CURRICULUM VITAE

Nam Ling, Ph.D., IEEE/IET/AAIA Fellow
Associate Dean for Research, School of Engineering
Wilmot J. Nicholson Family Professor (Endowed Chair)
Department of Computer Science and Engineering
Santa Clara University
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As of Date: April 15, 2026

MAJOR POSITIONS (EMPLOYMENTS)

Current Position:
Associate Dean for Research, School of Engineering
Wilmot J. Nicholson Family Professor (Endowed Chair)
Professor (tenured), Department of Computer Science and Engineering
Santa Clara University, Santa Clara, California, USA.

September 2024 – Present:
Associate Dean for Research, School of Engineering

September 2020 – Present:
Wilmot J. Nicholson Family Professor (Endowed Chair), Santa Clara University, Santa Clara, California, USA.

September 2010 – August 2020:
Sanfilippo Family Professor (University Endowed Chair), Santa Clara University, Santa Clara, California, USA.

September 2001 - Present:
Professor (tenured), Department of Computer Science and Engineering (renamed from Department of Computer Engineering since Sep 2019), Santa Clara University, Santa Clara, California, USA.

September 2010 – August 2023:
Chair, Department of Computer Science and Engineering, Santa Clara University, Santa Clara, California, USA.

July 2007 – August 2010:
Associate Dean for Research and Faculty Development, School of Engineering, Santa Clara University, Santa Clara, California, USA.

June 2002 – June 2007:
Associate Dean for Graduate Studies and Research, School of Engineering, Santa Clara University, Santa Clara, California, USA.
(Acting Associate Dean, School of Engineering, Santa Clara University, May 2002.)
Acting Dean, School of Engineering, Santa Clara University (during various short periods in 2004 - 2006.)

September 1994 – August 2001:
Associate Professor (tenured), Department of Computer Engineering, Santa Clara University, Santa Clara, California, USA.

September 1999 – December 1999:
Acting Chair, Department of Computer Engineering, Santa Clara University, Santa Clara, California, USA.

September 1989 - August 1994:
Assistant Professor, Department of Computer Engineering (previously Department of Electrical Engineering and Computer Science), Santa Clara University, Santa Clara, California, USA.
(Also, **Arthur Vining Davis Junior Faculty Fellow**, July 1, 1991 - September 30, 1992.)

August 1984 - July 1989:
Research Assistant and Teaching Assistant in The Center for Advanced Computer Studies and the Department of Electrical and Computer Engineering, University of Southwestern Louisiana, Lafayette, Louisiana, USA (now known as University of Louisiana at Lafayette).

May 1981 - December 1983:
Process Engineer and Product Engineer, Hewlett Packard (HP) Company, Singapore.
Responsibilities: Computer IC chips product development and transfer to production, equipment procuring, packaging, testing, and failure analysis.

OTHER POSITIONS (EMPLOYMENT/LONG TERM CONSULTING)

March 2018 – July 2023:
Program Mentor and Internship Assessor, NUS Overseas College in Silicon Valley, National University of Singapore (NUS).

September 2002 – July 2016:
Consulting Professor, NUS Overseas College in Silicon Valley, National University of Singapore (NUS).

January 1998 – August 1998 (On sabbatical leave from Santa Clara University):
Senior Research Fellow, Center for Signal Processing, Nanyang Technological University, Singapore.

1994 – Present:
In addition to above, for a complete list of honorary, visiting, and consulting positions, please see the section on honorary, visiting, and consulting positions.

EDUCATION

Ph.D. (Computer Engineering), The Center for Advanced Computer Studies, University of Louisiana at Lafayette, Lafayette, Louisiana, USA (then known as University of Southwestern Louisiana), December 1989.
(GPA = 4.0 out of 4.0)
Ph.D. Dissertation: "Systolic Temporal Arithmetic: A New Formalism for Specification, Verification, and Synthesis of Systolic Arrays."

M. S. in Computer Engineering, The Center for Advanced Computer Studies, University of Louisiana at Lafayette, Lafayette, Louisiana, USA (then known as University of Southwestern Louisiana), December 1985.
(GPA = 4.0 out of 4.0)
M.S. Thesis: "Mixed Packet Design for Packetized Voice Transmission over Integrated Services Digital Network."

B. Eng. (Electrical Engineering), National University of Singapore, Singapore, May 1981.

HONORS AND AWARDS

(1) FELLOWS

1. **IEEE Fellow - for contributions to video coding algorithms and architectures**, elevated on November 15, 2007, effective January 1, 2008. Achieved the status of **IEEE Life Fellow**, effective January 1, 2022.
   (IEEE is The Institute of Electrical and Electronics Engineers. Fellow is one of the most prestigious honors of the IEEE and is bestowed upon a very limited number of Senior Members who have made outstanding contributions to the electrical and information technologies and sciences for the benefit of humanity and the profession. The number of IEEE Fellows elevated in a year is no more than 0.1% of the total IEEE voting membership. The IEEE Fellow is the highest grade of membership in the IEEE.)

2. **IET Fellow** – elected on April 28, 2011, effective April 2011.
   (The Institution of Engineering and Technology (IET) Fellow is selected based on successful leadership or outstanding service to the profession over an extended period.)

3. **AAIA Fellow** – Fellow of the Asia-Pacific Artificial Intelligence Association, effective October 18, 2022.

(2) BEST PAPER AWARDS

4. **Excellent Paper Award** for our paper, Taru Kanchan, Minqiang Jiang, and Nam Ling, "Non-MPM Mode Coding for Intra Prediction in Video Coding," at the 12th International Conference on Ubi-Media Computing and Workshops (Umedia 2019), Bali, Indonesia, August 6 – 9, 2019.

5. **Outstanding Paper Award** for our paper, Ying Liu, Keng-Pang Lim, Zhao-Jie Li, Shuai Zhang, and Nam Ling, "On Over-Exposed Region Detection with Regularized Logistic Regression," at the 10th IEEE International Conference on Ubi-Media Computing and Workshops (Umedia 2017), Pattaya, Thailand, August 1 – 4, 2017.

6. **Best Paper Award** for our paper, Manav Jaiswal, Yuhong Liu, and Nam Ling, "Design and Implementation of a Greener Home Automation System," at the 9th IEEE International Conference on Ubi-Media Computing (Umedia 2016), Moscow, Russia, August 15 – 17, 2016.

7. **Best Paper Award (First Place Winner)** for our paper, Gunnar Hovden and Nam Ling, "MPEG-4 FAP Generation as an Optimization Problem," at the 2003 IEEE International Conference on Consumer Electronics (ICCE), Los Angeles, California, USA, June 17 – 19, 2003. Award was received at 2005 ICCE in Las Vegas, Nevada, USA, on Jan 11, 2005.
   (ICCE is the flagship conference of IEEE Consumer Electronics Society.)

(3) CHAIR, DISTINGUISHED, AND GUEST PROFESSORSHIPS

8. **Wilmot J. Nicholson Family Professor** (Endowed Chair), Santa Clara University, awarded June 11, 2020, effective September 1, 2020 – August 31, 2030.
   (The professorship is awarded to a faculty member who has distinguished himself/herself as a teaching scholar who fosters the highest ideals of a Catholic, Jesuit education – creative scholarship with teaching, collegiality and collaboration with faculty and students, and incorporation of intellectual foundations for ethics and justice.)

9. **Sanfilippo Family Professor (University Endowed Chair)**, Santa Clara University, awarded June 2, 2010, effective September 1, 2010 – August 31, 2020.
   (The professorship is awarded to a faculty member who has distinguished himself/herself as a teaching scholar who fosters the highest ideals of a Catholic, Jesuit education – creative scholarship with teaching, collegiality and collaboration with faculty and students, and incorporation of intellectual foundations for ethics and justice.)

10. **Guest Professor**, Zhongyuan University of Technology, Zhengzhou, China, awarded and effective August 20, 2018.

11. **Distinguished Professor**, Xi'an University of Posts and Telecommunications, Xi'an, China, awarded and effective April 17, 2015 – April 18, 2021.
    (Awarded by the university to selective globally admired experts with outstanding academic and scholarly qualifications upon reviewed by its academic committee.)

12. **Chair Professor**, Fuzhou University, Fuzhou, China, awarded and effective April 18, 2017 – April 17, 2020.

(Awarded by the university to selective globally admired experts with outstanding academic and scholarly qualifications upon reviewed by its academic committee.)

13. **Minjiang Scholar** (Chair Professor Category, Fuzhou University), Fujian Province, China, awarded and effective December 26, 2018 – present.
(Reviewed and awarded by Fujian Province, China.)

14. **Guest Professor**, Tianjin University, Tianjin, China, awarded and effective April 2015 - 2019.
(The honor of Guest Professor is exclusively offered to the selective globally admired experts after the review of the academic committee of the University.)

15. **Cuiying Chair Professor**, Lanzhou University, China, awarded and effective June 27, 2012 – May 2018.
(Cuiying (Tsuiying) Chair Professorships are awarded to overseas professors with outstanding academic and scholarly qualifications upon reviewed by its academic committee.)

16. **Guest Professor**, Shanghai Jiao Tong University, Shanghai, China, awarded and effective May 2006 – May 2016.
(The honor of Guest Professor is exclusively offered to the selective globally admired experts after the review of the academic committee of the University.)

17. **Outstanding Overseas Scholar**, Shanghai University of Electric Power, Shanghai, China, awarded and effective January 27, 2014 – January 26, 2016.
(Awarded by the university to overseas professors with outstanding academic and scholarly qualifications upon reviewed by its academic committee.)

18. **Distinguished Visiting Professor**, National Dong Hwa University, Taiwan, March 24-30, 2004.
(The program was co-sponsored by Taiwan's Ministry of Education.)

(4) DISTINGUISHED LECTURERS

19. **Distinguished Lecturer**, Hong De Lecture Hall, Zhongyuan University of Technology, Zhengzhou, China, awarded August 20, 2018.

20. **APSIPA Distinguished Lecturer**, named for 2014 – 2015.
(APSIPA is the Asia-Pacific Signal and Information Processing Association. The distinguished lecturer (DL) appointment is an honor to recognize the technical achievement, expertise, and leadership of an individual. APSIPA DL serves as an ambassador of APSIPA to promote its image and outreach.)

21. **IEEE Distinguished Lecturer (Circuits and Systems)**, named for 2007 – 2008 (second time).
(This is appointed by the IEEE Circuits and Systems Society Distinguished Lecturer Program.)

22. **IEEE Distinguished Lecturer (Circuits and Systems)**, named for 2002-2003.
(This is appointed by the IEEE Circuits and Systems Society Distinguished Lecturer Program.)

(5) SANTA CLARA UNIVERSITY AWARDS – UNIVERSITY LEVEL

23. **University Award for Sustained Excellence in Scholarship**, Santa Clara University, awarded on September 11, 2007.
(This is the University's highest honor for scholarly achievement. This award recognizes the outstanding achievements of a faculty member who has demonstrated sustained excellence in scholarly or creative work and who has been a member of the faculty of Santa Clara University for a minimum of ten years. One award is given each year.)

24. **President's Recognition Award**, Santa Clara University, awarded on September 13, 2005.
(The award honors faculty who set an example for students and colleagues as teaching scholars and whose recent work has advanced the mission of Santa Clara in significant ways.)

25. **University Award for Recent Achievement in Scholarship**, Santa Clara University, awarded on September 17, 2002.

(The award was created in year 2000 to recognize scholarly or creative work by a faculty member over the previous five years, and the work represents a major contribution to a field of knowledge or to the arts. One award is given each year. Ling is the third recipient since its creation.)

26. **Outstanding Achievement Award in Teaching, Research, and Service**, Santa Clara University, awarded on April 3, 1992.
(The award was given to faculty members with outstanding achievement in teaching, research, and service.)

(6) SANTA CLARA UNIVERSITY AWARDS – SCHOOL OF ENGINEERING LEVEL

27. **2009 Award for Teaching Excellence**, School of Engineering, Santa Clara University, awarded on February 17, 2010.
(The award recognizes excellence in teaching on the part of the faculty in Engineering. One award is given each year.)

28. **1999 Researcher of the Year**, School of Engineering, Santa Clara University, awarded on May 13, 2000.
(The award recognizes scholarly achievements on the part of the faculty in Engineering. One award is given each year.)

(7) CERTIFICATES OF APPRECIATION

29. **IEEE Circuits and Systems Society Certificate of Appreciation**, awarded July/August 2014.
(This was in recognition for the time and effort as General Chair of the 2013 IEEE International Conference on Multimedia and Expo (ICME 2013).)

30. **Appreciation for Outstanding Contribution on Leading MPEG-4 Activity**, Center for Signal Processing, Nanyang Technological University, Singapore, awarded on August 21, 1998.
(This was in appreciation of leadership in MPEG-4 activity, which led to a major business contract.)

31. **IEEE Computer Society Certificate of Appreciation**, awarded August 25, 1997.
(This was for the recognition of service and leadership as the General Chair of the 1995 Hot Chips Symposium.)

(8) OTHER RECOGNITIONS

32. **Special Dean's Recognition Award**, awarded to the Department of Computer Science and Engineering (Nam Ling was the Department Chair), School of Engineering, Santa Clara University, awarded on June 16, 2023.
(The award recognizes an individual or a group for excellence in the School of Engineering. One award is given each year.)

33. **Arthur Vining Davis Junior Faculty Fellowship**, Santa Clara University, period: July 1, 1991 - September 30, 1992, awarded on March 14, 1991.
(One award was given each year to an Assistant Professor on a competitive basis for a research or creative project.)

(9) OTHER NOTABLES:

- ***Recognition for Special Accomplishment*** at Faculty Recognition Dinner, Santa Clara University, recognized on September 17, 2013, September 16, 2014, September 15, 2015, and September 12, 2017. (This type of recognitions started in 2012.) (Also recognized as part of the University President's address at University Convocation, September 12, 2017).
- ***One of the "Best Minds"*** met by researchers in the 4th Industrial Technology Research Institute (ITRI) (Taiwan) Elite Researchers Program: "Meet the Best Minds," May 17, 2005.
- ***Other honors such as Keynote Speakers, Honorary Chairs, General Chairs, NSF Awards, etc.* –** see later sections.

RESPONSIBILITIES AND MAJOR ACCOMPLISHMENTS AS DEPARTMENT CHAIR

Sep 2010 – Aug 2023:

Chair, Department of Computer Science and Engineering (formerly Department of Computer Engineering)**,** School of Engineering, Santa Clara University.
Selected major accomplishments are:

- Growth in Students and Faculty:
  - During this period, student enrollment grew from 372 (Fall 2010, 131 undergrads, 241 grads) to 1,022 (Fall 2022, 441 undergrads, 581 grads), became the *largest* department in Santa Clara University.
  - During this period, full-time faculty strength grew from 10 (Fall 2010, 8 tenure-tracks and 2 lecturers) to 27 (Fall 2023, 19 tenure-tracks and 8 lecturers).
  - **Special Dean's Recognition Award**, awarded to the department, awarded on June 16, 2023.

- Overseeing:
  - One Ph.D. program (Computer Science and Engineering (CSE)), one Engineer's degree program, one M.S. program (CSE), two B.S. programs (CSE, Web Design and Engineering (WDE)).
  - Three full Professors, seven Associate Professors, nine Assistant Professors, eight full-time Lecturers, 25-30 quarterly part-time Lecturers, two Senior Administrative Assistants.
  - Advisory board of seven members.
  - Approximately 45 Ph.D. students, 535 M.S. students, and 440 B.S. students.
  - More than 170 courses per year, in addition to labs, senior design projects, and graduate research.

- Management and Leadership
  - Managed and led department faculty and staff, assigned work, chaired departmental meetings, and conducted performance evaluations. Worked with faculty (shared governance) to accomplish tasks, 2010 – 2023.
  - Worked with the Dean on plans and other matters related to the School of Engineering, 2010 – 2023.

