

CV Trygve Helgaker

Name: Trygve Ulf Helgaker

Born: August 11 1953, Porsgrunn, Norway

Nationality: Norwegian

Civil Status: Married to Barbara Reay Helgaker
Children: Jan Fredrik (b. 1985) and Aleksander (b. 1988)

Address: Tollef Gravs vei 7, N-1358 Jar, Norway (home)
Department of Chemistry,
University of Oslo,
Blindern P.O.B. 1033,
N-0315 Oslo, Norway (office)

Telephone: 47-67143705 (home); 47-22855428 (office)

E-mail: trygve.helgaker@kjemi.uio.no

Homepage: <http://folk.uio.no/helgaker/>

Languages: Norwegian (mother tongue), fluent in English and Russian, reads French and German

School: Oslo Katedralskole, 1972

Army Service: 1972–1974 (Army Language School, 24 months)

Cand. mag.: 1974–1975, University of Leningrad (Russian studies, Cultural Exchange Programme)
1975–1978, University of Oslo (science studies)

Cand. scient.: 1980, Department of Chemistry, University of Oslo;
thesis work in gas-phase electron diffraction:
Strukturundersøkelser av enkle dialkylsinkforbindelser
Thesis advisor: Prof. Arne Haaland

Dr. philos.: 1986, University of Oslo
Thesis work in quantum chemistry with Prof. Jan Almlöf:
Development of Quantum Chemical Methods for Analytical Calculation of Molecular Properties

Positions: **Research Assistant** (vitenskapelig assistent),
Department of Slavic Studies, University of Oslo, 1979 (6 months)
Research Assistant (vitenskapelig assistent),
Department of Chemistry, University of Oslo, 1981-85;
Amanuensis (temporary position),
Department of Chemistry, University of Oslo, 1985-86 ,Research
post. doc. with prof. Jan Almlöf,
Institute for Mathematics and Its Applications, Minnesota Supercomputer Institute and
Department of chemistry, University of Minnesota 1986–87
post. doc. with lektor Poul Jørgensen,
Department of Chemistry, Aarhus University, Denmark, 1987–1989
(with lektor Poul Jørgensen)
Lecturer (førsteamanuensis)
Department of Chemistry, University of Oslo, 1989–1992,
Professor
Department of Chemistry, University of Oslo, 1993

- Sabbaticals: 1 year at the Dept. of Chemistry, **University of Cambridge**, UK, 1999–2000,
1 year at the Dept. of Chemistry, **University of Durham**, UK, 2006–2007
- Visits abroad: 1 month at the Dept. of Chemistry, University of Moscow, Dec. 1980;
3 months at the Dept. of Chemistry, Aarhus University, Jan–Mar 1985;
1 month at the Dept. of Chemistry, Aarhus University, Jun 1985;
1 month at the Dept of Chemistry, Aarhus University, Nov–Dec 1985;
1 month at NASA Ames Research Center, California, April 1988;
3 weeks at the Universite Louis Pasteur, Strasbourg, January 2003
50 other visits of duration of a week or longer
- Speaker: speaker at 58 international conferences and meetings; (talks since 2002 available from
<http://folk.uio.no/helgaker/talks.html>)
- Conferences org. Scandinavian Minisymposium on Theoretical Chemistry, Oslo, Norway, Sept. 1983.
The Nordic Molecular Physics Symposium, Oslo, Norway, May 1986
The Dalton 2000 Workshop, Oslo Norway, December 5 – 7, 1988
70 Years of the Correlation Problem, Oslo, Norway, June 3 – 5, 1999
Quantum Chemistry SUP Meeting, Oslo, Norway, November 9 –11 2004
Nanoquant Midterm Meeting, Leangkollen, Norway, February 9–12 2006
Molecular Properties 2009. Vetre. Norway, June 18–21 2007
- Summer schools: *The Sostrup Summer School: Quantum Chemistry and Molecular Properties*, Denmark
organizer and teacher together with Poul Jørgensen and Jeppe Olsen,
Held 10 times, biennially since 1990, each school of 12 days duration

European Summer School in Quantum Chemistry, Sweden and Italy,
teacher, 10 times since 1991;

Helsinki Winter School, Finland, teacher, 1991 and 2000

The Fock Summer School, Russia, teacher 2005
- Students: 8 past master students; 4 past Ph.D.-students; 3 present PhD-students;
6 post-docs (4 finished, 2 present)
- Honors: Fridtjof Nansens belønning for yngre forskere, 1985;
Kjemistudentenes undervisningspris ”Den Gyldne Spatel”, 1992
Elected member, The Norwegian Academy of Science and Letters, 2004;
Elected member, International Academy of Quantum Molecular Science, 2005;
Elected member, Scientific Board of World Association of Theoretical and
Computational Chemists (WATOC), 2005;
University of Oslo Research Prize 2006;
Centenary Lectureship Winner 2007–2008, Royal Society of Chemistry, UK;
The Guldberg–Waage medal, Norwegian Chemical Society, 2007
- Publications: **263 publications**: 246 papers in refereed international journals; 9 reviews; 8 book
chapters; **monograph**: *Molecular Electronic Structure Theory*, T. Helgaker, P.
Jørgensen, and J. Olsen, Wiley, 2000; two translations of Russian fiction to
Norwegian.
- Programs: one of the principal contributors **Dalton** <http://www.kjemi.uio.no/software/dalton/>,
with more than 1476 licenses to Dalton 1.X and 1400 to Dalton 2.0;
author of the **Hermit** integral code (used in Aces and Columbus);
contributor to **Dirac** and to **DIRCCR12-OS**

Citations: More than **10400 citations** to 248 articles in ISI-indexed journals since 1981, (26 articles cited more than 100 times, 3 papers cited more than 500 times, 1 paper more than 600 times); additional 2000 citations to books, book chapters and computer codes; **Hirsch index 55**, most cited Norwegian chemist

Editorial Boards Molecular Physics,
Theoretical Chemistry Accounts,
International Journal of Quantum Chemistry

Networks: **COST-D9** Program “Development of Quantum-Chemical Methods for Studying Molecules in Mixed Condensed Phase Media”, (1998–2002)
COST-D9 Program “Molecular Structure and Dynamics—New Level of Accuracy using Explicitly Correlated Wave Functions” (1998–2002)
COST-D26 Program “Towards a New Level of Accuracy in Computations of Molecular Structure, Molecular Properties, Spectroscopy, and Thermo-Chemistry” (2002-2005)

European research training network on “Molecular Properties and Molecular Materials” (**MOLPROP**) HPRN-2000-00013 (2000 – 2003);

European research training network on “Understanding Nano-Materials from the Quantum Perspective” (**NANOQUANT**), MRTN-CT-2003-506842 (2004–2007);

Nordiska Forskarakademi network for research and training (NorFA grant No. 030262) on “Quantum Modeling of Molecular Materials” (QMMM) (2004–2006);

Norwegian Research Consortium in Quantum Chemistry **SUP** (Strategic University Program) (2003–2007);

Norwegian **NANOMAT** program Molecular Modeling in Nanotechnology (2003–2006);

Quantum Modeling of Molecular Materials (QMMM), a NorFA network in natural sciences (2004-2006).

Co-director **Centre for Theoretical and Computational Chemistry**, a Centre of Excellence established by the Norwegian Research Council, 2007, as a joint project between the Universities of Oslo and Tromsø.

Boards: CMA (Centre of Mathematics and Applications), University of Oslo