

Office Page of Rainer Dömer

[Contact](#)[Projects](#)[Awards](#)[Publications](#)[Releases](#)[Teaching](#)[Students](#)[Personal](#)

Contact

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Office hours

- Monday, 11am, EH 3217

Projects

Current Projects

- [Grid of Processing Cells \(GPC\)](#)
- [RISC: Parallel SystemC Simulation on Many-Core Computer Architectures](#)

Ongoing Projects

- A New Parallel Programming Model for Many-Core Computers

Completed Projects

- [ConcurrenC: A Novel Model of Computation for C-based SLDLs](#) (2014)
- [Eclipse-based Platform for Computer-Aided Recoding](#) (2013)
- [System-on-Chip Environment \(SCE\)](#) (2011)

SDT EX2003

Cadence Design Systems v. SDT

IPR2024-00024

- [Hardware-dependent Software \(HdS\)](#) (2009)
- [CARS: Computer-Aided Re-coding for SoC Specification](#) (2008)
- [FAT: Fast and Accurate Transaction-Level Modeling](#) (2008)
- [Intl. Embedded Systems Symposium \(IESS\)](#) (2007)
- [SCRC: SpecC Reference Compiler and Simulator](#) for the [SpecC Technology Open Consortium \(STOC\)](#) (2006)
- [OSCAR: Optimum Simultaneous Scheduling, Allocation and Resource Binding Based on Integer Programming](#) (1996)

Awards

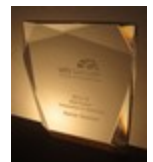
Research Awards

- [DATE Best Paper Award 2014](#):
"May-Happen-in-Parallel Analysis based on Segment Graphs for Safe ESL Models", Design, Automation and Test in Europe (DATE) Conference, Dresden, Germany, March 2014.
 - [DATE Announcement](#)
 - [HSSOE Announcement](#)
 - [CECS Announcement](#)
- [NSF CAREER Award #0747523](#):
"Result-Oriented System-Level Modeling for Efficient Design of Embedded Systems"
 - [HSSOE Announcement](#)
 - [CECS Announcement](#)



Teaching Awards

- [Dean's Honoree for Teaching Excellence](#)
University of California, Irvine
Celebration of Teaching, April 18, 2019
- [Faculty Innovation in Teaching, Mid-Career Award 2016](#)
University of California, Irvine
The Henry Samueli School of Engineering, May 23, 2016
- [EECS Faculty of the Year 2012-2013](#)
UC Irvine, The Henry Samueli School of Engineering
Engineering Student Council, February 22, 2013



Publications

Selected Publications

- W. Ecker, W. Müller, R. Dömer:
[*"Hardware-dependent Software - Principles and Practice"*](#),
Springer, Boston, January 2009.
(ISBN 978-1-4020-9435-4)
- A. Rettberg, M. Zanella, R. Dömer, A. Gerstlauer, F. Rammig:
[*"Embedded System Design: Topics, Techniques and Trends"*](#),
Springer, Boston, June 2007.
(ISBN 978-0-387-72257-3)
- A. Gerstlauer, R. Dömer, J. Peng, D. Gajski:
[*"System Design: A Practical Guide with SpecC"*](#),
Kluwer Academic Publishers, Boston, June 2001.
(ISBN 0-7923-7387-1)
- D. Gajski, J. Zhu, R. Dömer, A. Gerstlauer, S. Zhao:
[*"SpecC: Specification Language and Methodology"*](#),
Kluwer Academic Publishers, Boston, March 2000.
(ISBN 0-7923-7822-9)



All Publications

- [listed by publication date](#)
- [listed by publication type](#)

Recent Invited Talks and Presentations

- R. Dömer:
[*"Advances in Parallel Discrete Event Simulation for Embedded Computer Systems"*](#),
Presentation at Chapman University, Fowler School of Engineering, April 26, 2023.
- R. Dömer:
[*"RISC: A Compiler for Parallel SystemC with Maximum Standard Compliance"*](#),
Presentation at SystemC Evolution Fika, Virtual Meeting, April 2022.
- R. Dömer:
[*"Out-of-Order Parallel Simulation of SystemC Models using the RISC Framework"*](#),
Tutorial at ESWEEK 2020, Virtual Conference, September 22, 2020.
- R. Dömer:
[*"Pushing the Limits of Standard-Compliant Parallel SystemC Simulation"*](#),
Presentation at SystemC Evolution Day 2019, Munich, Germany, October 2019.
- R. Dömer:
[*"On the Limits of Standard-compliant Parallel Simulation of the IEEE SystemC Language"*](#),
Opening Keynote at FDL 2018, Munich, Germany, September 2018.