- Planning, Continuous Improvement, and Faculty Strength
  - Led and worked with SCU College of Arts and Sciences on the STEM 2020 initiative to foster convergence and greater collaborations between engineering and sciences. Worked with the university architect and administration on relocating the department to a new building and a new floor plan, 2015 – 2019.
  - Worked with faculty and other departments to change the name of the department to the Department of Computer Science and Engineering.
  - Led and worked with department faculty on continuous improvement of curriculum, student learning, enrolment, and faculty workload, 2010 – 2023.
  - Led and oversaw faculty search and hiring, 2011 – 2023.
    - Acquired, searched, and hired 13 new tenure-track faculty and eight new lecturers, 2012 - 2023.
    - Led and oversaw part-time faculty search, hiring, and workload, 2011 – 2023.
  - Led departmental process related to faculty appointment, promotion, and tenure, 2011 – 2023.
    - One received tenure (2016), four received tenure and promotion to associate professor (2018, 2020, 2022, 2023), and one received promotion to full professor (2019), during this period.
    - Five were promoted from Academic Year Lecturer to Renewable-Term Lecturer (RTL) (2011, 2016, 2022) and several reappointments.
  - Led and oversaw staff search and hiring, 2018 – 2023.
    - Acquired, searched, and hired a second full-time Senior Administrative Assistant, Fall 2021, again in Winter 2022.
    - Acquired, searched, and hired a full-time Senior Administrative Assistant and a half-time (50%) fixed-term Administrative Assistant, Summer and Fall, 2018.

- Student Recruitment and Retention
  - Assigned faculty duties and presented at Preview Days and Open Houses, 2011 - 2023.
  - Led the department to create new structures to handle massive enrollment growth swiftly, 2014, 2018, 2022.
  - Worked with the Engineering Graduate Office to set recruitment targets, 2014 – 2023.
  - Served as advisor in Summer Orientations, 2011 - 2022.
  - Trained graduate faculty advisors and student peer advisors, 2015 – 2023.

- Assessment

- Co-led the department through the Accreditation Board for Engineering and Technology (ABET) accreditation process (both Engineering Accreditation Commission (EAC) and Computing Accreditation Commission (CAC)), 2010 (in the final stage), 2016-17, 2022-23 (both entire stage).
- Led/co-led the department in annual self-assessment processes and program reviews, 2010 – 2023.

- Crisis Leadership
  - Led the department on switching to remote teaching and learning during the Covid-19 pandemic period, April 2020 – 2022.
  - Worked with the graduate office to resolve international student issues and hybrid class issues during the Covid-19 pandemic period, Fall 2020 – 2023.
  - Worked with the dean's office to resolve revenue deficit and budget/expenditure issues during the Covid-19 pandemic period, April 2020 – 2023.
  - Handled and resolved crises due to massive enrolment growth, faculty/staff sudden medical/family leave, etc., 2014 – 2023. Created a new advising structure (using peer advisors) to handle high enrolment, Fall 2018.

- Mentoring, Research, and Faculty/Staff Development
  - Evaluated faculty grant proposals, sabbatical, and leave requests, 2010 – 2023.
  - Mentored junior faculty members, 2010 – 2023.
  - Mentored senior faculty members (for promotion to full professors), 2021 – 2023.
  - Oversaw faculty research lab space arrangement, 2011 – 2023.
  - Nominated faculty and staff for awards, 2010 – 2023.
  - Conducted performance evaluations for faculty and staff. 2010 – 2023.
  - Led mid-probationary review and junior faculty development leave proposal review for, 2013 - 2023.
  - Worked with the Dean to determine start-up packages and terms for new faculty, 2012 – 2023.

- Academic Programs and Curriculum
  - Worked with faculty and other departments on undergraduate and graduate yearly course plans, 2010 – 2023.
  - Oversaw policies and quality related to senior projects, graduate theses, directed research, 2011 – 2023.
  - Revised and oversaw policies for curricular practical training (CPT), transfers, and other matters, 2016 - 2023.
  - Led the departmental curriculum revision and bulletin update processes, 2010 – 2023. Also:
  - Oversaw teaching quality and related student matters, 2010 – 2023.
  - Worked with faculty on teaching assistant and grader needs and assignments, 2011 – 2023.

- Finance
  - Worked with the Dean and the Senior Admin Assistant on the yearly budget (wages and tuition) for student assistants (TAs, graders, peer advisors, office assistants), 2022 - 2023.
  - Oversaw and worked with Senior Admin Assistants and Senior Assistant Dean on department operating and gift budget allocation and usage, 2010 – 2023.
  - Approved department, faculty, and staff expenditures, 2010 – 2023.

- Student Issues
  - Resolved complaints from students, handled cheating cases, academic probations, and more, 2010 – 2023.
  - Approved co-ops, overload, and other paperwork for students, 2010 – 2023.

- External Relations & Events
  - Served as contact for companies for student hiring and partnership with faculty, 2010 – 2023.
  - Worked with Career Center for student internships, International Student Service for international students' CPT and OPT, 2010 – 2023.
  - Worked with Development Office for gift contributions from donors, 2010 – 2023.
  - Led, oversaw, and worked with admin assistants on the design of the department's websites, 2020 – 2023.
  - Oversaw the visiting research scholar process for the department, 2014 – 2023.
  - Presented the department to representatives from different universities and organizations, 2011 – 2023.
  - Delivered welcome speeches at the University's International Graduate Student Orientation (2015), the 5th ACM SIGIR International Conference on the Theory of Information Retrieval (ACM ICTIR 2019), the 30th International Conference on Mass Storage Systems and Technologies (MSST 2014).

- Co-hosted an animation event with the Art & Art History Department and the Communication Department, 2011.

RESPONSIBILITIES AND MAJOR ACCOMPLISHMENTS AS ASSOCIATE DEAN

September 2023 – Present:
Associate Dean for Research, School of Engineering, Santa Clara University.

September 2007 – August 2010:
Associate Dean for Research and **Faculty Development**, School of Engineering, Santa Clara University.

September 2002 – August 2007:
Associate Dean for Graduate Studies and **Research**, School of Engineering, Santa Clara University.

Selected major accomplishments are:

Graduate Studies:

- School of Engineering Graduate programs during 2002-2007:
  - Ph.D., M.S., and Engineer's degrees in Computer Engineering, Electrical Engineering, and Mechanical Engineering.
  - M.S. degrees in Software Engineering, Engineering Management and Leadership, Applied Mathematics, and Civil Engineering.
  - Certificate programs in different fields in Computer, Electrical, and Mechanical Engineering.

- Led and worked with various parties in academic policy, assessment, instruction, and grad student support.
  - Led Engineering Graduate Program Review and Learning Outcomes, 2005 - 2008.
  - Led the revision of Ph.D. policies related to doctoral committee and duration of study, 2009.
  - Oversaw the quality of term-lecturers; produced "Quality of Term-Lecturers – Guidebook", 2004.
  - Worked on Ph.D. graduation procedure and thesis format, 2003 - 2004.
  - Worked with the International Students Office on related academic policies and co-op, 2002 - 2003.
  - Provided academic guidance and approvals for graduate students, 2002 – 2010.
  - Created and oversaw the selection process for the Graduate Academic Excellence in Engineering Awards, 2006 - 2007.

- Strategic goals for graduate studies.
  - Worked with various parties in projecting enrollment, tuition rate and revenue, and financial aid needs for graduate programs, 2003 - 2007.
  - Participated in the academic effort in improving graduate enrollment, 2004 - 2007.

- Improved graduate curriculum in Engineering. Created and offered graduate interdisciplinary programs and courses.
  - Started courses in ethical and societal issues, law and intellectual property issues, as well as multicultural and gender issues, 2002 - 2007.
  - Created a pilot interdisciplinary (with the Biology Department) Bioinformatics certificate program, 2004.
  - Created and started five courses in the new area of Bioinformatics, 2003 - 2004.

- Worked with the Engineering Graduate Services Office.
  - Staff hiring, open houses, student orientations, surveys, and bulletin revisions, 2002 – 2007.
  - Budgeting, marketing, admission, registration, graduation, course scheduling, term faculty hiring, and other related matters, 2002 - 2004.
  - Search and hired the Director of Graduate Programs, May – July 2002.
  - Managed the Director of Graduate Programs, who manages the staff of the Graduate Office, 2002 - 2004.
  - Reorganized the Graduate Office and hire two staff members, 2003.

Research, Grants, and Student Support:

- Research Events.
  - Led and worked with various parties in organizing the annual School of Engineering Research Showcase (with more than 60 posters and more than 400 visitors), 2025-2026.
  - Co-organized and spoke at the "Ph.D. Night" event (to about 70 current and potential Ph.D. students), 2009.

- Oversaw and enhanced faculty research, student scholarships, and grant activities.
  - Reviewed and approved external grant proposals from Engineering faculty, 2002 – 2010, 2023 - present.
  - Oversaw and led/co-led the selection process for graduate student scholarships: (a) Packard Research Fellowship, (b) James W Reed Graduate Engineering Endowed Scholarship, (c) Frank Lee Endowed Scholarship, and (d) Edward M. Fellows Foundation Scholarship, 2002-2005, 2007-2010, 2025-2026.
  - Worked with the Assistant Dean (Finance) and the SCU Development Office in the distributions of endowed gift funds for the School of Engineering, 2024 – present.
  - Led the effort in creating, structuring, and proposal selecting for the School's Kuehler Undergraduate Research Program, based on a US$1 million gift from Kuehler, 2005 – 2010, 2024 - present.
  - Worked with Department Chairs and Assistant Dean on allocating teaching assistantships; organized teaching assistant orientation and training sessions, 2008 – 2010.
  - Led the effort in developing the research rubrics for the performance evaluation of faculty activities, 2025.
  - Served on the STEM research space committee, set policies related to research lab usage, 2024-2025.
  - Served as Engineering rep to the University Special Taskforce on Patents and Inventions, 2008 – 2010.
  - Oversaw and reported yearly faculty scholarship accomplishments for the school, 2005 - 2009.
  - Co-led the effort on using the indirect cost fund and the financial aid fund to help improve scholarship in the School (e.g. research assistantships and School faculty grants), 2003 – 2010.
  - Assisted the Dean in evaluating SCU internal grant proposals submitted by Engineering faculty, 2005 - 2010.
  - Strengthened and streamlined external grant proposals submitting procedure, 2003.

- Other activities related to PhD students.
  - Coordinated the PhD prelim exams with different departments, 2024 – present.
  - Worked with Graduate Studies in strengthening the PhD program, 2025 – present.
  - Led the effort in re-structuring University Ph.D. conferral procedure at commencements, 2006.

Faculty Development:

- Tenure, promotion, and other faculty development activities.
  - Led the effort in the revision of discipline-specific standards for promotion and tenure, 2025.
  - Served as the Engineering rep to the University Faculty Development Advisory Council, 2007 – 2010.
  - Led the selection process for the School's faculty awards, 2004 – 2010, 2023 - present.
  - Led the effort in structuring the School's best practices for the support of tenure and promotion, 2005 - 2007.

- Related publications and talks.
  - Nam Ling, "The Mentoring Program in Engineering," published in *The Teaching Scholar* (The Newsletter of the Faculty Development Program), Santa Clara University, Volume 7, Issue 1, Fall 2007.
  - Served as Panelists/Speakers at several Santa Clara University Faculty Development/Teaching-Scholar/Research Workshops/Symposia, 2001 – 2007.

Partnerships:

- Globalization effort and building University-Industry partnerships for academic cooperation and programs.
  - Initiated the effort to collaborate (mainly on research) with Shanghai Jiao Tong University (SJTU), China. An MOU between the two Universities (Santa Clara and SJTU) was signed in August 2009.
  - Led the effort and worked with Lockheed Martin and the University of Denver on establishing the Santa Clara University – Lockheed Martin Partnership for the company's Engineering Leadership Development Program (ELDP) (interdisciplinary) at Santa Clara University, 2005 - 2007. Related courses had high enrolments.
  - Jointly created and hired instructor to teach a course on "Building Global Teams" to help students understand global working environment, 2004.

Other Activities:

- Leadership and organization in the School of Engineering.
  - Acting Dean, School of Engineering, during various short periods in 2004 – 2006, 2024 - 2025.
  - Worked with the Dean and the other Associate Deans to redefine the duties of each Associate Dean, 2003.

RESPONSIBILITIES AS PROFESSOR

- Teaching undergraduate and graduate courses, improving course/lab contents and curricula, as well as advising and supervising students in their study plans, research, and projects.
- Conducting scholarly research, publishing and presenting research results, and acquiring research funds.
- Serving in professional organizations and on university committees, contributing to community service and consulting.

RESEARCH AND TEACHING INTERESTS

General Interests:
* Video Coding and Compression
* Image Coding and Compression
* AI Approaches for Visual Coding, Processing, and Vision

Special Interests (Current):
* Agentic AI in Visual Coding
* 3D Gaussian Splatting for 3D Style Transfer in Art
* Embodied AI and Split Computing in Machine Perception
* Attention Methods in Image Restoration
* Generative Video Compression using Video-LLMs
* Token-based Video Compression
* Generative Image Compression
* Latent Coding for DNA Storage
* Knowledge Distillation in Learned Image Compression

Special Interest (Earlier):
* Methods for VVC/H.266, HEVC/H.265, 3D-HEVC, and H.264/AVC Video Coding
* Deep Neural Networks (CNN, GAN, RNN, Transformer) for Image/Video Coding
* Depth Coding and Related Methods for 3D Video
* Fast Motion Estimation
* Rate Control and Rate-Distortion Optimization
* Intra Prediction
* Encoder/Decoder Architecture
* Sparse Coding for Image and Video
* Other Topics: Perceptual Video Coding, Face Animation
* Systolic Arrays

KEYNOTE SPEECHES

1. Nam Ling, "Visual Coding – From Traditional Approach to Deep Learning Approach," Keynote Speech, *Combined Conference of the 4th International Conference on Natural Language Processing (ICNLP), the 4th International Symposium on Signal Processing Systems (SSPS), and the 5th International Symposium on Computer Vision for Public Security (CVPS)*, virtual conference, March 26 - 27, 2022.

2. Nam Ling, "Applying Machine Learning to Sparse Coding in Image Compression," Keynote Speech, the *19th International Conference on Computer and Information Technology (ICCIT)*, Dhaka, Bangladesh, December 18 – 20, 2016.

3. Nam Ling, "Rate-Distortion Optimization for Sparse Coding in Image and Video Compression," Keynote Speech, the *2016 International Workshop on Signal Processing with Applications in Scene Investigation*, Xi'an, China, November 21-22, 2016.

4. Nam Ling, "3D Video Coding and its Applications: The New Generation," Keynote Speech, the *2014 Workshop on Image and Video Processing for Applications in Electronic Information Scene Investigation*, Xi'an, China, October 20 – 22, 2014.

5. Nam Ling, "The Next Generation of 3D Video Coding Technology," Keynote Speech, the *7th International Conference on Ubi-Media Computing (Umedia)*, Ulaanbaatar, Mongolia, July 12 – 14, 2014.

6. Nam Ling, "3D Video Coding and 3D-HEVC: A Research Perspective," Keynote Speech, the *2nd International Workshop on Video Coding and Video Processing (VCVP)*, Shenzhen, China, January 21 - 23, 2014.

7. Nam Ling, "Next Generation Video Coding – HEVC with a Special Look at Intra Prediction", Keynote Speech, *IET International Conference on Ubi-media Computing* and *IET International Conference on Frontier Computing (IET U-media and IET FC)*, Xining, China, August 16 - 18, 2012.

