

## Curriculum Vitae: Mohammad Asadzadeh

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### Address

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### Professional preparation

B.Sc. in Mathematics, Kharazmi University of Tehran, 1973.  
M.Sc. in Mathematics, The University of Göteborg, Sweden, 1979.  
Ph.D. in Mathematics, The University of Göteborg, Sweden, 1986.  
Thesis: “Convergence analysis of some numerical methods for neutron transport and Vlasov equations”. Supervisor: Claes Johnson.

### Professional experience

Department of Science and Education of Iran, Shoushtar:

- *Lecturer of Mathematics and Physics (high school/college), 1973-1975.*

National Industrial Education Center of Iran, Kashan University of Tech:

- *Lecturer of Mathematics (undergraduate engineering), 1975-1977.*

Chalmers University of Technology:

- *Assistant of Mathematics, 1978-1986.*  
*(on leave 1983-84 visiting University of Michigan, Ann Arbor).*

University of Michigan, Ann Arbor:

- *Visiting research scholar (as part of PhD studfiers), 1984.*

Chalmers University of Technology:

- *Assistant Professor, 1986-1995 (on leave 93-95 visiting UM)*

University of Michigan, Ann Arbor:

- *Visiting Assistant/Associate Professor of Mathematics, 1993-1995.*

Chalmers University of Technology:

- *Senior Lecturer of Mathematics, 1993-2001.*
- *Associate Professor of Mathematics (Docent), 2001–2011*  
*(on leave 2006-2007 visiting Cornell University).*

Cornell University:

- *Visiting Professor of Mathematics, 2006-2007.*

Chalmers University of Technology:

- *Professor of Applied Mathematics, 2012–2018. Swedish: bitr. Prof.*  
*(an intermediate position existing only at Chalmers).*
- *Professor of Applied Mathematics, 2018–present.*

### **Fellowship and research grants**

Research scholar grant, 1983-84; University of Michigan, Ann Arbor, USA.

EU/INTAS research project grant, 2005-2006; “On Synthetic Optimal Control”:  
Coordinator for Azerbaijan, Sweden, Turkey and Ukraine.

JSPS (Japan’s Society for the Promotion of Science) grant, 2009:  
*Numerical analysis of BGK equation*. Kyoto University, Aerospace engineering.

RAYsearch (Stockholm) grant 2011: *Finite elements for radiation oncology; Head screening*.

### **Swedish Research Council (VR) grants,**

- Project: 2010-2013, *Numerical methods for neutron transport equation*
- Joint project: 2013-2017, *DREAM (Deterministic REActor Modelling)*.  
with applied physics, mechanics and Fraunhofer Institutes at Chalmers.

### **Awards**

Riaazi Kermani award 2013: For the “best paper” in *The 43th Annual Iranian Mathematical Conference for academic year 2011-2012*.

### **Master students**

I have supervised over a dozen of master thesis at Dept of Math, Chalmers. and 2 at *the Institute of Advance Studies in Basic Sciences (IASBS)*, Zanjan, Iran.

### **Research students**

Abdelouahab Kadem, PhD Applied Mathematics, 2006. (Chalmers)/Setif U.  
*Spectral methods for the neutron transport equation*.

Hassan Almanasreh, PhD Applied Mathematics, 2012. GU/Chalmers.  
*The Dirac Equation: Numerical and Asymptotic Analysis*.

Ehsan Kazemi, PhD Applied Mathematics, 2015. (Chalmers)/Isfahan U of Tech.  
*The Streamline Diffusion and Discontinuous Galerkin Methods for Linearized Boltzmann Equation*

John Bondestam Malmberg; PhD Applied Mathematics, 2017 (co-adviser). GU.  
*Efficient Adaptive Algorithms for an Electromagnetic Coefficient Inverse Problem*.

Christoffer Standar; PhD Applied Mathematics, 2017. Chalmers.  
*On finite element schemes for Vlasov-Maxwell system and Shrödinger equation*.

### **Current graduate students**

Niklas Eriksson; Department of Mathematics, GU.  
*On finite element approximations for Stokes and Navier-Stokes equations*.

### Postdoctoral students

Antonios Mylonakis, Sweden, 2019-2020.

