip Solovej CV (March 2023)

Personal:

Professor Jan Philip Solovej

Born: June 14, 1961, Copenhagen, Denmark

Citizenship: Danish

Married, two Children

<http://www.math.ku.dk/~solovej>

Workplace:

Institute for Mathematical Sciences

University of Copenhagen

Universitetsparken 5

DK-2100 Copenhagen, DENMARK

Email: solovej@math.ku.dk

Education:

- Cand. Scient., University of Copenhagen, 1985
- Ph.D., Princeton University, 1989

Research interests: *Mathematical Physics:* Stability of Matter, Many-body theory, Atomic structure, Bose gases, Condensed matter Physics, Statistical mechanics, Semiclassics, Variational methods, Spectral theory, Partial differential equations, Quantum Information Theory

Employment:

- 1989-90: Visiting Assistant Professor, Dept. of Math., University of Michigan
- 1990 (Fall): Post-doctoral fellow, Dept. of Math., University of Toronto
- 1991 (Spring): Member, School of Math., Institute for Advanced Study, Princeton
- 1991-1995: Assistant Professor, Dept. of Math., Princeton University
- 1995-1997: Research Professor (Forskningsprofessor), Dept. of Math., Aarhus Univ.
- 1997-present: Professor, Inst. for Math. Sciences, University of Copenhagen
 - 2016-2026: Centre leader: VILLUM Centre of Excellence for the Mathematics of Quantum Theory (QMATH).
 - 2022-present: Head of studies for Master's program in Quantum Information Science, University of Copenhagen

Visiting Positions:

- 1997 (Spring): Member, School of Math., Institute for Advanced Study, Princeton
- 2003-2004: Member, School of Math., Institute for Advanced Study, Princeton
- 2004 (2 months) Visitor Dept. of Physics, Princeton University

- 2005 (1 month) Visiting Professor, Université Paris Dauphine
- 2007 (Spring) Mercator Guest Professor, Ludwig-Maximilians-Universität, München
- 2013 (1 month) Visiting Professor Université Paris Dauphine while at Institut Henri Poincaré
- 2014 (3 months) Senior Research Fellow, Erwin Schrödinger Institute, Vienna
- 2020 (1 month) Visiting Professor, IST, Austria
- 2022-23 (3 months) Visiting Professor ISTA, Austria

Honors

- Member of the **The Royal Danish Academy of Sciences and Letters** (elected 2000)
- The 2001 University of Copenhagen **Teacher of the Year Award**
- The 2002 Friedman Rescue Award for significant contributions to Mathematical Physics.
- Member of **Academia Europaea** (elected 2020)
- Recipient of the 2021 **Henri Poincaré Prize**
- Fellow of the American Mathematical Society (elected 2022)

Selected invited addresses at major conferences:

- 2022 Invited speaker International Congress of Mathematicians (ICM)
- 2021 Plenary speaker International Congress on Mathematical Physics (ICMP), Geneva
- 2017 Invited speaker Mathematical Congress of the Americas (MCA), Montreal
- 2004 Invited speaker 4th European Congress of Mathematics (ECM), Stockholm
- 2003 Plenary speaker, 90th Statistical Mechanics Meeting, Rutgers University, In honor of the 80th birthday of F. Dyson.
- 2003 Plenary speaker XIV International Congress on Mathematical Physics (ICMP), Lisbon
- 2001 Invited lecturer, Enrico Fermi and the Universe of Physics, On the occasion of the 100th anniversary of Enrico Fermi, Rome
- 1996 Invited speaker 2nd European Congress of Mathematics (ECM), Budapest
- 1991 Plenary speaker at the 1991 International Congress on Mathematical Physics (ICMP), Leipzig

Grant participation

- 1990-91 US NSF Personal grant (No. DMS-9002416)
- 1992-95 US NSF Personal grant (No. DMS-9203829)
- 1996–2001 EU-network (TMR) *Partial Differential Equations and Quantum Mechanics*, Danish team coordinator
- 1996–1997, 1998–2001, 2002–2005, 2005, 2006–2008, 2009–2011, 2012–14 Danish natural Science research council (SNF and FNU) research grants, co-PI (co-applicant)
- 1997–2006 Danish National Research Foundation Center *MaPhySto*, Co-PI, board member, and Copenhagen University representative
- 2002–2006 EU-network (IHP) *Postdoctoral Training program in Mathematical Analysis of Large Quantum Systems*, Danish team coordinator
- 2002–2007 ESF-programme *Spectral Theory and Partial Differential Equations* (SPECT), Member of the steering committee
- 2005–2008 Danish natural Science research council (SNF) *Center for Non-commutative Geometry*, Co-PI
- 2010–2015 ESF-programme *Random geometry of large interacting systems and statistical Physics* (RGLIS), Danish coordinator
- 2010–2014 Research grant from the Lundbeck foundation *Quantum Theory Coupled to Geometry*
- 2013–2018 **ERC Advanced Grant:** *The Mathematics of the Structure of Matter* (1.5 MEuros)
- 2016–2026 **Centre of Excellence grant** from the VILLUM Foundation (8 MEuros)