8. Nam Ling, "High Efficiency Video Coding and its 3D Extension: A Research Perspective," Keynote Speech, the *2012 7th IEEE Conference on Industrial Electronics and Applications (ICIEA)*, Singapore, July 18 – 20, 2012.

9. Nam Ling, "Video Compression – A New Era," Keynote Speech, the *3rd IEEE International Conference on Adaptive Science and Technology (ICAST)*, Abuja, Nigeria, November 24 - 26, 2011.

10. Nam Ling, "Video Coding Technology and Applications: What Have We Seen? What Will We See?" Keynote Speech, *2009 Joint Conferences on Pervasive Computing (JCPC)*, Tamsui, Taiwan, December 3 – 5, 2009.

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319. Nam Ling and M. A. Bayoumi, "Algorithms for High Speed Multi-Dimensional Arithmetic and DSP Systolic Arrays," *Proceedings of the 1988 International Conference on Parallel Processing (ICPP)*, St. Charles, Illinois, USA, pp.367-374, August 15-19, 1988.

320. Nam Ling and M. A. Bayoumi, "An Algorithm Transformation Technique for Multi-Dimensional DSP Systolic Arrays," *Proceedings of the 1988 IEEE International Symposium on Circuits and Systems (ISCAS)*, Espoo, Finland, pp.2275-2278, June 7-9, 1988.

321. Nam Ling and M. A. Bayoumi, "A Testable NORA CMOS Serial-Parallel Multiplier," *Proceedings of the 1988 IEEE International Symposium on Circuits and Systems (ISCAS)*, Espoo, Finland, pp.251- 254, June 7-9, 1988.

322. Nam Ling and M. A. Bayoumi, "Multi-Dimensional Systolic Networks for DSP Algorithms," *Proceedings of the 1988 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, New York City, New York, USA, pp.1922-1925, April 11-14, 1988.

323. Nam Ling, M. A. Bayoumi, and K. S. Reddy, "VLSI Array Implementation of Modified Booth Algorithm," *Proceedings of the 1987 South Central Regional ACM Conference*, Lafayette, Louisiana, USA, pp. 205-221, November 19-21, 1987.

324. Nam Ling and M. A. Bayoumi, "A New Testable CMOS Multiplier," *Proceedings of the 30th Midwest Symposium on Circuits and Systems*, Syracuse, New York, USA, pp. 536-539, August 17-18, 1987.

(6) OTHERS:

325. Da Ai, Yanhong Deng, An Fan, and Nam Ling, "Bibliometric Analysis of the Novel Techniques for Surveillance Video System based on IEEE Xplore," *Journal of Xi'an University of Posts and Telecommunications*, Vol. 21, No. 6, pp. 65 – 72, November 2016.

ADOPTED CONTRIBUTIONS TO INTERNATIONAL STANDARDS

(1) NORMATIVE CONTRIBUTIONS ADOPTED:

1. Jianhua Zheng, Zhouye Gu, Xu Chen, Xiaozhen Zheng, Yongbing Lin, Nam Ling, and Philipp Zhang, "Cleanup of Single Depth Intra Mode Simplification," JCT3V-K0051, adopted at the *11th Meeting of Joint Collaborative Team on 3D Video Coding Extensions (JCT-3V) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11*, Geneva, Switzerland, February 12 – 18, 2015.
   (The method was adopted into the 3D-HEVC video coding international standard – including the 3D-HEVC text document and the *3D-HEVC reference software HTM 14.0* onwards. Our method further simplifies the single depth intra mode.)

2. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "3D-CE5 related: On Neighbouring Reference Pixel Selection for Depth Intra Coding," JCT3V-G0143, adopted at the *7th Meeting of Joint Collaborative Team on 3D Video Coding Extension Development (JCT-3V) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11*, San Jose, California, U.S.A, January 9 – 17, 2014.
   (The method was adopted into the 3D-HEVC video coding international standard – including the 3D-HEVC text document JCT3V-G1005 and the *3D-HEVC reference software HTM 10.0* onwards. Our method improves reference pixel selection for depth intra coding in 3D-HEVC.)

(2) INFORMATIVE CONTRIBUTIONS ADOPTED:

3. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "Fast Intra SDC Coding for 3D-HEVC Intra Coding," JCT3V-I0123, adopted at the *9th Meeting of Joint Collaborative Team on 3D Video Coding Extension Development (JCT-3V) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11*, Sapporo, Japan, July 3 – 9, 2014.
   (The method was adopted into the 3D-HEVC video coding international standard – including the *3D-HEVC reference software HTM 12.0* onwards. Our method speeds up 3D-HEVC depth intra coding.)

4. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "VSD Bugfix and Improvement," JCT3V-G0163, adopted at the *7th Meeting of Joint Collaborative Team on 3D Video Coding Extension Development (JCT-3V) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11*, San Jose, California, U.S.A, January 9 – 17, 2014.

(The method was adopted into the 3D-HEVC video coding international standard – including the *3D-HEVC reference software HTM 10.0* onwards. Our method corrects view synthesis distortion calculation in 3D-HEVC.)

5. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "3D-CE5.h related: Fast Intra Prediction Mode Selection for Intra Depth Map Coding," JCT3V-E0238, adopted at the *5th Meeting of Joint Collaborative Team on 3D Video Coding Extension Development (JCT-3V) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11*, Vienna, Austria, July 27 – August 2, 2013.
(The method was adopted into the 3D-HEVC video coding international standard – including the *3D-HEVC reference software HTM 8.0* onwards. Our method simplifies the mode decision process on 3D-HEVC depth intra coding.)

6. Jun Zhang, Xiaoquan Yi, Nam Ling, and Weijia Shang, "Context Adaptive Lagrange Multiplier (CALM) for Motion Estimation in JM – Improvement," JVT-T046, adopted at the *20th Meeting of Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG*, Klagenfurt, Austria, July 17 – 21, 2006.
(The method was adopted into the H.264/MPEG-4 AVC video coding international standard – including the text document and the *H.264/AVC reference software JM 12.0* onwards. Our method further improves the rate-distortion performance for fast motion estimation.)

7. Xiaoquan Yi, Jun Zhang, Nam Ling, and Weijia Shang, "Improved and simplified fast motion estimation for JM," JVT-P021, adopted at the *16th Meeting of Joint Video Team (JVT) of ISO/IEC MPEG & ITU-T VCEG*, Poznan, Poland, July 24-29, 2005.
(The method was adopted into the H.264/MPEG-4 AVC video coding international standard – including the *Text Description of Joint Model Reference Encoding Methods and Decoding Concealment Methods* and the *H.264/AVC reference software JM 10.0* onwards. Ours is one of the very few fast motion estimation methods in the H.264 reference software.)

PATENTS

(1) PATENTS GRANTED

1. Pengli Du, Ying Liu, Nam Ling, Yongxiong Ren, and Lingzhi Liu, "Generative Video Compression with a Transformer-based Discriminator," U.S. Patent Granted (publication number US12530588B2), January 20, 2026. (U.S. Patent filed (application no. 17/971,546) on October 21, 2022.)

2. Yifei Pei, Ying Liu, Nam Ling, Lingzhi Liu, Yongxiong Ren, Ming Kai Hsu, "Class-Specific Neural Network for Video Compressed Sensing," U.S. Patent Granted (publication number US12394103B2), August 19, 2025. (U.S. Patent filed (application no. 17/695,684) on March 15, 2022. Provisional U.S. Patent filed (application no. 63/161,431) on March 15, 2021.)

3. Yifei Pei, Ying Liu, Nam Ling, Yongxiong Ren, Lingzhi Liu, "End-to-End Deep Generative Network for Low Bitrate Image Coding," U.S. Patent granted (publication number US20240185473A1), June 10, 2025. (U.S. Patent filed (application no. 17/969,551) on October 19, 2022.)

4. Pengli Du, Ying Liu, Nam Ling, Lingzhi Liu, Yongxiong Ren, and Ming Kai Hsu, "Generative Adversarial Network for Video Compression," U.S. Patent granted (patent number US12058312B2), August 6, 2024. (U.S. Patent filed (application no. 17/495,797) on October 6, 2021.)

5. Minqiang Jiang, Taru Kanchan, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Non-MPM Mode Coding for Intra Prediction in Video Coding," U.S. Patent granted (publication number US10764577B2), September 1, 2020. (U.S. Patent filed (application no. 16/664,601) on October 25, 2019. Provisional U.S. Patent filed (application no. 62/750,649) on October 25, 2018.)

6. Minqiang Jiang, Jianhua Zheng, Madhusudan Kalluri, Nam Ling, and Chen-Xiong Zhang, "Systems, Methods, and Devices for Image Coding," U.S. Patent granted (patent grant number US10587900B2), March 10, 2020. (U.S. Patent filed (application no. 15/433,344) on February 15, 2017. Provisional U.S. Patent filed (application no. 62/295,406) (title and authors' order different) on February 15, 2016.)

7. Zhouye Gu, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Illumination Compensation (IC) Refinement Based on Positional Pairings Among Pixels," U.S. Patent granted (publication number US10554967B2), February 4, 2020. (U.S. Patent filed (application no. 14/664,348) on March 20, 2015. PCT Application filed (application no. WO 2015/139668 A1) on March 21, 2015. Provisional U.S. Patent filed (application no. 61/968,980) on March 21, 2014.)

8. Zhouye Gu, Nam Ling, Chen-Xiong Zhang, and Jianhua Zheng, "System and Method for Estimating View Synthesis Distortion," U.S. Patent granted (publication number US10326995B2), June 18, 2019. (U.S. Patent filed (application no. 15/640,290) on June 30, 2017.)

9. Jianhua Zheng, Zhouye Gu, Chen-Xiong Zhang, and Nam Ling, "System and Method for Depth Map Coding for Smooth Depth Map Area," U.S. Patent granted (publication number US10097838B2), October 9, 2018. (U.S. Patent filed (application no. 14/882,256) and PCT Application filed (application no. PCT/US2015/055378) (authors' order different) on October 13, 2015. Provisional U.S. Patent filed (application no. 62/063,305) on October 13, 2014.)

10. Zhouye Gu, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Method and Device for Reducing a Computational Load in High Efficiency Video Coding," U.S. Patent granted (publication number US10085028B2), September 25, 2018. (U.S. Patent filed (application no. 14/752,043) and PCT Application filed (application no. PCT/US2015/038042) on June 26, 2015. Provisional U.S. Patent filed (application no. 62/017,625) on June 26, 2014. A second related provisional application no. 62/027,386 was filed in-house and linked to the first one, on July 22, 2014.)

11. Zhouye Gu, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Method and Device for Providing Depth Based Block Partitioning in High Efficiency Video Coding," U.S. Patent granted (publication number US10057586B2), August 21, 2018. (U.S. Patent filed (application no. 14/752,072) and PCT Application filed (application no. PCT/US2015/038037) on June 26, 2015. Provisional U.S. Patent filed (application no. 62/017,637) on June 26, 2014.)

12. Guichun Li, Lingzhi Liu, Nam Ling, Jianhua Zheng, Chen-Xiong Zhang, and Li Song, "Simplification of Mode Dependent Intra Smoothing," U.S. Patent granted (publication number US9807385B2), October 31, 2017. (U.S. Patent filed (application no. 13/744,827), PCT Application filed (application no. PCT/US2013/022116), and China Patent filed (application no. CN 201380006070) on January 18, 2013. Provisional U.S. Patent (application no. 61/588,355) was filed on January 19, 2012.)

13. Zhouye Gu, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "System and Method for Estimating View Synthesis Distortion," U.S. Patent granted (publication number US9699462 B2), July 4, 2017. Revised version U.S. Patent granted later (publication number US10326995B2), June 18, 2019. (U.S. Patent filed (application no. 14/588,646) on January 2, 2015. Provisional U.S. Patent (application no. 61/923,500) was filed on January 3, 2014.)

14. Lingzhi Liu, Guichun Li, Nam Ling, Jianhua Zheng, and Chengxiong Zhang, "Using Multiple Prediction Sets to Encode Extended Unified Directional Intra Mode Numbers for Robustness," U.S. Patent granted (publication number US9667987 B2), May 30, 2017. (U.S. Patent filed (application no. 13/416,766) and PCT Application filed (application no. PCT/US2012/028533) (authors' order different) on March 9, 2012. Provisional U.S. Patent filed (application no. 61/451,432) on March 10, 2011.)

15. Jianhua Zheng, Zhouye Gu, Nam Ling, and Chen-Xiong Zhang, "Method and Apparatus of Depth Prediction Mode Selection," U.S. Patent granted (publication number US9641853 B2), May 2, 2017. (U.S. Patent filed (application no. 14/253,465) (authors' order different) on April 15, 2014. Provisional U.S. Patent (application no. 61/812,124) was filed on April 16, 2013.)

16. Guichun Li, Lingzhi Liu, Changcai Lai, Nam Ling, Jianhua Zheng, and Chen-Xiong Zhang, "Mode Dependent Intra Smoothing Filter Table Mapping Methods for Non-Square Prediction Units," U.S. Patent granted (publication number US9602839 B2), March 21, 2017. Revised version U.S Patent granted later (publication number US10015522B2), July 3, 2018. (U.S. Patent filed (application no. 13/475,587) on May 18, 2012 and PCT Application filed (application no. PCT/CN2012/076949) on June 14, 2012. Provisional U.S. Patent filed (application no. 61/497,173) on June 15, 2011.)

17. Zhouye Gu, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Method and Apparatus of Derivation for a Binary Partition Pattern," U.S. Patent granted (publication number US9571858 B2), February 14, 2017. Revised version U.S.

Patent granted later (publication number US9762914 B2), September 12, 2017. (U.S. Patent filed (application no. 14/335,403) on July 18, 2014. European patent filed (application number EP 14 826 205.8), on February 24, 2016. Provisional U.S. Patent (application no. 61/866,941) was filed on August 16, 2013.)

18. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "Method and Apparatus of Depth Prediction Mode Selection," U.S. Patent granted (publication number US9503723 B2), Nov. 22, 2016. (U.S. Patent filed (application no. 14/152,904) and PCT Application filed (application no. PCT/US2014/011157) on January 10, 2014. Provisional U.S. Patent filed (application no. 61/751,589) on January 11, 2013.)

19. Lingzhi Liu, Guichun Li, Nam Ling, Jianhua Zheng, Philipp Zhang, and Li Song, "Reference Pixel Reduction for Intra LM Prediction," U.S. Patent granted (publication number US9307237 B2), Apr. 5, 2016. (U.S. Patent filed (application no. 13/745,134) and PCT Application filed (application no. PCT/US2013/022156) on January 18, 2013. Provisional U.S. Patent filed (application no. 61/588,359) on January 19, 2012.) [Also: European Patent granted (publication number EP 2 805 496 B1), December 21, 2016. (European Patent filed (application no. EP 13 702 692.8) on September 2014.)]

20. Lingzhi Liu, Guichun Li, Nam Ling, Jianhua Zheng, and Chengxiong Zhang, "Multiple Predictor Set for Intra Coding with Intra Mode Prediction," U.S. Patent granted (Patent Number 9,204,155), issued on December 1, 2015. (U.S. Patent filed (application no. 13/247,555) on September 28, 2011 and PCT Application filed (application no. PCT/CN2011/080404) on September 30, 2011 (title: "Improved Multiple Predictor Set for Intra Coding with Intra Mode Prediction"). Provisional U.S. Patent filed (application no. 61/388,485) on September 30, 2010.)

21. Guichun Li, Lingzhi Liu, Changcai Lai, Nam Ling, Jianhua Zheng, and Philipp Zhang, "Simplified Bilateral Intra Smoothing Filter," U.S. Patent granted (Patent Number 9,179,148), issued on November 3, 2015. (U.S. Patent filed (application no. 13/495,899) in June 2012 and PCT Application filed (application no. PCT/CN2012/078022) on July 2, 2012. Provisional U.S. Patent filed (application no. 61/503,415) on June 30, 2011.)

