IEEE COOL Chips21, April 18-20, 2018

Symposium on Low-Power and High-Speed Chips and Systems



Hironori Kasahara, Ph.D., IEEE Fellow, IPSJ Fellow

IEEE Computer Society President 2018

Professor, Dept. of Computer Science & Engineering Director, Advanced Multicore Processor Research Institute Waseda University, Tokyo, Japan

URL: http://www.kasahara.cs.waseda.ac.jp/

1980 BS, 82 MS, 85 Ph.D., Dept. EE, Waseda Univ. 1985 Visiting Scholar: U. of California, Berkeley 1986 Assistant Prof., 1988 Associate Prof., 1997, Waseda Univ., Now Dept. of Computer Sci. & Eng. 1989-90 Research Scholar: U. of Illinois, Urbana-Champaign, Center for Supercomputing R&D 2004 Director, Advanced Multicore Research Institute, 2017 member: the Engineering Academy of Japan and the Science Council of Japan

2005 STARC Academia-Industry Research Award
2008 LSI of the Year Second Prize
2008 Intel AsiaAcademic Forum Best Research Award
2010 IEEE CS Golden Core Member Award
2014 Minister of Edu., Sci. & Tech. Research Prize
2015 IPSJ Fellow
2017 IEEE Fellow, IEEE Eta Kappa Nu

Reviewed Papers: 216, Invited Talks: 155, Published Unexamined Patent Application:66 (Japan, US, GB, China Granted Patents: 42), Articles in News Papers, Web News, Medias incl. TV etc.: 578

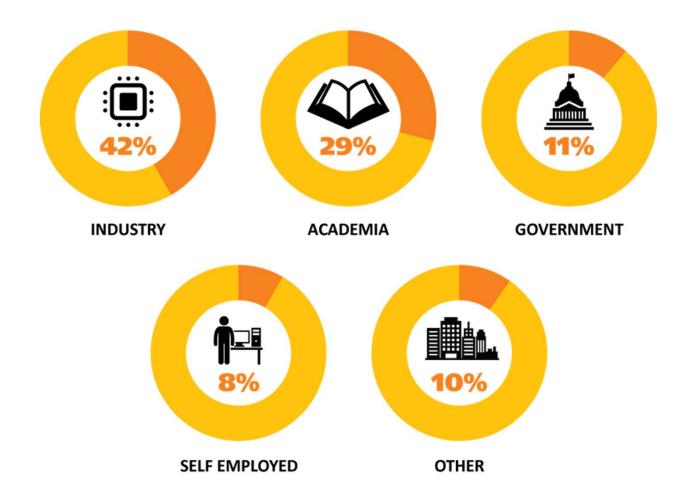
Committees in Societies and Government 255
IEEE Computer Society President 2018, BoG(2009-14), Multicore STC Chair (2012-), Japan Chair (2005-07), IPSJ Chair: HG for Mag. & J. Edit, Sig. on ARC. [METI/NEDO] Project Leaders: Multicore for Consumer Electronics, Advanced Parallelizing Compiler, Chair: Computer Strategy Committee [Cabinet Office] CSTP Supercomputer Strategic ICT PT, Japan Prize Selection Committees, etc. [MEXT] Info. Sci. & Tech. Committee, Supercomputers (Earth Simulator, HPCI Promo., Next Gen. Supercomputer K) Committees, etc.

IEEE Computer Society

60,000+ members, volunteer-led organization,
200 technical conferences, 17 scholarly journals
and 13 magazines, awards program,
Digital Library with more than 550,000 articles and papers,
400 local and regional chapters, 40 technical committees,



IEEE Computer Society Members







IEEE Computer Society BoG (Board of Governors) Feb.1, 2018



IPSJ/IEEE-CS Young Computer Researcher Award For members of the IPSJ and the IEEE-CS

The First Award Ceremony:

COMPSAC2018, July 23-27, NII, Tokyo

https://ieeecompsac.computer.org/2018/



Bjarne Stroustrup
2018 Computer
Society Computer
Pioneer Award
Columbia University



Masaru Kitsuregawa
Director General of
NII, Past President of
IPS.I



Margaret Martonosi
2018 Computer
Society Technical
Achievement
Princeton University