Curriculum Vitae

- [Short Biography](#)
- Full CV available upon request

Software Releases

Recoding Infrastructure for SystemC (RISC)

- 08/18/2021: [RISC Compiler and Simulator, Release V0.6.3](#)
- 09/13/2020: [RISC Compiler and Simulator, Release V0.6.2](#)
- 09/30/2019: [RISC Compiler and Simulator, Release V0.6.0](#)
- 09/30/2018: [RISC Compiler and Simulator, Release V0.5.0](#)
- 06/15/2018: [RISC Compiler and Simulator, Release V0.4.2](#)
- 07/31/2017: [RISC Compiler and Simulator, Release V0.4.0](#)
- 09/30/2016: [RISC Compiler and Simulator, Beta Release V0.3.0](#)
- 10/30/2015: [RISC Compiler and Simulator, Alpha Release V0.2.1](#)
- 09/30/2015: [RISC Compiler and Simulator, Alpha Release V0.2.0](#)
- 06/09/2014: [RISC API, Alpha Release V0.1.0](#)

SpecC Reference Compiler and Simulator

- 12/15/2014: [SCRC Release 2.2](#)
01/03/2018: plus [scrc-2.2.patch](#)
- 09/28/2006: [SCRC Release 2.1](#)
- 06/24/2004: [SCRC Release 2.0](#)
- 01/03/2002: [SCRC Release 1.2](#)
- 08/06/2001: [SCRC Release 1.1](#)
- 06/01/2001: [SCRC Release 1.0](#)

Teaching**Current Courses**

- W24: [EECS 22](#), [Advanced C Programming](#)
- W24: [EECS 222](#), [Embedded System Modeling](#)

Recent Courses

- F23: [ECPS 203](#), [Embedded Systems Modeling and Design](#)
- List of all [Courses Taught at UCI](#)

Teaching Statement

- My [Teaching Philosophy](#)

Students

Graduate Students

- Vivek Govindasamy (vbgovind@uci.edu)
- Yutong Wang (yutongw5@uci.edu)

Undergraduate Students

- Anson Harry Fong
- Rean Yanda Li
- Zhuoqi Li

Alumni

- [Emad Arasteh](#), Ph.D. (2022)
- Zhongqi Cheng, Ph.D. (2020)
- Tim Schmidt, Ph.D. (2018)
- Guantao Liu, Ph.D. (2017)
- Che-Wei Chang, Ph.D. (2015)
- Yasaman Samei Ph.D. (2014)
- [Weiwei Chen](#), Ph.D. (2013) [EDAA Outstanding Dissertation Award](#)
- Xu Han, Ph.D. (2013)
- Ines Viskic, Ph.D. (2010)
- Pramod Chandraiah, Ph.D. (2008)
- [Gunar Schirner](#), Ph.D. (2008)
- Claudio Raccomandato M.S. (2022)
- Yutong Wang, M.S. (2022)
- Vivek Govindasamy, M.S. (2022)

- Arya Daroui, M.S. (2022)
- Zhongqi Cheng, M.S. (2017)
- Guantao Liu, M.S. (2013)
- Yitao Guo, M.S. (2010)
- Deepak Mishra, M.S. (2009)
- Gautam Sachdeva, M.S. (2006)
- Eric Johnson, M.S. (2006)
- Ines Viskic, M.S. (2005)
- Pramod Chandraiah, M.S. (2005)
- [Gunar Schirner](#), M.S. (2005)
- Daniel Mendoza, B.S. (2020)
- Spencer Kam, B.S. (2020)
- Farah Arabi, B.S. (2018)
- Timothy Bohr, B.S. (2011)

Decisions are not as easy if you understand both sides of the story.

01/02/24 [R. Dömer](#) (doemer@uci.edu).