22. Lingzhi Liu, Xiang Li, Jianhua Zheng, Nam Ling, and Chen-Xiong Zhang, "Predictive Adaptive Scan Ordering for Video Coding," U.S. Patent granted (Patent Number 8,477,845), issued on July 2, 2013. (U.S. Patent filed (application no. 12/905,872) on October 15, 2010. Provisional U.S. Patent filed (application no. 61/252,443) on October 16, 2009.)

(2) PATENTS FILED

23. Bingxin Hou, Ying Liu, Nam Ling, Lingzhi Liu, Yongxiong Ren, and Ming Kai Hsu, "3D Separable Deep Convolutional Neural Network for Moving Object Detection," U.S. Patent filed (application no. 17/533,012) on November 22, 2021. Published (US20220164630 A1) on May 26, 2022. (Note: Provisional U.S. patent (application no. 63/116,689) filed on November 20, 2020.)

24. Minqiang Jiang, Jianhua Zheng, Promila Agarwal, Michael Schimpf, Nam Ling, and Chen-Xiong Zhang, "System and Method for Coding Intra Prediction Mode using a Second Set of Most Probable Modes," U.S. Patent filed (application no. 15/818,551) on November 20, 2017 and PCT Application filed (application no. PCT/CN2017112356) on November 22, 2017. (Note: Provisional U.S. patent (application no. 62/425,425) filed on November 22, 2016.)

25. Zhouye Gu, Jianhua Zheng, Nam Ling, and Philipp Zhang, "Improved Reference Pixel Selection and Filtering for Intra Coding of Depth Map," U.S. Patent filed (application no. 14/515,930) and PCT Application filed (application no. PCT/SU2014/060873) on October 16, 2014. (Note: two Provisional U.S. Patents filed - application no. 61/892,342 on October 17, 2013 and application no. 61/923,124 on January 2, 2014.)

MEMORANDA OF UNDERSTANDING (MOU)

1. Assisted in the process that led to the signing of memorandum of understanding between Santa Clara University (U.S.A) and Beijing University of Posts and Telecommunications (China), June 21, 2018.

2. Spearheaded the process that led to the signing of memorandum of understanding between Lanzhou University (China) and Santa Clara University (U.S.A), April 27, 2017. In addition, an agreement of commitments for the exchange of

visiting scholars was signed between Lanzhou University School of Information Science and Engineering and Santa Clara University School of Engineering, April 27, 2017. A team effort involving Santa Clara University Engineering Graduate Studies office and Global Engagement Office.

3. Initiated the effort to collaborate (mainly on research) with Shanghai Jiao Tong University (SJTU), China, which led to a memorandum of understanding between the two Universities (Santa Clara University and SJTU), signed on August 31, 2009. A team effort with the School of Engineering Graduate Studies office.

4. Spearheaded the process that led to the signing of memorandum of understanding on R & D collaboration (MPEG and DTV technologies) between the School of Engineering (Santa Clara University, U.S.A.) and the Center for Signal Processing (Nanyang Technological University, Singapore), Singapore, April 24, 2000.

RESEARCH GRANTS AND TEACHING GRANTS

(1) RESEARCH GRANTS:

1. Nam Ling (PI) and Ying Liu (PI), "Low Complexity and High Efficiency Image and Video Coding with Deep Learning on Heterogeneous Platforms," awarded Kwai Inc. grant, US$154,673, performance period: June 16, 2021 – June 15, 2022.

2. Nam Ling (PI) and Ying Liu (Co-PI), "Low Complexity and High Efficiency Image and Video Processing with Neural Network on Heterogeneous Platforms," awarded Kwai Inc. grant, US$150,873, performance period: June 16, 2020 – June 15, 2021.

3. Nam Ling (PI), "Research on JVET JEM Video Coding," awarded Huawei Technologies grant, US$217,440, performance period: February 28, 2017 – September 7, 2018.

4. Nam Ling (PI), "Method for H.266 Video Coding," awarded Santa Clara University School of Engineering Research Grant, US$16,100, February 19, 2016, (performance period: July 2016 – June 2017).

5. Nam Ling (PI), "Research on 3D Extension for HEVC Standardization," awarded Huawei Technologies grant, US$200,440, performance period: June 20, 2014 – June 19, 2016.

6. Nam Ling (PI), "Research on 3D Extension for HEVC Standardization," awarded Huawei Technologies grant, US$34,000 (achievement award – reward gift), performance period: June 20, 2014 – June 19, 2016.

7. Nam Ling (PI), "On Investigating the Future of Video Coding Beyond HEVC," awarded Santa Clara University School of Engineering Research Grant, US$16,704, March 3, 2015, (performance period: July 2015 – June 2016).

8. Nam Ling (PI), "3D Video Coding and 3D-HEVC," awarded Santa Clara University School of Engineering Research Grant, US$13,875, March 5, 2014, (performance period: July 2014 – June 2015).

9. Nam Ling (PI) and Zhouye Gu (Co-PI), "Depth and Mode Coding for HEVC-3D," awarded Huawei Technologies grant, US$100,220, performance period: June 20, 2013 – June 19, 2014.

10. Nam Ling (PI), "HEVC 3DV and SVC Extensions," awarded Santa Clara University School of Engineering Research Grant, US$31,849, January 24, 2013 (performance period: January 2013 – June 2014).

11. Nam Ling (PI), "Coding of Depth in 3D Video," awarded Santa Clara University School of Engineering Research Grant, US$15,511, June 4, 2012 (performance period: July 2012 – June 2013).

12. Nam Ling (PI), "High Efficiency Video Coding – Next Step," awarded Huawei Technologies grant, US$70,000, performance period: April 16, 2012 – April 15, 2013.

13. Nam Ling (PI), “Intra Prediction Model for Video Coding,” awarded Huawei Technologies grant, US$70,000, performance period: March 1, 2011 – December 31, 2012.

14. Nam Ling (PI), “Adaptive Bit-Rate Control for Wavelet-Based Video Coding,” awarded Droplet Technology, Inc. grant, US$125,500, performance period: June 1, 2010 – July 31, 2012.

15. Nam Ling (PI), “Intra Prediction for Next Generation Video Compression,” awarded Santa Clara University School of Engineering Research Grant, US$23,122, performance period: February/March 2011 – June 30, 2012.

16. Nam Ling (PI), “Project Astra: 3-D Visualization of a Virtual Universe,” awarded Santa Clara University School of Engineering Kuehler Undergraduate Research Grant, US$3,052, performance period: Summer 2011.

17. Nam Ling (PI), “High-Performance Video Codec System,” awarded Santa Clara University Technology Innovation Grant, US$12,304, performance period: January 2011 – June 30, 2011.

18. Nam Ling (PI), “Next Generation Video Coding,” awarded Santa Clara University School of Engineering Research Grant, US$10,371, performance period: January 2010 – June 30, 2011.

19. Nam Ling (PI), “3-D Graphics and Video,” awarded Santa Clara University School of Engineering Kuehler Undergraduate Research Grant, US$2,420, performance period: Summer 2010.

20. Nam Ling (PI), “Predictive and Decoder-Derived Video Coding Model,” awarded Huawei Technologies grant, US$70,000, performance period: July 1, 2009 – June 30, 2010.

21. Nam Ling (PI), “A Statistical Motion Vector Coding Model,” awarded Huawei Technologies grant, US$70,000, performance period: August 16, 2007 – August 15, 2008.

22. Nam Ling (PI), “H.264 Video Post-Processing and Artifacts Reduction,” awarded Santa Clara University School of Engineering Research Grant, US$15,504, performance period: September 5, 2006 – December 31, 2007.

23. Nam Ling (PI), “Streaming MPEG-4 FGS Video over the Internet,” awarded Santa Clara University School of Engineering Research Grant, US$12,000, performance period: June 19, 2002 – June 18, 2003.

24. Nam Ling (PI), “VLSI Design of an MPEG-2 Decoder,” awarded Santa Clara University School of Engineering Internal Grant, US$10,803, performance period: June 19, 2000 – June 18, 2001.

25. Nam Ling (PI), awarded Broadband Networks Corporation research donation, US$55,092 (in new equipment), for research in areas of MPEG and DTV technology, networked video, and interactive multimedia, performance period: starting May 25, 2000.

26. Nam Ling (PI) and Hans-Peter Dommel (Co-PI), “Transmission of HDTV Streams over IP Networks,” awarded Research grant from Nortel Networks, US$20,000, performance period: February 1, 2000 – November 1, 2000.

27. Nam Ling (PI), “Memory Subsystem for HDTV Decoding,” awarded NJR Corporation (New Japan Radio) grant for joint research, US$55,200, performance period: August 1, 1997 – February 1, 1999.

28. Nam Ling (PI), “MPEG-2 and MPEG-4 Video,” awarded Medianix Semiconductor, Inc. grant for joint research, US$50,000, performance period: July 1, 1997 – June 30, 1998.

29. Nam Ling (PI), “MPEG Video Compression,” awarded NJR Corporation (New Japan Radio) grant for joint research, US$56,700 (US$20,000 received in October 1995, US$36,700 received in April 1996), performance period: October 1, 1995 - March 31, 1997.

30. Nam Ling (PI), “An Application Framework for Distributed Computing Environment,” awarded Santa Clara University IBM Research Grant, US$5,000, performance period: May 1, 1993 - February 10, 1995.

31. Nam Ling (PI), "A Formal Verifier for Systolic Array Designs," awarded Santa Clara University Arthur Vining Davis Junior Faculty Fellowship, US$10,700 (including a funding of US$3,500 and the release from all other University responsibilities during Fall 1991), performance period: July 1, 1991 - September 30, 1992.

32. Nam Ling (PI), "RIA: Formal Specification and Verification of Systolic Arrays," awarded National Science Foundation (NSF) Research Initiation Award, Grant No. MIP-9010385, US$59,938, performance period: July 1, 1990 - June 30, 1993.

33. Nam Ling (PI), "Automatic Formal Verification of Systolic Arrays," awarded Santa Clara University IBM Faculty Research Grant, US$3,818, performance period: May 7, 1990 - June 30, 1991.

(2) TEACHING GRANTS:

34. Nam Ling and Weijia Shang, "Video Processing Project for Undergraduates," awarded Santa Clara University Funds for Technology Innovation, US$9,502, performance period: February 15, 2010 – May 15, 2010.

35. Nam Ling and Weijia Shang, "A New Computer Hardware Design Methodology for Undergraduates," awarded Santa Clara University IBM Faculty Teaching Grant, US$6,000, performance period: April 19, 1996 – December 31, 1997.

(3) OTHER INFO:

Nominated by Santa Clara University for National Science Foundation (NSF) Young Investigator (NYI) award, January 28, 1993.

TEACHING, COURSE DEVELOPMENT, AND RESEARCH SUPERVISING EXPERIENCE

(1) COURSES TAUGHT:

Different Graduate Level Courses Taught (1990 - present):
1. Image and Video Compression.
2. Multimedia Data Compression I: Image and Video.
3. Multimedia Data Compression II: Audio and Speech.
4. Advanced Techniques in Video Coding.
5. Digital TV.
6. Application-Specific Array Processors.
7. Parallel Computation Systems I.
8. Parallel Computation Systems II.
9. Computer Architecture.

Different Undergraduate Level Courses Taught (1989 - present):
10. Multimedia Data Compression (Senior Level Current Topics).
11. Computer Architecture (Senior Level).
12. Introduction to Microprocessors (Senior/Junior Level).
13. Digital System Design and Analysis / Logic Design (Junior/Sophomore Level).
14. Machine Organization and Programming (Sophomore Level).
15. Introduction to Digital Hardware (Freshmen/Sophomore Level).

Note: Most of the above courses were taught multiple times. Course materials were revised yearly to include state-of-the-art topics.

Courses Taught Prior to 1989:
- Digital Systems (Junior Level), Spring 1986.
- Computer Engineering (Freshmen Level), Spring 1986.

(2) CURRICULUM AND LABORATORY DEVELOPMENT:

1. Worked with Electrical Engineering Department to revise circuit course sequence to enable the inclusion of principles of programming languages as a required course for B.S. in Computer Science & Engineering, 2011.
2. Co-developed graduate courses in intellectual property issues, global issues, and multicultural and gender issues, for the School of Engineering, 2002 - 2007.
3. Created a new area of specialization (Bioinformatics) and the corresponding graduate courses in the School of Engineering, 2004.
4. Created and developed the Bioinformatics track for track-based M.S. curriculum in Computer Engineering, 2004.
5. Participated as a member of the committee that developed a track-based M.S. curriculum in Computer Engineering; innovated and developed the Multimedia Processing track and the Computer Architecture and Systems track, 2000-01.
6. Jointly developed a hardware description language based design lab for computer architecture course, 1997 – 98.
7. Led a committee that developed the curriculum requirement for Advanced Studies in High-Performance Computing certificate program, 1994 - 95.
8. Jointly developed the new curriculum requirements for M.S. in Computer Engineering, 1993 - 94.
9. Involved in the Computer Engineering undergraduate curriculum revision, 1993 - 94.
10. Involved in the development of Digital Systems Laboratory for undergraduate instruction and in the structuring of undergraduate digital hardware courses and curriculum, 1990 - 2002.

Courses Created, Developed (Syllabi Updated Periodically), and Taught:

11. Advanced Techniques in Video Coding (Graduate Level Course), beginning 2006.
12. Digital TV (Graduate Level Course under Advanced Topics in Computer Engineering), 2000.
13. Multimedia Data Compression II: Audio and Speech (Graduate Level Course) (renamed later as "Audio and Speech Compression"), beginning 1996.
14. Multimedia Data Compression I: Image and Video (Graduate Level Course) (renamed later as "Image and Video Compression"), beginning 1995.
15. Introduction to Digital Hardware (Freshmen/Sophomore Level) course and lab, beginning 1995.
16. Application-Specific Array Processors (Graduate Level Course), beginning 1990.

Laboratory Development:

17. Established and developed the Multimedia Visual Processing Laboratory (MVP Lab), 2021 – present.
18. Established and developed the Multimedia Compression Lab., 1997 – 2021.
19. Jointly developed the High Performance Computing Lab. (also known as Computer Systems and Parallel Processing Research Lab.), 1993 - 1996.

(3) SERVED AS DISSERTATION/THESIS/RESEARCH/SENIOR DESIGN/INDEPENDENT STUDY ADVISORS FOR:

- About 30 Ph.D. students, one Engineer's degree student, and more than 110 M.S. students, 1990 – present. Also served as advisors for many undergraduate students in their senior design projects and undergrad research, 1990 – present.

Achievements (selected) from Ling's students:

- Genius undergraduate student:
  - Kairan Quazi – graduated with his bachelor's degree at the age of 14, and joined SpaceX as an engineer (he started college at the age of 9 and transferred to our program as a junior at the age of 11). There have been over 1,300 news reports on different media in over 70 countries on this achievement (Ling appeared on some), 2023.
- Undergraduate student awards:
  - John Judnich - Honorable Mention in Computing Research Association's Outstanding Undergraduate Researcher Award, 2013 (national level).
  - John Judnich – Santa Clara University School of Engineering 2013 Undergraduate Researcher Award.
  - Several students published papers in top international conferences.
  - Several senior design teams won school level senior design awards.
- Graduate student awards:
  - Cihan Ruan (Ph.D. student) – WiCAS 2023 Runner-up Paper Award, Women in Circuits and Systems (WiCAS), 56th IEEE International Symposium on Circuits and Systems (ISCAS), 2023.

