

Sandeep Koranne

West Linn, OR 97068
(971) 276-9431 (M)
sandeep.koranne@gmail.com

- WORK EXPERIENCE**
- ◇ **Chief Scientist & Principal Key Expert**, Mentor, A Siemens Business. (January 2008 – Present)
 - ★ Lead author and principal contributor to several commercial software products.
 - ★ Providing technical leadership and influence to global team.
 - ★ HPC, computational geometry algorithms, software architecture and implementation.
 - ★ Author of several papers and patents for Mentor (please see scholar.google.com).
 - ◇ **Senior Algorithms Developer and Director**, Synplicity Inc. (April 2004 – January 2008)
 - ★ Design, development, integration and testing of Synplicity’s Amplify FPGA Physical Optimization tool using advanced graph theory algorithms and enumeration.
 - ◇ **Senior Scientist**, Tanner Research, Inc. (September 2001 – April 2004)
 - ★ Responsible for the design and development of a high-performance foundry compatible hierarchical layout verification suite of products.
 - ◇ **Project Lead**, Philips Research Labs, The Netherlands, (July 1999 - September 2001)
- EDUCATION**
- ◇ **Oregon State University, Corvallis, OR** July 2019
Masters in Mathematics: Thesis topic “High-Order Finite Difference Methods for Nonlinear Optical Media”. Course work: Real Analysis, Complex Analysis, Linear Algebra, Numerical Analysis, PDE, Algebra, Topology. Took PhD level course work and qualifying exams.
 - ◇ **Indian Institute of Technology, Delhi**
Masters in VLSI Design, Tools and Technology (interdisciplinary program), Jun 1997-Dec 1998. Master’s program supported by a Fellowship from Texas Instruments India Ltd., Thesis: “XPLAN: A methodology to estimate crosstalk in VLSI circuits”.
 - ◇ **Maulana Azad College of Technology, (REC), Bhopal**
Bachelor’s in Computer Science and Engineering, Aug 1993-May 1997.
Received University Gold Medal and Roll of Honors,
Undergraduate thesis: Solving the VLSI standard cell placement problem using graph partitioning.
- AWARDS**
- ◇ Winner of the Sun Studio 12 Contest 2010 (<http://skoranne.blogspot.com>).
 - ◇ Exemplary achievement award at Synplicity and Mentor.
 - ◇ University Gold Medal and Roll of Honor for securing 1st position in Computer Science.
 - ◇ Gold medal in National Science Aptitude Test of India (year 1990).
- SKILLS**
- ◇ C++, C, Julia, Common Lisp, Fortran, Python, Erlang, Lex, Yacc.
 - ◇ Strong background in algorithms, graph theory, and computational geometry.
 - ◇ Applied Mathematics and numerical methods, using Reduce, Maxima, and Singular.
 - ◇ Parallel programming using CUDA, OpenMP, MPI and Threads.
 - ◇ Author of two books and several (more than 50) peer reviewed, archived papers.
 - ◇ Scientific computing on Power, ARM, PS2 and PS3.
 - ◇ Algorithm offloading to hardware using SystemC, Verilog, C++ ESL and OpenACC.
 - ◇ Expert in CMOS, VLSI, Lithography, and semiconductor manufacturing.
- ART**
- ◇ Indian classical music instrumental (Sitar).