

# Olga V. Holtz

Professor, UC Berkeley & TU Berlin  
Member, Institute for Advanced Study

Homepage: <http://www.math.ias.edu/~holtz>

Simonyi Hall 007  
IAS, Einstein Drive  
Princeton, NJ 08540

☎ 609-734-8090

☎ 609-951-4459

✉ [holtz@math.ias.edu](mailto:holtz@math.ias.edu)

## Education

- 2000 **Ph.D. in Mathematics**, *University of Wisconsin-Madison*, USA.
- 1995 **B.Sc. in Applied Mathematics**, *Chelyabinsk State Technical University*, Russia.

## Employment

- 2009–now **Professor (W3)**, *Technische Universität Berlin*, Institut für Mathematik.
- 2007–now **Professor**, *Berlin Mathematical School*.
- 2007–now **Associate Professor**, *University of California-Berkeley*, Mathematics.
- 2004–2007 **Morrey Assistant Professor**, *University of California-Berkeley*, Mathematics.
- 2002–2004 **Research Fellow**, *Technische Universität Berlin*, Institut für Mathematik.
- 2000–2002 **Research Associate**, *University of Wisconsin-Madison*, Computer Sciences.

## Visiting positions

- 2009–2010 **Member**, *Institute for Advanced Study*, School of Mathematics.
- 2007–2009 **Guest Professor**, *Technische Universität Berlin*, Institut für Mathematik.

## Honors and awards

- 2009–2010 John von Neumann Fellowship (Institute for Advanced Study)
- 2008 European Mathematical Society Prize
- 2008–2013 Member of the Junge Akademie of Germany
- 2006–2010 Sofja Kovalevskaja research prize (Alexander von Humboldt Foundation)
- 2002–2003 Humboldt research fellowship (Alexander von Humboldt Foundation)
- 2000 SIAG/LA prize in Applied Linear Algebra (SIAM)
- 2000 Liftoff award (Clay Mathematics Institute)
- 1999–2000 Alfred P. Sloan doctoral dissertation fellowship (Sloan Foundation)
- 1999 Excellence in Research graduate fellowship (UW-Madison)
- 1999 Elizabeth Hirschfelder fellowship (UW-Madison)
- 1996–1997 Presidential scholarship for study abroad (Russian ministry of higher education)
- 1994–1996 George Soros undergraduate and graduate scholarships
- 1992–1995 Lenin scholarship (Russian ministry of higher education)
- 1994 4th prize at the All-Russian Mathematical Olympiad

## Grants

- 2008–2010 Priority Programme Research grant, German Research Foundation (DFG)
- 2006–2010 Sofja Kovalevskaja Programme, German Ministry for Education and Research
- 2006–2007 Center for Pure and Applied Mathematics, UC-Berkeley (co-PI with Yuval Peres)

## Research interests

Numerical analysis, matrix and operator theory, approximation theory, wavelets and splines, compressive sensing, orthogonal polynomials and special functions, commutative algebra, combinatorics, analysis of algorithms, computational complexity.

---

## Selected invited talks

- 2011 Foundations of Computational Mathematics, Budapest (plenary talk)
- 2010 Joint Mathematics Meetings, San Francisco (AMS invited address)
- 2009 Joint Mathematics Meetings, Washington D.C. (Current Events lecture)
- 2008 European Congress of Mathematicians, Amsterdam (EMS prize lecture)
- 2006 Joint GAMM-SIAM conference on applied linear algebra, Düsseldorf (ILAS lecture)
- 2005 12th ILAS meeting, Regina (plenary lecture)
- 2000 7th SIAM conference on applied linear algebra, Raleigh (SIAG/LA prize lecture)

---

## Invited seminar & colloquium talks

- since 2000 AIM, Berlin Mathematical School, Dagstuhl Research Center, Isaac Newton Institute, Microsoft Research Theory Group, MIT, Oberwolfach Mathematics Institute, San Jose State University, San Francisco State University, Stanford University, Technion, Technische Universität Berlin, Tel Aviv University, University of California-Berkeley, University of Cambridge, University of Connecticut-Storrs, University of Hawaii, University of Rome (La Sapienza), University of Washington-Seattle.

---

## Conferences organized

- FoCM 2011 **Workshop**, *Numerical linear algebra*.
- JMM 2010 **Sessions**, *Zonotopal algebra and applications, Algebraic methods in signal processing*.
- FoCM 2008 **Workshop**, *Numerical linear algebra*.
- ICIAM 2007 **Minisymposia**, *Structured matrix algorithms: complexity and stability, Structured matrix algorithms: new methods*.

---

## Editorial services

- 2007–now **Associate editor**, *IMA Journal on Numerical Analysis*.
- 2005–2008 **Associate editor**, *Linear Algebra and its Applications*.
- 2006 **Editor**, *Special issue of Linear Algebra and its Applications in honor of F. L. Bauer*.

---

## Students supervised

- Felipe Rincon University of California Berkeley, Ph.D., current
- Shuchao Bi University of California Berkeley, Ph.D., current
- Matthias Lenz Technische Universität Berlin, Ph.D., current
- Mikhail Tyaglov Technische Universität Berlin, Ph.D., 2009
- Nenad Moraca Technische Universität Berlin, M.S., 2009

---

## Courses taught

- 2009: Spring TU Berlin, Linear algebra for engineers, Compressive sensing
- 2008: Fall UC Berkeley, Numerical functional analysis, Advanced problem solving
- 2007: all year TU Berlin, Pure and applied algebra, Graduate reading seminar
- 2006: Fall UC Berkeley, Discrete mathematics, Linear algebra
- 2005: Fall UC Berkeley, Wavelets and signal processing, Introduction to analysis
- 2005: Spring UC Berkeley, Wavelets and signal processing, Numerical analysis
- 2004: Fall UC Berkeley, Honors seminar on problem solving Mathematical physics