- Bingxin Hao (Ph.D. student) – 1st Place Award (Ph.D. Student Category), Santa Clara University School of Engineering Research Showcase, 2020.
- Licheng Xiao (M.S. student) – 1st Place Award (M.S. Student Category), Santa Clara University School of Engineering Research Showcase, 2019.
- Taru Kanchan (M.S. student) – Excellent Paper Award, 12th International Conference on Ubi-Media Computing and Workshops. 2019.
- Shuai Zhang (co-supervised Master's student at Xi'an University of Posts and Telecommunications) - Best Student Paper Award, IEEE Workshop on Signal Processing Systems (SiPS), Cape Town, South Africa, 2018.
- Manav Jaiswal (M.S. student) – Best Paper Award, 9th IEEE International Conference on Ubi-Media Computing, 2016.
- Gunnar Hovden (Ph.D. student) – Best Paper Award, IEEE International Conference on Consumer Electronics, 2003.
- Many students published in top journals and conferences.

- Ph.D. students graduated:
  - Cihan Ruan, dissertation title: "DNA Storage of Images: From Pixels to Molecules," graduated June 2025.
  - Mareeta Mathai, dissertation title: "Deep Learning-Based Video Prediction," graduated June 2024.
  - Michael G. Schimpf, dissertation title: "On Sparse Coding as an Alternate Transform in Video Coding," graduated June 2023.
  - Bingxin Hou, dissertation title: "Deep Learning-Based Low Complexity and High Efficiency Moving Object Detection Methods," graduated March 2022.
  - Olayinka Sylvia N'guessan, dissertation title: "Human Attention Regions of Interest in Video Compression," graduated June 2018.
  - Madhusudan Kalluri, dissertation title: "Rate-Distortion Optimization for Sparse Coding in Image Compression," graduated June 2018.
  - Jun Zhang, dissertation title: "Context Adaptive Rate-Distortion Optimization in Video Coding," graduated June 2010.
  - Maria Pantoja, dissertation title: "An Efficient IPB-Picture Transcoder with Joint Pixel and Transform Domain Processing," graduated September 2009.
  - Fengling Li, dissertation title: "Improved Motion-Compensated Temporal Filtering (MCTF) for Scalable Video Coding," graduated December 2006.
  - Minqiang Jiang, dissertation title: "Adaptive Rate Control for Advanced Video Coding," graduated March 2006.
  - Xiaoquan Yi, dissertation title: "Simplified and Fast Full-Pel and Sub-Pel Motion Estimation for Video Coding," graduated December 2005.
  - Nien-Tsu Wang, dissertation title: "Processing and Storage Models for MPEG-2 Main Level and High Level Video Decoding – A Block-Level Pipeline Approach," graduated March 2004.
  - Gunnar Hovden, dissertation title: "Generation of Optimized Facial Animation Parameters," graduated December 2003.

- Ph.D. student (Co-advised) graduated:
  - Pengli Du, dissertation title: "Generative Video Compression: Achieving High Perceptual Quality at Low Bitrates," Jun 2024.

(4) SERVED AS SUPERVISORS FOR:

- About 15 Research Assistants (graduate students), 1990 – present.

- Full-time researchers (salary paid by Santa Clara University School of Engineering or Ling's grants):
  - Minqiang Jiang, Research Assistant Professor/Post-Doctoral Research Fellow, term: April 16, 2015 – June 30, 2019.
  - Zhouye Gu, Postdoctoral Research Fellow, term: November 1, 2013 – October 31, 2014.
  - Zhouye Gu, Visiting Research Scholar, term: November 1, 2012 – October 31, 2013.
  - Li Song, Visiting Associate Professor, term: October 1, 2011 – September 30, 2012.

- Served as hosts for more than 15 visiting faculty (from other universities), 1990 – present.

PROFESSIONAL ACTIVITIES AND UNIVERSITY COMMITTEES

(1) MAJOR PROFESSIONAL LEADERSHIP POSITIONS:

1. **Technical Program Chair**, 2026 IEEE International Conference on Multimedia and Expo (ICME), Bangkok, Thailand, July 5 – 9, 2026. (ICME is the flagship conference on multimedia research for the IEEE and is sponsored by four of the largest IEEE societies – Computer, Communications, Signal Processing, and Circuits and Systems.)

2. **Honorary General Co-Chair**, the 14th International Conference on Ubi-Media Computing, Penang, Malaysia, January 18-22, 2026.

3. **Steering Chair**, the 13th International Conference on Ubi-Media Computing, Bangkok, Thailand, January 19-23, 2025.

4. **Technical Program Chair**, 2024 IEEE International Symposium on Circuits and Systems (ISCAS), Singapore, May 19 - 22, 2024. (ISCAS is the flagship conference of the IEEE Circuits and Systems Society.)

5. **Chair** and **Founding Member**, Asia-Pacific Signal and Information Processing Association (APSIPA) U.S. Local Chapter, January 2023 – December 2024.

6. **General Chair**, 2023 IEEE International Conference on Visual Communications and Image Processing (VCIP), Jeju, South Korea, December 3 - 6, 2023.

7. **Vice Chair** and **Founding Member**, Asia-Pacific Signal and Information Processing Association (APSIPA) U.S. Local Chapter, February 2021 – December 2022.

8. **General Co-Chair**, 12th International Conference on Ubi-Media Computing (Umedia), Bali, Indonesia, August 6-9, 2019.

9. **General Co-Chair**, 4th International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec), Santa Clara, California, U.S.A, December 10-11, 2018.

10. **General Co-Chair**, 11th International Conference on Ubi-Media Computing (Umedia), Nanjing, China, August 22 – 25, 2018.

11. **Honorary Co-Chair**, 10th International Conference on Ubi-Media Computing and Workshops (Umedia), Pattaya, Thailand, August 1 - 4, 2017.

12. **General Co-Chair**, 9th International Conference on Ubi-Media Computing (Umedia), Moscow, Russia, August 15 - 17, 2016.

13. **General Chair**, 2015 IEEE Workshop on Signal Processing Systems (SiPS), Hangzhou, China, October 14 - 16, 2015.

14. **General Co-Chair**, 8th International Conference on Ubi-Media Computing (Umedia), Colombo, Sri Lanka, August 24 – 25, 2015.

15. **General Co-Chair**, 7th International Conference on Ubi-Media Computing (Umedia), Ulaanbaatar, Mongolia, July 12 – 14, 2014.

16. **General Co-Chair**, 2nd International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, January 21 – 23, 2014.

17. **Technical Program Co-Chair**, 2013 IEEE International Conference on Visual Communications and Image Processing (VCIP), Kuching, Sarawak, Malaysia, November 17 - 20, 2013.

18. **General Chair**, 2013 IEEE International Conference on Multimedia and Expo (ICME), San Jose, California, USA, July 15 – 19, 2013. (ICME is the flagship conference on multimedia research for the IEEE and is sponsored by four of the largest IEEE societies – Computer, Communications, Signal Processing, and Circuits and Systems.)

19. **Technical Program Co-Chair**, 2010 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), Singapore, December 14 – 17, 2010.

20. **Technical Program Co-Chair**, 2010 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Kuala Lumpur, Malaysia, December 6 – 9, 2010.

21. **General Co-Chair**, 1st International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, November 26 - 28, 2008.

22. **Technical Committee Chair**, IEEE Circuits and Systems Society Circuits and Systems for Communications Technical Committee, May 2006 – May 2008. (Technical Committee Chair-Elect during May 2005 – May 2006).

23. **Technical Program Co-Chair**, 2007 IEEE International Symposium on Circuits and Systems (ISCAS), New Orleans, Louisiana, U.S.A, May 27 – 30, 2007. (ISCAS is the flagship conference of the IEEE Circuits and Systems Society, ISCAS 2007 has 1,826 papers submitted and an attendance of about 1,300.)

24. **Program Co-Chair**, 2007 IEEE Workshop on Signal Processing Systems (SiPS), Shanghai, China, October 17 – 19, 2007.

25. **Track Co-Chair (Track on Circuits and Systems for Communications)**, **Technical Program Committee**, 2006 IEEE International Symposium on Circuits and Systems (ISCAS), Island of Kos, Greece, May 21 – 24, 2006.

26. **Track Co-Chair (Track on Circuits and Systems for Communications)**, **Technical Program Committee**, 2005 IEEE International Symposium on Circuits and Systems (ISCAS), Kobe, Japan, May 23 – 26, 2005.

27. **Track Co-Chair (Track on Circuits and Systems for Communications)**, **Technical Program Committee**, 2004 IEEE International Symposium on Circuits and Systems (ISCAS), Vancouver, Canada, May 23 - 26, 2004.

28. **Program Chair**, Third International Workshop on Digital and Computational Video (DCV), Clearwater Beach, Florida, USA, November 14-15, 2002.

29. **Program Co-Chair**, 2000 IEEE Workshop on Signal Processing Systems (SiPS), Lafayette, Louisiana, USA, October 11-13, 2000.

30. **General Chair**, IEEE Hot Chips Symposium VII, Stanford University, Stanford, California, USA, August 13-15, 1995. (Hot Chips VII has a total attendance of about 1,000 and reported by media such as World Journal, EE Times, and San Jose Mercury News.)

31. **Chair**, IEEE Computer Society Technical Committee on Microprocessors and Microcomputers, 1993 - 1995.

32. **Vice Chair**, IEEE Hot Chips Symposium VI, Stanford University, Stanford, California, USA, August 14-16, 1994.

(2) EDITORSHIPS IN MAJOR JOURNALS:

33. **Guest Editor**, International Journal of Web and Grid Services (IJWGS) (Special Issue on Sustainable Web and Grid Services through NLP and Social Computing), Inderscience Publishers, 2025.

34. **Guest Editor**, International Journal of Web and Grid Services (IJWGS) (Special Issue on Social Computing with Cognitive Awareness for User-Centric Web Services), Inderscience Publishers, 2024.

35. **Guest Editor**, Multimedia Tools and Applications (Special Issue on Deep Learning for Image/Video Compression and Visual Quality Assessment), Springer, Vol. 81, Issue: December 2022.

36. **Guest Editor**, International Journal of Web and Grid Services (IJWGS) (Special Issue on Web of Things (WoT) and its Intelligent Data Processing Services), Vol. 17, No. 1 (tentative), Inderscience Publishers, 2021.

37. **Guest Editor**, Multimedia Tools and Applications (Special Issue on Pervasive Multimedia Computing – Systems Applications and Services), Vol. 75, Issue: November 2016, Springer, Published: September 19, 2016. (Guest Editorial on pp. 14015-14017).

38. **Associate Editor**, Human-centric Computing and Information Sciences, Springer, 2014 – present.

39. **Associate Editor**, Multidimensional Systems and Signal Processing: An International Journal (MSSP), Springer, 2012 – 2017.

40. **Advisory Board Member**, International Journal of Computational Science and Engineering, Inderscience Publishers, July 2016 – present.

41. **Guest Editor**, IEEE Journal of Selected Topics in Signal Processing (Special Issue on Video Coding: HEVC and Beyond), Vol. 7 No. 6, December 2013.

42. **Guest Co-Editor,** Journal of Signal Processing Systems for Signal, Image, and Video Technology (Special Issue: SoC for Multimedia Networking), Vol. 60, No. 3, Springer, September 2010. (Online version published May 2009).

43. **Editor of the Editorial Board**, Journal of Internet Technology, 2004 – 2009, 2011 - present.

44. **Member of the Editorial Board**, International Journal of Internet Protocol Technology, Inderscience Publishers, 2005 – 2008.

45. **Guest Co-Editor,** Journal of VLSI Signal Processing Systems for Signal, Image, and Video Technology (Special Issue on Digital and Computational video), Vol. 42, No. 1, Springer, January 2006.

46. **Associate Editor** (Signal Processing and Multimedia), IEEE Transactions on Circuits and Systems – I: Fundamental Theory and Applications, January 2002 – December 2003.

(3) DISTINGUISHED LECTURER POSITIONS:

47. **APSIPA Distinguished Lecturer**, January 2014 – December 2015.

48. **IEEE Distinguished Lecturer** (IEEE Circuits and Systems Society), January 2007 – December 2008.

49. **IEEE Distinguished Lecturer** (IEEE Circuits and Systems Society), January 2002 – December 2003.

(4) POSITIONS IN CONFERENCE STEERING/ORGANIZING/PROGRAM COMMITTEES AND TECHNICAL COMMITTEES:

50. **Distinguished Lecturer Selection Committee Members**, IEEE Circuits and Systems Society Distinguished Lecturer Program, 2025 – present.

51. **Co-Chair**, Award Subcommittee, IEEE Circuits and Systems Society Technical Committee on Visual Signal Processing and Communications, 2022 – 2024.

52. **International Advisory Committee Member**, the 17th IEEE Conference on Industrial Electronics and Applications (ICIEA), Chengdu, China, December 16-19, 2022.

53. **International Advisory Committee Member**, the 16th IEEE Conference on Industrial Electronics and Applications (ICIEA), Chengdu, China, August 1-4, 2021.

54. **International Advisory Committee Member**, the 15th IEEE Conference on Industrial Electronics and Applications (ICIEA), Virtual Conference (changed from Kristiansand, Norway), November 9-13, 2020.

55. **Best Paper Award Committee Member**, the 15th IEEE Conference on Industrial Electronics and Applications (ICIEA), Virtual Conference (changed from Kristiansand, Norway), November 9-13, 2020.

56. **Tutorial Chair**, 32nd IEEE International System-on-Chip Conference, Singapore, September 3-6, 2019.

57. **International Advisory Committee Member**, the 14th IEEE Conference on Industrial Electronics and Applications (ICIEA), Xi'an, China, June 19 - 21, 2019.

58. **International Advisory Committee Member**, the 13th IEEE Conference on Industrial Electronics and Applications (ICIEA), Wuhan, China, May 31 – June 2, 2018.

59. **International Advisory Committee Member**, the 12th IEEE Conference on Industrial Electronics and Applications (ICIEA), Siem Reap, Cambodia, June 18 – 20, 2017.

60. **Exhibit Chair and Demo Chair**, the 42nd IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), New Orleans, Louisiana, March 5 – 9, 2017.

61. **Advisory Board Member**, International Journal of Computational Science and Engineering, Inderscience Publishers, June 2016 – present.

62. **International Advisory Committee Member**, the 11th IEEE Conference on Industrial Electronics and Applications (ICIEA), Hefei, China, June 5 - 7, 2016.

63. **Technical Committee Representative to the ICME Steering Committee** - representative of the IEEE Circuits and Systems Society Multimedia Systems and Applications Technical Committee to the IEEE International Conference on Multimedia and Expo (ICME) Steering Committee, term: January 1, 2014 – December 31, 2015.

64. **International Advisory Committee Member**, the 10th IEEE Conference on Industrial Electronics and Applications (ICIEA), Auckland, New Zealand, June 15 - 17, 2015.

65. **America Liaison**, 2014 IEEE International Workshop on Multimedia Signal Processing (MMSP), Jakarta, Indonesia, September 22 – 24, 2014.

66. **International Advisory Committee Member**, the 9th IEEE Conference on Industrial Electronics and Applications (ICIEA), Hangzhou, China, June 9 – 11, 2014.

67. **International Advisory Committee Member**, the 9th International Conference on Information, Communications and Signal Processing (ICICS), Tainan, Taiwan, December 10 – 13, 2013.

68. **International Advisory Committee Member**, the 8th IEEE Conference on Industrial Electronics and Applications (ICIEA), Melbourne, Australia, June 19 – 21, 2013.

69. **International Advisory Committee Member**, the 7th IEEE Conference on Industrial Electronics and Applications (ICIEA), Singapore, July 18 - 20, 2012.

70. **Best Paper Award Committee Member**, the 7th IEEE Conference on Industrial Electronics and Applications (ICIEA), Singapore, July 18 - 20, 2012.

71. **Tutorial Co-Chair**, 2012 IEEE International Symposium on Circuits and Systems (ISCAS), Seoul, South Korea, May 20 – 23, 2012.

72. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 12 - 15, 2012.