Sebastian Gonzalez Pintor, Sweden, 2013-2017.

Tobias Gebäck, Sweden, 2010-2012.

Laurent Thevenot, France, 2003.

Piotr Kowalczyk, Poland, 2002.

Alexandros Sopasakis, USA, 2000-2002.

### Editorial

- Editorial board: Applied and Computational Mathematics, 2002-
- Associate editor: Bulletin of Iranian Mathematical Society, 2003-
- Editorial board: Computational Methods for Differential Equations, 2012-
- Associate editor: Iranian Journal of Science and Technology, 2016-

### Administration

- Member of the Library board at Math department, Chalmers, 1982-2007.
- Vice-chair: Swedish University Teachers Assoc. (SULF), Chalmers 1999-2012
- Board member: Swedish Academicians Organization (SACO), Chalmers 2005-
- Member of the coordinating board, mathematical sciences, Chalmers 2005-
- Member of Project NT5, QA; *Quality assurance of Master programs in 5 Nordic University of Technologies: Aalto (Helsinki), Chalmers (Göteborg), DTU (Copenhagen), KTH(Stockholm) and NTNU(Trondheim)*; 2009-2012.
- Member of the SAC (Swedish Alumni Club) of JSPS, 2015-
- Chairman of the Swedish University Teachers Association at Chalmers, 2018/2019.
- Vice-chair: Swedish Alumni Club of JSPS, 2022-

### Books

M. Asadzadeh, *Analys och linjär algebra*, Studentlitteratur,

Upplaga 1, 2004, pp. 399, ISBN: 91-44-03793-7.

Upplaga 2, 2007, pp. 431, ISBN: 9789144005256.

M. Asadzadeh, *An Introduction to Finite Element Method for Differential Equations*. Wiley (2020/21).

M. Asadzadeh and K. Holmåker, *Fourier Analysis and its Applications* (in preparation).

M. Asadzadeh and R. Emanuelsson, *2 $\pi$  Matematiskt koncept, satser och formler* (in preparation ).

M. Asadzadeh and R. Emanuelsson, *Handbook of Mathematical Concepts and Formulas for students in Science and Engineering* (World Scientific, 2022/23).

### **Lecture Notes**

- M. Asadzadeh, PDE Lecture Notes 2001-, ..., -2017 (electronic).
- M. Asadzadeh, Lecture Notes in Fourier analysis 2008 (electronic).
- M. Asadzadeh, An introduction to finite element methods (FEM) for differential equations, 2006-..., 2019 (Compendium).
- M. Asadzadeh and F. Bengzon, TMA682, Lecture Notes, 2004 (electronic).
- M. Asadzadeh, Fourier and Wavelet Analysis, Lecture Notes, 2010-2019, (electronic).
- M. Asadzadeh and R. Emanuelsson, Flervariabelanalys (available upon request).

**Publications Info:** A list of ( $> 100$ ) publications can be found at Chalmers Math Department Personal site.

**Languages known:** English, Swedish, French, Persian, Azari.

### **Membership in Professional Organizations**

- AMS (American Mathematical Society).
- SIAM (Society of Industrial and Applied Mathematics).
- Swedish Mathematical Society.
- JSPS (Japan's Society for Promotion of Science).

### **Conferences, Professional Meetings, Summer Schools**

Presented research work in about 80 conferences, where a dozen as invited/plenary speaker. Served in over 10 scientific committees, and have organized Applied Math, Neutron Transport, FEM, Particle Dynamics (Vlasovia), Radioation beams and JSPS meetings.

**Current research projects: see,**

<http://www.math.chalmers.se/~mohammad>

### **Community service**

I have evaluated a dozen of lecturerships (at assistant/associate professor levels) for Swedish universities, and for a few promotions to full professorship in the USA. I have served as opponent in applied mathematics and nuclear engineering PhD defenses in Sweden, Norway and France. I have served in about 20 math and engineering PhD committees in Sweden. I have written reviews for math and numerical analysis books and for more than 300 reviews (MathRev) for published papers. As referee, I have reviewed more than 100 manuscripts submitted to applied math, numerical analysis, nuclear science and engineering and rarefied gas dynamics journals.