Past board memberships and administrative duties:

- Vicepresident and Secretary Danish Mathematical Society (1998–2006)
- Danish coordinator of European Research Group in Mathematics and Quantum Physics (2000–2008)
- Chairman of the international committee of the science faculty at the University of Copenhagen (2001–2003)
- Member of the C18 commission for mathematical physics under the International Union of Pure and Applied Physics (IUPAP) (2003–2007)
- Board member (2004–2010) of Institute Mittag-Leffler, Stockholm (vicechair of the board 2009–10)

- Executive Committee member (elected 2006–2011 and 2021–2024), **secretary (2009–2011)** of the **International Association of Mathematical Physics**.
- Evaluator US NSF (latest 2004), Swedish Research Council (latest 2005), Canadian NSERC (latest 2006), Norwegian Research Council (2008)
- Evaluator European Research Council (ERC) (2007, 2008 Starting Grants, 2011, 2013 Advanced grants)
- Member Norwegian Research Council (Fall 2007)
- Member of the European Mathematical Society prize committee 2008
- Member **The Danish Council for Independent Research | Natural Sciences** (FNU) (2008–2013), **Vicechair of the council (2009–2012)**, **Chairman of the council (2013)**
- Member of the **International Scientific Committee for the 16th International Congress in Mathematical Physics** (Prague 2009)
- Chairman of the prize committee for the International Association of Mathematical Physics *Early career award* (2009)
- Member scientific committee for the British-Nordic Congress of Mathematicians, Oslo, 2009
- Member of scientific board of Groupement de recherche (GDR) "Dynamique quantique" (2009–2012)
- Member **Editorial board** *Journal of Mathematical Physics* 2010–2012
- Evaluator of the Physics Department ETH Zurich, 2013
- **Associate Editor** *Journal of Mathematical Physics* 2013–2018
- Member **Editorial board** *Journal of spectral Theory* 2011–2019.
- Member **Editorial board** *Journal of European Mathematical Society (JEMS)* 2014–2019
- Board member **the Danish Council for Independent Research**, 2014–2019 (Vicechair 2016–2019)
- Evaluator 2015 of the Czech Academy of Sciences
- ERC Advanced grant panel member 2014 (Mathematics Panel PE1), **Panel Chair** 2016, 2018, 2020 (Mathematics Panel PE1)
- Member European Mathematical Society prize committee 2020

Current board memberships and administrative duties:

- **Editor in Chief**, *Journal of Mathematical Physics*, 2019–2023

- Chairman NordForsk Panel for Interdisciplinary Research 2021–2025
- President **European Mathematical Society** 2023–2026

M.Sc. Students: 31

Ph.d. students: 4 current students, 10 graduated: M. Fialova, S. Tokus, A. Samojlow, B. Brietzke, R. Reuvers, M. Makedonski, K. Petersen, P.T. Nam (Recipient **ERC consolidator grant, EMS-prize**), S. Fournais (Recipient **ERC starting grant and Advanced grant**), T. Østergaard Sørensen.

Post-docs: Total number 15: P. Balodis Matesanz, W.L. Spitzer, D. Hasler, C. Hainzl, M. Lewin (Recipient of **ERC starting grant and consolidator grant**), N. Gilka, D. Lundholm, F. Portmann, J. Sok, N. Benedikter (Recipient of **ERC starting grant**), G. De Palma, L. Betermin, L. Schimmer, A. Bols, B. Ruba (current)

Publications: 105 publications including 2 collections edited and 1 monograph.

Examples: 2×Annals of Math., 2×Inventiones Math., 1×Acta Math. 1×Jour. American Math. Society (JAMS), 1×Jour. European Math. Society (JEMS), 4×Phys. Rev. Lett. (PRL), 13×Commun. Math. Phys.

(Citations (google scholar): ~ 4470 , H-index=36)