73. **Technical Program Committee Member,** 2011 International Conference on Advanced Intelligence and Awareness Internet (AIAI), Shenzhen, China, October 28 -30, 2011.

74. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 12, 2011.

75. **Publicity Co-Chair**, 2010 IEEE International Symposium on Multimedia (ISM), Taichung, Taiwan, December 13 – 15, 2010.

76. **Technical Program Committee Member**, 2010 IEEE Workshop on Signal Processing Systems (SiPS), San Francisco Bay Area, California, USA, October 6 – 8, 2010.

77. **Technical Program Committee Member,** 2010 IEEE International Conference on Multimedia and Expo (ICME), Singapore, July 19 – 23, 2010.

78. **Technical Program Committee Member,** SPIE Visual Communications and Image Processing 2010 (VCIP), Huang Shan, China, July 11 – 14, 2010.

79. **International Advisory Committee Member**, the 5th IEEE Conference on Industrial Electronics and Applications (ICIEA), Taichung, Taiwan, June 15 – 17, 2010.

80. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 13, 2010.

81. **Organizing Committee Member (Registration),** 2009 IEEE International Conference on Image Processing (ICIP), Cairo, Egypt, November 7 – 11, 2009.

82. **Technical Program Committee Member**, 2009 IEEE Workshop on Signal Processing Systems (SiPS), Tampere, Finland, October 7 - 9, 2009.

83. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 10 - 14, 2009.

84. **Steering Committee Member**, IEEE International Symposium on Circuits and Systems (ISCAS), 2008.

85. **Technical Program Committee Member,** 1st International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, November 26 - 28, 2008.

86. **Technical Program Committee Member**, 2008 IEEE Workshop on Signal Processing Systems (SiPS), Washington, D.C., USA, October 8 - 10, 2008.

87. **Technical Program Committee Member,** IEEE International Conference on Circuits and Systems for Communications (ICCSC), Shanghai, China, May 26 - 28, 2008.

88. **Review Committee Member**, 2008 IEEE International Symposium on Circuits and Systems (ISCAS), Seattle, Washington, USA, May 18 - 21, 2008.

89. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 13, 2008.

90. **Technical Program Committee Member,** Multimedia Compression and Optimization Track, Pacific-Rim Conference on Multimedia (PCM), Hong Kong, China, December 11 – 14, 2007.

91. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 10 - 14, 2007.

92. **Technical Program Committee Member**, 2006 IEEE Workshop on Signal Processing Systems (SiPS), Banff, Alberta, Canada, October 2 – 4, 2006.

93. **Technical Program Committee Member** and **Review Committee Member**, 2006 IEEE International Symposium on Circuits and Systems (ISCAS), Island of Kos, Greece, May 21 – 24, 2006.

94. **Program Committee Member,** Picture Coding Symposium 2006 (PCS), Beijing, China, April 24 – 26, 2006.

95. **Technical Program Committee Member,** IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 11, 2006.

96. **Technical Program Committee Member,** 2005 International Symposium on Intelligent Signal Processing and Communications Systems, Hong Kong, China, December 13 – 16, 2005.

97. **International Program Committee Member**, Fifth International Conference on Information, Communications and Signal Processing, Bangkok, Thailand, December 6 – 9, 2005.

98. **Technical Program Committee Member**, 2005 IEEE Workshop on Signal Processing Systems (SiPS), Athens, Greece, November 2 – 4, 2005.

99. **Technical Program Committee Member** and **Review Committee Member**, 2005 IEEE International Symposium on Circuits and Systems (ISCAS), Kobe, Japan, May 23 - 26, 2005.

100. **Technical Program Committee Member**, 2004 IEEE Workshop on Signal Processing Systems (SiPS), Austin, Texas, U.S.A, October 13 – 15, 2004.

101. **Technical Program Committee Member** and **Review Committee Member**, 2004 IEEE International Symposium on Circuits and Systems (ISCAS), Vancouver, Canada, May 23 - 26, 2004.

102. **Program Committee Member**, 2003 IEEE Workshop on Signal Processing Systems (SiPS), Seoul, Korea, August 27 - 29, 2003.

103. **Review Committee Member**, 2003 IEEE International Symposium on Circuits and Systems (ISCAS), Bangkok, Thailand, May 25 - 28, 2003.

104. **Publication Co-Chair**, Workshop and Exhibition on MPEG-4, San Jose, California, USA, June 25 - 27, 2002.

105. **Technical Program Committee Member**, 2002 IEEE International Symposium on Circuits and Systems (ISCAS), Scottsdale, Arizona, USA, May 26-29, 2002.

106. **International Program Committee Member**, Third International Conference on Information, Communications and Signal Processing, Singapore, October 15 – 18, 2001.

107. **Program Committee Member**, 2001 IEEE Workshop on Signal Processing Systems (SiPS), Antwerp, Belgium, September 26-28, 2001.

108. **Publication Co-Chair**, Workshop and Exhibition on MPEG-4, San Jose, California, USA, June 18 – 20, 2001.

109. **Technical Program Committee Member**, 2001 IEEE International Symposium on Circuits and Systems (ISCAS), Sydney, Australia, May 6-9, 2001.

110. **Chair, Student Paper Contest Panel**, 2000 IEEE Workshop on Signal Processing Systems (SiPS), Lafayette, Louisiana, USA, October 11-13, 2000.

111. **Technical Program Committee Member**, 2000 IEEE International Symposium on Circuits and Systems (ISCAS), Geneva, Switzerland, May 28-31, 2000.

112. **Technical Program Committee Member**, 1999 IEEE International Symposium on Circuits and Systems (ISCAS), Orlando, Florida, USA, May 30 – June 2, 1999.

113. **Program Committee Member**, 8th Great Lakes Symposium on VLSI, Lafayette, Louisiana, USA, February 19-21, 1998.

114. **Member (at large)**, Organizing Committee, IEEE Hot Chips Symposium IX, Stanford University, Stanford, California, USA, August 24-26, 1997.

115. **Member (at large)**, Organizing Committee, IEEE Hot Chips Symposium VIII, Stanford University, Stanford, California, USA, August 18-20, 1996.

116. **Technical Program Committee Member**, 37th Midwest Symposium on Circuits and Systems, Lafayette, Louisiana, USA, August 3 -5, 1994.

117. **Publication Chair**, IEEE Hot Chips Symposium V, Stanford University, Stanford, California, USA, August 8-10, 1993.

118. **Digest Chair**, IEEE Hot Interconnects Symposium, Stanford University, Stanford, California, USA, August 5-7, 1993.

119. **Publication Chair**, IEEE Hot Chips Symposium IV, Stanford University, Stanford, California, USA, August 9-11, 1992.

120. **Publication Chair**, IEEE Hot Chips Symposium III, Stanford University, Stanford, California, USA, August 26-27, 1991.

121. **Registration Chair**, IEEE Hot Chips Symposium II, Santa Clara University, Santa Clara, California, USA, August 20-21, 1990.

(5) ORGANIZERS OF PANELS AND SPECIAL SESSIONS:

122. **Session Co-Organizer,** Session on "Coding Anything for AI Tasks," 2025 IEEE International Conference on Multimedia and Expo (ICME), Nantes, France, June 30 – July 4, 2025.

123. **Panel Organizer and Moderator**, Panel on "The Future of Video Coding," APSIPA U.S. Local Chapter, Virtual Event, April 24, 2021.

124. **Session Co-Organizer and Session Co-Chair**, Session on "Signal Processing for Signal/Video and IoT Energy," 2018 IEEE Workshop on Signal Processing Systems (SiPS), Cape Town, South Africa, October 21 – 24, 2018.

125. **Session Organizer and Session Chair**, Special Session on "Advances in Scalable Video Coding," Visual Communications and Image Processing 2005 (VCIP), Beijing, China, July 12 – 15, 2005.

126. **Session Organizer and Session Chair**, Special Session on "Multimedia Architectures," 37th Midwest Symposium on Circuits and Systems, Lafayette, Louisiana, USA, August 3 -5, 1994.

(6) CONFERENCE SESSION CHAIRS:

127.Keynote Session Chair, First Keynote, "Towards Chips that Rewire Themselves? … How Novel Material-System Co-Design can Enable Them," 2024 IEEE International Symposium on Circuits and Systems (ISCAS), Singapore, May 19 - 22, 2024.

128.Session Chair, Session on "Learning-based Video Coding & Processing," 2022 IEEE International Symposium on Circuits and Systems (ISCAS), Austin, Texas, USA (Hybrid Conference), May 28 – June 1, 2022.

129.Session Chair, Session U7, 12th International Conference on Ubi-Media Computing (Umedia), Bali, Indonesia, August 6 - 9, 2019.

130.Session Chair, Session U5, 11th International Conference on Ubi-Media Computing (Umedia), Nanjing, China, August 22 – 25, 2018.

131.Keynote Session Chair, First Keynote (replacing Timothy K. Shih), 11th International Conference on Ubi-Media Computing (Umedia), Nanjing, China, August 22 – 25, 2018.

132.Session Chair, Session U4, 10th International Conference on Ubi-Media Computing and Workshops (Umedia), Pattaya, Thailand, August 1 - 4, 2017.

133.Session Chair, Session on "Telepresence," Workshop on Hot Topics in 3D Multimedia (replacing Jong-Seok Lee), 2015 IEEE International Conference on Multimedia and Expo (ICME), Torino, Italy, June 29 – July 3, 2015.

134.Session Chair, Session on "Visual Signal Processing," 2015 10th IEEE Conference on Industrial Electronics and Applications (ICIEA), Auckland, New Zealand, June 15 – 17, 2015.

135.Session Chair, Session on "Advanced Image/Video Coding," 2015 IEEE International Symposium on Circuits and Systems (ISCAS), Lisbon, Portugal, May 24 - 27, 2015.

136.Session Chair, Session on "Classification and Recommendation," 2014 IEEE International Workshop on Multimedia Signal Processing (MMSP), Jakarta, Indonesia, September 22 – 24, 2014.

137.Keynote Session Chair, "Perception Inspired Video Processing: From Digital Camera to Ubiquitous Projection," 2nd International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, January 21 – 23, 2014.

138.Session Chair, All Sessions in Day 3 of the Workshop, 2nd International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, January 21 – 23, 2014.

139.Keynote Session Chair, Keynote Speech entitled "Recent Developments in Visual Saliency Detection and Salient Object Segmentation," 2013 IEEE Visual Communications and Image Processing Conference (VCIP), Kuching, Sarawak, Malaysia, November 17 - 20, 2013.

140.Session Chair, Session on "Image Processing Techniques & SS on Perception-Driven Image and Video Processing for Visual Communication Systems," 2013 IEEE Visual Communications and Image Processing Conference (VCIP), Kuching, Sarawak, Malaysia, November 17 - 20, 2013.

141.Keynote Session Chair, Keynote Speech entitled "Advances of Media Technology in Modern Computing," 2013 IEEE International Conference on Multimedia and Expo (ICME), San Jose, California, U.S.A, July 15 – 19, 2013.

142.Session Chair, Session on "High Efficiency Video Coding (I)," 2012 IEEE Visual Communications and Image Processing Conference (VCIP), San Diego, California, U.S.A, November 27 – 30, 2012.

143.Keynote Session Chair, Keynote Speech entitled "Robots and the Human," 2010 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), Singapore, December 14 – 17, 2010.

144.Keynote Sessions Chair, all Keynote Speeches for Day 1, 2010 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Kuala Lumpur, Malaysia, December 6 – 9, 2010.

145. **Session Co-Chair**, Session on "Visual Signal Coding and Communications," 2010 IEEE International Symposium on Circuits and Systems (ISCAS), Paris, France, May 30 – June 2, 2010.

146. **Session Chair**, Session on "Transcoding," 2009 IEEE International Conference on Image Processing (ICIP), Cairo, Egypt, November 7 – 11, 2009.

147. **Session Chair**, Session on "DSP Implementations I," 2009 IEEE Workshop on Signal Processing Systems (SiPS), Tampere, Finland, October 7 - 9, 2009.

148. **Session Chair**, Session on "Advanced Video Compression & Processing Techniques," 2008 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Macao, China, November 30 – December 3, 2008.

149. **Keynote Session Chair**, Keynote Speech entitled "Video Compression and the New World of Digital Television," 1st International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, November 26 – 28, 2008.

150. **Session Chair**, All Sessions in Day 3 of the Workshop, 1st International Workshop on Video Coding and Video Processing (VCVP), Shenzhen, China, November 26 – 28, 2008.

151. **Session Co-Chair**, Session on "Wireless Communications Systems," 2008 IEEE International Symposium on Circuits and Systems (ISCAS), Seattle, Washington, USA, May 18 - 21, 2008.

152. **Session Co-Chair**, Session on "Encoder Optimization," 2008 IEEE International Symposium on Circuits and Systems (ISCAS), Seattle, Washington, USA, May 18 - 21, 2008.

153. **Keynote Session Chair**, Keynote Speech entitled "Wireless Sensors Networks & DSP: Marriage Made in Heaven," 2007 IEEE Workshop on Signal Processing Systems (SiPS), Shanghai, China, October 17 – 19, 2007.

154. **Keynote Session Chair**, Keynote Speech entitled "Si Technology Roadmap for Ubiquitous Computing, Sensing, and Perception," 2007 IEEE International Symposium on Circuits and Systems (ISCAS), New Orleans, Louisiana, U.S.A, May 27 – 30, 2007.

155. **Session Co-Chair**, Session on "MIMO Systems," 2007 IEEE International Symposium on Circuits and Systems (ISCAS), New Orleans, Louisiana, U.S.A, May 27 – 30, 2007.

156. **Session Chair**, Session on "Coding and Compression," 2006 IEEE Workshop on Signal Processing Systems (SiPS), Banff, Alberta, Canada, October 2 – 4, 2006.

157. **Session Co-Chair**, Session on "Motion Estimation II," 2006 IEEE International Symposium on Circuits and Systems (ISCAS), Island of Kos, Greece, May 21 – 24, 2006.

158. **Session Co-Chair**, Session on "Moving Picture Coding," Picture Coding Symposium 2006 (PCS), Beijing, China, April 24 – 26, 2006.

159. **Session Chair**, Session on "Mobile Multimedia," IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 11, 2006.

160. **Session Co-Chair**, Session on "H.264 Encoding," IEEE International Conference on Consumer Electronics (ICCE), Las Vegas, Nevada, USA, January 9 - 11, 2006.

161. **Session Chair**, Session on "Video Coding," 2005 IEEE Workshop on Signal Processing Systems (SiPS), Athens, Greece, November 2 – 4, 2005.

162. **Session Co-Chair**, Session on "Efficient Implementation of AVC/H.264," 2005 IEEE International Symposium on Circuits and Systems (ISCAS'2005), Kobe, Japan, May 23 - 26, 2005.

163. **Session Co-Chair**, Session on "Communication Circuits & Systems I," 2005 IEEE International Symposium on Circuits and Systems (ISCAS'2005), Kobe, Japan, May 23 - 26, 2005.

164. **Session Chair**, Session on "JPEG2000 Implementations," 2005 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Philadelphia, Pennsylvania, USA, March 18 – 23, 2005.

165. **Session Chair**, Session on "Architectures for Source and Channel Coding," 2004 IEEE Workshop on Signal Processing Systems (SiPS), Austin, Texas, USA, October 13 – 15, 2004.

166. **Session Chair**, Session on "Advanced Video Coding Techniques for HDTV and Video Applications (I)," 2004 IEEE International Conference on Multimedia and Expo (ICME 2004), Taipei, Taiwan, June 27 - 30, 2004.

167. **Session Chair**, Session on "Receivers Architecture and Design," 2004 IEEE International Symposium on Circuits and Systems (ISCAS'2004), Vancouver, Canada, May 23 - 26, 2004.