Dejan Milojicic
CS President 2014
HP Labs
CS 2022 Report

Choose Your Content Bundle	Preferred Plus Q More Info	Training & Development	Research More Info	Basic More Info	Student More Info
IEEE Member: Add Computer Society to your existing IEEE membership. IEEE Membership is an additional charge. Affiliate Member: Join Computer Society only as a Computer Society affiliate. IEEE benefits are not included. Student Member: Students must join IEEE when joining Computer	IEEE Member: \$30 Affiliate Member: \$78 JOIN NOW	IEEE Member: \$28 Affiliate Member: \$71 JOIN NOW	IEEE Member: \$28 Affiliate Member: \$71 JOIN NOW	IEEE Member: \$20 Affiliate Member: \$63 JOIN NOW	IEEE Student Member: \$4 New Student Member: \$20 JOIN NOW
Society. IEEE Student members can add Computer Society. Computer magazine (12 digital issues)* ComputingEdge (12 issues)	Ø	Ø	Ø	Ø	
Members-only discounts on conferences and events Members-only webinars Unlimited access to Computing Now, computer.org, and the new	Ø Ø	Ø Ø	Ø Ø	Ø Ø	Ø Ø
mobile-ready myCS Local chapter membership Skillsoft Skillchoice™ Complete with 67,000+ books, videos, courses, practice exams and mentorship resources	Ø	Ø	Ø	Ø	Ø
Books24x7 on-demand access to 15,000 technical and business resources Two complimentary Computer Society <u>magazines</u> subscriptions	Ø	Ø	Ø		Ø
myComputer mobile app Computer Society Digital Library	30 tokens 12 FREE downloads	Member pricing	30 tokens 12 FREE downloads	Member pricing	30 tokens
Training webinars Priority registration to Computer Society events	3 FREE webinars	3 Free webinars	Member pricing	Member pricing	Member pricing
Right to vote and hold office One-time 20% Computer Society online store discount	0	Ø	Ø	Ø	

 $^{^{\}star}$ Print publications are available for an additional fee. See IEEE catalog for details.

IEEE computer society

Home // Professional Education // Certification Credentials // Certificates of Achievement // Multicore Video Series

Multicore Video Series

- > Automatic Parallelization: David Padua
- > Autoparallelization for GPUs: Wen-mei Hwu
- > Dependences and Dependence Analysis: Utpal Banerjee
- > Dynamic Parallelization: Rudolf Eigenmann
- > Instruction Level Parallelization: Alexandru Nicolau
- ➤ Multigrain Parallelization and Power Reduction: Hironori Kasahara
- ➤ The Polyhedral Model: Paul Feautrier
- **▶** Vector Computation: <u>David Kuck (Computer Pioneer)</u>
- > Vectorization: P. Sadayappan
- ➤ Vectorization/Parallelization in the IBM Compiler: Yaoqing Gao
- ➤ Vectorization/Parallelization in the Intel Compiler: Peng Tu
- > Roundtable Discussion by all presenters

Self-Paced Learning:

Approximate time = 12 hours

PDH: 12.0

• CEU: 1.2

Full Series Price:

• IEEE CS Member: \$195

Nonmember: \$1,000

Individual Videos:

IEEE CS Member: \$30

Nonmember: \$125

See individual videos below.

For questions, please contact certification@computer.org.



Toward 2018

- Refining content and services to further improve the satisfaction of CS members;
- Considering an <u>incentive for volunteers</u> to further accelerate CS activities and promptly provide technical benefits for people around the globe; To express appreciation to volunteers: CS Point (Mileage) System: Annual & Life Time Honor, Premier Seating, Premier Registration, Distinguished Reviewer, etc.
- Offering more <u>attractive services</u> for practitioners in <u>industry</u>;
- Providing the world's best educational content and historical treasures for future generations, which only the CS can create with our pioneering researchers (for example, the Multicore Compiler Video Series found at www.computer.org/web/education/multicore-video-series);
- Thinking about <u>sustainable membership fees</u> while considering the diversity of economic situations within the 10 regions;
- Cooperating with other IEEE societies and sister societies in a timely and efficient manner:
- Intelligibly introducing the latest computer-related technologies to younger generations, including children, so that they can realize their technological dreams.