168. **Session Co-Chair**, Session on "Image and Video Compression," 2004 IEEE International Symposium on Circuits and Systems (ISCAS'2004), Vancouver, Canada, May 23 - 26, 2004.

169. **Session Co-Chair**, Session on "3-D and Image Processing," 2004 IEEE International Symposium on Circuits and Systems (ISCAS'2004), Vancouver, Canada, May 23 - 26, 2004.

170. **Session Chair**, Session on "Video Architectures," 2003 IEEE Workshop on Signal Processing Systems (SiPS), Seoul, Korea, August 27 - 29, 2003.

171. **Session Chair**, Session on "Video Computation Algorithms," Third International Workshop on Digital and Computational Video (DCV'2002), Clearwater Beach, Florida, USA, November 14-15, 2002.

172. **Session Chair**, Session on "Video," Workshop and Exhibition on MPEG-4 (WEMP4'2002), San Jose, California, USA, June 25 - 27, 2002.

173. **Session Chair**, Session on "Video Segmentation," 2002 IEEE International Symposium on Circuits and Systems (ISCAS'2002), Scottsdale, Arizona, USA, May 26-29, 2002.

174. **Session Chair**, Session on "Communication Circuits / Implementation," 2002 IEEE International Symposium on Circuits and Systems (ISCAS'2002), Scottsdale, Arizona, USA, May 26-29, 2002.

175. **Session Chair**, Session on "Video Codecs," 2001 IEEE Workshop on Signal Processing Systems (SiPS), Antwerp, Belgium, September 26-28, 2001.

176. **Session Chair**, Session on "Decoder Algorithms and Architectures," 2001 IEEE International Symposium on Circuits and Systems (ISCAS'2001), Sydney, Australia, May 6-9, 2001.

177. **Session Chair**, Session on "Student Paper Contest," 2000 IEEE Workshop on Signal Processing Systems (SiPS), Lafayette, Louisiana, USA, October 11-13, 2000.

178. **Session Chair**, Session on "Communication Systems and Circuits," 2000 IEEE International Symposium on Circuits and Systems (ISCAS'2000), Geneva, Switzerland, May 28-31, 2000.

179. **Session Chair**, Session on "VLSI Testing – I," 1999 IEEE International Symposium on Circuits and Systems (ISCAS'99), Orlando, Florida, USA, May 30 – June 2, 1999.

180. **Session Chair**, Session on "Novel and Emerging Circuits," 8th Great Lakes Symposium on VLSI, Lafayette, Louisiana, USA, February 19-21, 1998.

181. **Session Chair**, Session on "VLSI Signal and Image Processing Architectures," 1993 IEEE International Symposium on Circuits and Systems (ISCAS'93), Chicago, Illinois, USA, May 3-6, 1993.

182. **Session Chair**, Session on "VLSI Design and Applications I," 1992 IEEE International Symposium on Circuits and Systems (ISCAS'92), San Diego, California, USA, May 10-13, 1992.

183. **Session Chair**, Session on "VLSI Design and Circuit Layout," 1990 IEEE International Symposium on Circuits and Systems (ISCAS'90), New Orleans, Louisiana, USA, May 1-3, 1990.

(7) MEMBERSHIP POSITIONS IN SOCIETY TECHNICAL COMMITTEES AND BOARDS:

184. **Emeritus Member**, IEEE Circuits and Systems Society Multimedia Systems and Applications Technical Committee, July 2021 - present.

185. **Honorable Member**, IEEE Circuits and Systems Society Technical Committee on Visual Signal Processing and Communications, 2016 - present.

186. **Member**, APSIPA Membership Board, 2014 –.

187. **Member of Advisory Board**, IEEE Signal Processing Society Design and Implementation of Signal Processing Systems Technical Committee, 2011 –.

188. **Committee Member**, IEEE Circuits and Systems Society Multimedia Systems and Applications Technical Committee, May 2008 – 2018.

189. **Emeritus Member**, IEEE Circuits and Systems Society VLSI Systems and Applications Technical Committee, 2005 – present.

190. **Committee Member**, IEEE Circuits and Systems Society Circuits and Systems for Communications Technical Committee, May 2004 – present.

191. **Committee Member**, IEEE Circuits and Systems Society Technical Committee on Visual Signal Processing and Communications, 1999 – 2016.

192. **Committee Member**, IEEE Signal Processing Society Design and Implementation of Signal Processing Systems Technical Committee, 2004 - 2010.

193. **Committee Member**, IEEE Circuits and Systems Society VLSI Systems and Applications Technical Committee, 1990 – 2005.

194. **Committee Member**, IEEE Computer Society Technical Committee on Microprocessors and Microcomputers, 1992 - 1997.

(8) OTHER PROFESSIONAL SERVICE (AND SOME COMMUNITY SERVICE):

195. **External Examiner** (for doctoral student theses and dissertations), Nanyang Technological University, Singapore, 2025.

196. **External Examiner** (for doctoral student theses and dissertations), Shanghai Jiao Tong University, Shanghai, China, 2021.

197. **Member, External Advisory Board** for the Undergraduate Bachelor of Science in Computer Science Program, Department of Computer Science, San Jose State University, San Jose, California, USA, May 2017 – 2018.

198. **External Reviewer** (assessing faculty tenure and promotion), School of Engineering, San Francisco State University, San Francisco, California, USA, 2018.

199.External Reviewer (assessing faculty tenure and promotion), School of Electronic, Information and Electrical Engineering, Shanghai Jiao Tong University, China, 2017.

200.External Examiner (for doctoral student theses and dissertations), School of EEE, Nanyang Technological University, Singapore, 2011 and 2012.

201.External Referee (assessing faculty tenure and promotion), School of Computer Engineering, Nanyang Technological University, Singapore, 2012.

202.External Referee (assessing faculty tenure and promotion), School of EEE, Nanyang Technological University, Singapore, 2008, 2010, 2011.

203.External Referee (evaluating faculty tenure and promotion), Department of Electrical and Computer Engineering, Lehigh University, Bethlehem, Pennsylvania, USA, 2010.

204.Member, Integrated Undergraduate Engineering Advisory Committee, University of Hawaii at Hilo, Hilo, Hawaii, USA, September 2009 – 2010.

205.External Referee (evaluating faculty promotion), Department of Electrical and Computer Engineering, University of Minnesota, Minneapolis, Minnesota, USA, 2009.

206.Judge, The 15th Annual Outstanding Chinese Media Awards, North California Chinese Media Association (NCCMA), California, USA, 2009.

207.External Examiner, Department of Computer Science & Engineering, the Hong Kong University of Science and Technology, Hong Kong, China, 2009.

208.External Assessor (assessing faculty tenure), School of EEE, Nanyang Technological University, Singapore, 2007.

209.Member, Board of Directors, Chinese Institute of Engineers (San Francisco Bay Area Chapter), USA, February 2004 – March 2006.

210. Contributed to the 4th Industrial Technology Research Institute (ITRI) (Taiwan) Elite Researchers Program: "Meet the Best Minds," May 2005.

211.External Examiner (for graduate student theses and dissertations), School of EEE, Nanyang Technological University, Singapore, 2000 – 2001, 2004 - 2005.

212.External Examiner (for graduate student theses and dissertations), Faculty of Engineering, Multimedia University, Malaysia, 2002 – 2003.

213.Member, Singapore Digital TV Technical Committee, Singapore, March 1998 – August 1998.

214.Reviewers for proposals

- Singapore Ministry of Education (MOE) Academic Research Fund (2008).
- Board of Regents (State of Louisiana, U.S.) Support Fund R & D Program (2003).
- King Fahd University of Petroleum and Minerals (Saudi Arabia) (1998).
- National Science Foundation (U.S.) (1991).

215.Reviewers for journals

- IEEE Transactions on Image Processing (2020).
- Journal of Supercomputing (Springer) (2018).
- Journal of Ambient Intelligence and Humanized Computing (Springer) (2017).
- Multidimensional Systems and Signal Processing: An International Journal (Springer) (2012, 2014, 2015, 2016).
- IET Image Processing (2009).

- Signal Processing: Image Communication (Elsevier Science) (2006).
- IEE Proceedings Vision, Image & Signal Processing (2005).
- Journal of Visual Communication and Image Representation (Elsevier Science) (2005).
- Computers & Electrical Engineering: An International Journal (2005).
- IEEE Transactions on Circuits and Systems – I: Fundamental Theory and Applications (2002, 2003, 2004).
- ETRI (Electronics and Telecommunications Research Institute, Korea) Journal (2003).
- EURASIP Journal of Applied Signal Processing (2002, 2006, 2007).
- IEEE Transactions on Circuits and Systems for Video Technology (2002, 2005, 2011).
- IEEE Transactions on Multimedia (2000, 2004).
- IEEE Transactions on Signal Processing (1998, 2000-01).
- IEEE Micro Magazine (1995).
- Journal of VLSI Signal Processing Systems (1993, 2001, 2003).
- IEEE Computer Magazine (1991, 1992, 1993).
- Journal of Circuits, Systems and Computers (1992).
- Electronics Letters (1991).

and more.

216. Reviewers for conferences

- IEEE Latin American Symposium on Circuits and Systems (2013).
- IEEE International Conference on Image Processing (2009, 2012).
- IEEE International Conference on Multimedia and Expo (2010).
- IEEE Asia Pacific Conference on Circuits and Systems (1992, 2010).
- Picture Coding Symposium (PCS) (2006).
- Visual Communications and Image Processing (VCIP) (2005, 2010, 2021).
- IEEE International Conference on Consumer Electronics (2006, 2010, 2011).
- IEEE Workshop on Signal Processing Systems (2000, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2015).
- IEEE International Symposium on Circuits and Systems (1991, 1992, 1993, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2010, 2014).
- IEEE International Conference on Acoustics, Speech, and Signal Processing (2005, 2006, 2007, 2008, 2009, 2010).
- Third International Workshop on Digital and Computational Video (2002).
- IEEE Workshop and Exhibition on MPEG-4 (2001).
- Third International Conference on Information, Communications and Signal Processing (2001).
- 3rd International Conference on Computational Intelligence and Multimedia Applications (1999).
- 8th Great Lakes Symposium on VLSI (1998).
- 37th Midwest Symposium on Circuits and Systems (1994).
- 7th International Parallel Processing Symposium (1993).
- International Conference on Parallel Processing (1989, 1993).
- International Conference on Parallel and Distributed Systems (1992).
- Hawaii International Conference on System Sciences (1992).

and more.

(9) MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS:

217. Life Fellow, The Institute of Electrical and Electronics Engineers, Inc. (IEEE), 2022 – present.

218. Fellow, Asia-Pacific Artificial Intelligence Association (AAIA), 2022 – present.

219. Fellow, The Institution of Engineering and Technology (IET), 2011 – present.

220. Fellow, The Institute of Electrical and Electronics Engineers, Inc. (IEEE), 2008 – present.

221. Member, Asia-Pacific Signal and Information Processing Association (APSIPA), part of 2013-present.

222. Senior Member, The Institute of Electrical and Electronics Engineers, Inc. (IEEE), 1999 – 2007.

223. Member, The Institute of Electrical and Electronics Engineers, Inc. (IEEE), 1990 - 1999.

224. Professional Member, American Society for Engineering Education (ASEE), 2002 – 2006.

225. Member, The International Society for Optical Engineering, (SPIE), 2004 – 2005.

226. Professional Member, The Association for Computing Machinery (ACM), 1990 - 2004.

(10) SERVICE IN UNIVERSITY COMMITTEES:

227. Member, Dean's Review Committee, School of Engineering, Santa Clara University, 2023.

228. Member, University Rank and Tenure Committee, Santa Clara University, 2022-2023.

229. Member, Ciocca-Koch Oversight and Accountability Committee, Santa Clara University, 2019 – 2021.

230. Member, Research Program Leadership Council, School of Engineering, Santa Clara University, 2018 – 2020.

231. Member, Engineering Diversity and Inclusion (EDI) Council, School of Engineering, Santa Clara University, Fall 2020.

232. Lector for Degree Recipients (Engineering), Graduate Commencement, Santa Clara University, June 14, 2019.

233. Lector for Degree Recipients (Engineering), Graduate Commencement, Santa Clara University, June 15, 2018.

234. Member, Natural Science Faculty Core Committee, Santa Clara University, 2014 - 2017.

235. Member, Faculty Development Advisory Council, Santa Clara University, 2007 – present.

236. Member, Graduate Program Leadership Council, School of Engineering, Santa Clara University, 2007 – 2016.

237. Affiliated Faculty, Department of Bioengineering, Santa Clara University, 2011 – present.

238. Member, Search Committee for Tenure-Track Faculty, Department of Computer Engineering, Santa Clara University, 2009-2010, 2015-2016.

239. Chair, Search Committee for Academic Year Adjunct Lecturer (full-time), Department of Computer Engineering, Santa Clara University, 2009, 2014, 2015.

240. Member, School of Engineering Committee on Rank & Tenure Document Revision, Santa Clara University, Fall 2012.

241. Member, Special Taskforce on Patents and Inventions, Santa Clara University, 2008 – 2010.

242. Member, Steering Committee, Center for Nanostructure, Santa Clara University, 2003 - 2007.

243. Committee Member, Search Committee for the New Dean of the School of Engineering, Santa Clara University, 2001 – 2002.

244. Member, University Faculty Judicial Board, Santa Clara University, 2000 – 2001, 2006 – 2007.

245. Committee Member, School of Engineering Rank & Tenure Committee, Santa Clara University, 1996 – 1999, 2001 – 2002.

246. Committee Member, School of Engineering Dean's Evaluation Committee, Santa Clara University, 1999.

247. Committee Member, University Research Committee, Santa Clara University, 1994 – 1996, 2001 – 2004.

248. Committee Member, University Academic Integrity Committee, Santa Clara University, 1992 - 1994.

249. Committee Member, University Teaching and Learning Committee, Santa Clara University, 1990 - 1992.

250. Advisor and co-founder, Upsilon Pi Epsilon (Computing Sciences Honor Society) Santa Clara University Chapter, Chapter started 1990, served as advisor in 1990 - 1993.

Also served in several college and departmental level committees not listed here.

HONORARY, VISITING, AND CONSULTING POSITIONS

(1) PROFESSORSHIPS AND MENTORS/ASSESSORS AT FOREIGN UNIVERSITIES:

1. **Guest Professor**, Zhongyuan University of Technology, Zhengzhou, China, August 20, 2018 –.
2. **Chair Professor**, Fuzhou University, China, April 18, 2017 – April 17, 2020.
3. **Minjiang Scholar** (Chair Professor Category, Fuzhou University), Fujian Province, China, December 26, 2018 –.
4. **Distinguished Professor**, Xi'an University of Posts and Telecommunications, China, April 17, 2015 – April 18, 2021.
5. **Guest Professor**, Tianjin University, China, April 2015 – 2022.
6. **Cuiying Chair Professor**, Lanzhou University, China, June 27, 2012 – May 2018.
7. **Guest Professor**, Shanghai Jiao Tong University, China, May 2006 – May 2016.
8. **Program Mentor and Internship Assessor**, NUS Overseas College in Silicon Valley (NCSV), National University of Singapore (NUS), March 2018 – July 2023.
9. **Consulting Professor**, NUS Overseas College in Silicon Valley (NCSV), National University of Singapore (NUS). Provided advice to NCSV, facilitated entrepreneurship education, advised and assessed NUS interns in Silicon Valley, September 1, 2002 – July 31, 2016.
10. **Outstanding Overseas Scholar**, Shanghai University of Electric Power, China, January 27, 2014 – January 26, 2016.
11. **Visiting Professor**, Xi'an University of Posts and Telecommunications, China, October 17, 2014 -.
12. **Adjunct Professor**, Lanzhou Jiaotong University, China, July 8, 2013 -.

(2) OTHER (SHORT-TERM) POSITIONS:

13. Co-PI, MOST Add-on Grant for International Cooperation, Ministry of Science and Technology, Taiwan, February 1, 2019 – July 31, 2020.
14. Consulting at Xilinx, San Jose, California, USA. Provided training on video technology for engineers, September 2009.
15. Visiting Researcher, Institute for Infocomm Research (I^2R), Singapore. Reviewed research activities, discussed collaborations, and delivered a seminar, January 21 – 25, 2008.

16. Invited Speaker/Visitor, Lee Center for Networking Research, Center for Telecommunications Research, and Dept. of Electronics Engineering, National Chiao Tung University, Taiwan, November 19 – 25, 2006.
(Invited through sponsorship by Taiwan National Science Council and Lee Center; delivered nine talks at four major universities in Taiwan.)

17. Visiting Consultant, Center for Signal Processing, Nanyang Technological University, Singapore. Worked in the areas of scalable video coding and distributed video coding, June 27 – July 6 and July 17 – 26, 2005.

18. Visiting Scientist/Consultant, Institute for Infocomm Research, Singapore. Worked in the area of scalable video coding and gave seminars, February 3 – March 2, 2005.

19. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "Video & Image Compression: Principles & Standards (including MPEG-4 AVC / H.264)" for professionals from multi-national companies, government organizations, University, and research centers, July 12 - 15, 2004.

20. Special Invited Speaker/Distinguished Visiting Professor, Dept. of Electrical Engineering, National Dong Hwa University, Hualien, Taiwan, March 24 – 30, 2004.
(Invited through a program sponsored by Taiwan Ministry of Education; delivered three talks.)

21. Visiting Scientist/Consultant, Institute for Infocomm Research, Singapore. Invited to give two presentations and to discuss collaborative work on multimedia signal processing, February 16 – 21, 2004.

22. Visiting Professor, Laboratories for Information Technology (now known as Institute for Infocomm Research), Singapore. Performed research & development on adaptive network environment for streaming of video, August 1 -31, 2002.

23. Consulting at Laboratories for Information Technology (now known as Institute for Infocomm Research), Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, March 25 - 28, 2002.

24. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, November 19 - 23, 2001.

25. Visiting Consultant, Center for Signal Processing, Nanyang Technological University, Singapore. Led a team of 5 research fellows and research engineers to work on a streaming video over IP project, July – September, 2001.

26. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, February 19 - 23, 2001.

27. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, November 20 - 24, 2000.

28. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, February 28 – March 1, 2000.

29. Visiting Consultant, Center for Signal Processing, Nanyang Technological University, Singapore. Led a team of 9 research fellows and research engineers to work on a digital TV project, July – September, 1999.

30. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on "MPEG & DTV" for professionals from multi-national companies, government organizations, University, and research centers, August 1999.

31. Consulting at Center for Signal Processing, Nanyang Technological University, Singapore. Taught a short course on MPEG video coding for professionals from multi-national companies, government organizations, University, and research centers, July 1998.

32. Consulting at Philips Semiconductors, Sunnyvale, California, USA. Provided MPEG compression training for engineers, 1995.

33. Consulting at LSI Logic Corporation, Milpitas, California, USA. Provided image and video compression training for digital video products engineers, 1994.

INVITED COLLOQUIA/SEMINARS, DISTINGUISHED LECTURES, AND PANELS

(1) Keynote Speeches – listed in earlier section.

(2) Panels and Distinguished Invited Lectures

1. **Distinguished Lecturer**, Hong De Lecture Hall, Lecture title: "Intra Prediction in Versatile Video Coding (VVC)," Zhongyuan University of Technology, Zhengzhou, China, August 20, 2018.
2. **Distinguished Speaker**, Nanqiang Lecture Series, Lecture title: "Rate-Distortion Optimization for Sparse Coding in Image Compression," Xiamen University, Xiamen, China, June 29, 2016.
3. **59th Distinguished Speaker**, Cuiying Distinguished Lecture Series (Cui Ying Da Jiang Tang), Lecture title: "3D Video Coding and Our Related Research," Lanzhou University, Lanzhou, China, April 23, 2014.
4. **Distinguished Invited Lecture Speaker**, Lecture title: "Expectations and Challenges for Next Generation Video Compression," 5th IEEE Conference on Industrial Electronics and Applications (ICIEA), Taichung, Taiwan, June 15 – 17, 2010.
5. **Panelist,** Panel on "futuretech," and **Speaker,** "Video Coding Technology for Interactive Digital Media – A Vision," The NTU International Workshop on Interactive Digital Media Research, Singapore, April 28-30, 2008.
   (Invited by the Provost of Nanyang Technological University (NTU), Singapore; this is the inaugural workshop for the NTU Institute for Media Innovation and is of national significance to Singapore.)
6. **Panelist**, Panel on "Technology Trends, New Applications, and Business Opportunities in New Digital Home," U.S. Taiwan High-tech Forum (UTHF), Santa Clara, California, U.S.A, September 11, 2004. **Speaker**, "Technology Trend on Video Coding and Streaming and its Application in Industry," UTHF Pre-Conference Workshop, Saratoga, California, U.S.A, September 10, 2004.
   (Invited by the North America Taiwanese Engineers' Association.)

(3) APSIPA Distinguished Lectures (Delivered as APSIPA Distinguished Lecturer)

Lecture titles for 2014-2015 APSIPA Distinguished Lectures - Lecture 1: "3D Video Coding and its Related Research." Lecture 2: "Research on High Efficiency Video Coding and its 3D Extension."

7. School of Electronic Information Engineering, Tianjin University, Tianjin, China, April 20, 2015.
   (Organized by School of Electronic Information Engineering (Tianjin University) and APSIPA.)
8. School of Electrical & Electronic Engineering, Nanyang Technological University (NTU), Singapore, January 29, 2014.
   (Organized by INFINITUS, NTU Infocomm Center of Excellence, IEEE Circuits and Systems (CAS) Society Singapore Chapter, IEEE Industrial Electronics (IE) Society Singapore Chapter, and APSIPA.)
9. School of Electronic and Information Engineering, Shanghai University of Electric Power, Shanghai, China, January 27, 2014.
   (Organized by School of Electronic & Information Engineering (Shanghai U of Electric Power) and APSIPA.)

(4) IEEE Distinguished Lectures (Delivered as IEEE Distinguished Lecturer)

Lecture title for 2007-2008 IEEE Distinguished Lectures (Circuits and Systems) – "Simplified Fast Motion Estimation: Simplified and Unified Multi-Hexagon Search (SUMH) with Context Adaptive Lagrange Multiplier (CALM)."

Lecture titles for 2002-2003 IEEE Distinguished Lectures (Circuits and Systems) – Lecture 1: "A Real-time MPEG-4 Binary Shape Decoder." Lecture 2: "A Real-time Video Decoder for Digital HDTV."

10. COPPE (Electrical Engineering), Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil, September 12, 2008.
    (Invited by the IEEE Circuits and Systems (CAS) Society Rio de Janeiro Chapter.)
11. Faculty of Engineering, Universiti Putra Malaysia (UPM), Serdang, Malaysia, July 22, 2008.
    (Invited by IEEE CAS Society Malaysia Chapter.)
12. Institute for Infocomm Research, Singapore, July 4, 2008.
    (Invited by IEEE CAS Society Singapore Chapter.)
13. Electrical Engineering Department, Indian Institute of Technology (IIT), New Delhi, India, November 23, 2007.
    (Invited by IEEE CAS Society Delhi Chapter.)
14. School of Electrical & Electronic Engineering, Nanyang Technological University, Singapore, November 19, 2007.
    (Invited by IEEE CAS Society Singapore Chapter.)
15. Simon Fraser University, Burnaby (Vancouver area), Canada, June 21, 2007.
    (Invited by IEEE CAS Society Joint Chapter of the Vancouver/Victoria Sections.)
16. School of Computer Science and Technology, Huazhong University of Science and Technology, Wuhan, China, November 26, 2003. (2 talks).
    (Invited by the School and the IEEE CAS Society Beijing Chapter.)
17. Beijing Broadcasting Institute (now known as Communication University of China), Beijing, China, November 24, 2003.
    (Invited by the Institute and the IEEE CAS Society Beijing Chapter.)
18. National Laboratory on Machine Perception, Beijing University (called Peking University in China), Beijing, China, November 24, 2003.
    (Invited by the Lab and the IEEE CAS Society Beijing Chapter.)
19. Division of Engineering, Brown University, Providence, Rhode Island, USA, August 19, 2003.
    (Invited by the Division and the IEEE Providence Section.)
20. Department of Electrical and Computer Engineering, National University of Singapore, Singapore, August 13, 2002.
    (Invited by IEEE CAS Society (Singapore Chapter) and the Department.)
21. Ajou University, Seoul, South Korea, April 22, 2002. (2 talks).
    (Invited by IEEE Seoul Section CAS Chapter and the University.)

(5) Interdisciplinary Colloquia/Seminars and Panels

22. **Speaker**, "Conducting Research and Writing Research Papers," Xi'an University of Posts and Telecommunications, Xi'an, China, November 18, 2019.
23. **Speaker**, "An Overview of Engineering Research and Our Video Coding Research," Department of Innovative Information and Technology, Tamkang University (Lanyang Campus), Jiaoxi Township, Yilan, Taiwan, July 22, 2019.
24. **Speaker,** "Understanding Artificial Intelligence and its Spiritual, Ethical, and Societal Impact," Chinese Church in Christ, Mountain View, California, USA, June 10, 2018.
25. **Speaker**, "A Brief Intro to Santa Clara University, Our Department, and Our Research," School of Information Science and Technology, Southwest Jiaotong University (Chengdu Campus), Chengdu, China, October 12, 2015.
26. **Speaker**, "A Brief Intro to Santa Clara University, Our Department, and Our Research," School of Information Science and Technology, Southwest Jiaotong University (Emei Campus), Emei, China, October 10, 2015.
27. **Speaker**, "Welcome Address: Sharing My Experience – as an International Student and as a Faculty," International Graduate Student Orientation, Santa Clara University, Santa Clara, California, USA, September 14, 2015.
28. **Panelist/Speaker**, "Seeking Acceptance, Coping with Rejection: Publishing Your Work in Scholarly Journals," SCU Faculty Development Workshop, Santa Clara University, Santa Clara, California, USA, May 4, 2010.
29. **Alumni Speaker**, Celebration - the Golden Jubilee (50^{th}) Anniversary of Computing at the University of Louisiana at Lafayette and the Silver Jubilee (25^{th}) Anniversary of the Center for Advanced Computer Studies, the University of Louisiana at Lafayette, USA, October 30 – 31, 2009.
    (Invited by the Center for Advanced Computer Studies, the University of Louisiana at Lafayette.)
30. **Panelist**, Panel on "Managing Projects Across International Boundaries," 2009 IEEE International Symposium on Circuits and Systems (ISCAS) Graduates of the Last Decade (GOLD) / Technology Management Joint-Session, Taipei, Taiwan, May 25, 2009.
    (Invited by IEEE Circuits and Systems Society GOLD.)

31. **Speaker**, "Managing U.S.-China and University-Industry Joint Projects – A Share of Experience," 2009 IEEE International Symposium on Circuits and Systems (ISCAS) Graduates of the Last Decade (GOLD) / Technology Management Joint-Session, Taipei, Taiwan, May 25, 2009.
    (Invited by IEEE Circuits and Systems Society GOLD.)
32. **Speaker**, ""Work Smarter! Not Harder!" - How to be "Successful" in Your Engineering Research Career?" Institute for Infocomm Research, Singapore, July 4, 2008.
    (Invited by IEEE WIE (Women in Engineering) Singapore Affinity Group, IEEE Circuits and Systems Society Singapore Chapter, and Institute for Infocomm Research, Singapore.)
33. **Panelist**, Panel on "Fifty Ways to Promote Scholarship," SCU Research Colloquium, Santa Clara University, Santa Clara, California, USA, February 28, 2006.
    (Invited by the Associate Provost for Faculty Development, Santa Clara University, USA.)
34. **Panelist & Facilitator**, Panel & Discussion on "Preparing Your Petition for Tenure and Promotion," Teaching-Scholar Symposium, Santa Clara University, Santa Clara, California, USA, February 5, 2004.
    (Invited by the Associate Provost for Faculty Development, Santa Clara University, USA.)
35. **Panelist/Speaker**, "What do Journal Editors Really Want?" Teaching-Scholar Symposium, Santa Clara University, Santa Clara, California, USA, October 28, 2003.
    (Invited by the Associate Provost for Faculty Development, Santa Clara University, USA.)
36. **Speaker**, "Enhancing Scholarly Productivity at SCU – Collaborative Research," Teaching-Scholar Symposium, Santa Clara University, Santa Clara, California, USA, May 1, 2002.
    (Invited by SCU Research Committee and the Faculty Development Program, Santa Clara University, USA.)
37. **Speaker**, "Corporate Funding and International Collaborations," Research Symposium, Santa Clara University, Santa Clara, California, USA, April 25, 2001.
    (Invited by SCU Sponsored Projects Office and University Research Committee, Santa Clara University, USA.)

(6) Technical Colloquia/Seminars

38. College of Engineering, Business, and Education, University of Bridgeport, Connecticut, U.S.A, September 28, 2023. (More than 330 attendees).
39. IEEE Industrial Electronics Society Singapore Chapter, IEEE Circuits and Systems (CAS) Society Singapore Chapter, and Center for Information Sciences and Systems (CISS), School of EEE, Nanyang Technological University, Singapore, November 17, 2022.
40. Kuaishou Academic Lecture (Virtual Event), Kuaishou Technology, July 8, 2021.
41. School of Information Science and Engineering, Lanzhou University, Lanzhou, China, November 19, 2019.
42. College of Physics and Information Engineering, Fuzhou University, Fuzhou, China, October 17, 2019.
43. IEEE Circuits and Systems (CAS) Society Singapore Chapter, IEEE Industrial Electronics Society Singapore Chapter, and Center for Infocomm Technology (INFINITUS), School of EEE, Nanyang Technological University, Singapore, October 14, 2019.
44. School of Information Science and Engineering, Yunnan University (Chenggong Campus), Kunming, China, September 4, 2019.
45. School of Electrical and Information Engineering, Tianjin University, Tianjin, China, September 2, 2019.
46. Waseda University, Tokyo, Japan, May 24, 2019.
47. Center for Image and Information Processing, Xi'an University of Posts and Telecommunications, Xi'an, China, August 29, 2018.
48. School of Electrical and Information Engineering, Tianjin University, Tianjin, China, August 21, 2018.
49. IEEE Circuits and Systems (CAS) Society Singapore Chapter and Center for Infocomm Technology (INFINITUS) (Nanyang Technological University), Singapore, July 3, 2018.
50. College of Physics and Information Engineering, Fuzhou University, Fuzhou, China, June 28, 2018.
51. Center for System Intelligence and Efficiency (EXQUISITUS) (Nanyang Technological University) and the IEEE Industrial Electronics Society Singapore Chapter, Singapore, December 18, 2017.
52. School of Mathematical Sciences, Nankai University, Tianjin, China, September 1, 2017.
53. School of Electrical and Information Engineering, Tianjin University, Tianjin, China, September 1, 2017.
54. Institute of Digital Media, School of Electronics Engineering & Computer Science, Peking University (Beijing University), Beijing, China, August 31, 2017.
55. IEEE Circuits and Systems (CAS) Society Singapore Chapter and Center for Infocomm Technology (INFINITUS) (Nanyang Technological University), Singapore, August 10, 2017.
56. School of Information Science and Engineering, Lanzhou University, Lanzhou, China, April 27, 2017.

57. College of Physics and Information Engineering, Fuzhou University, Fuzhou, China, April 24, 2017.
58. School of Cyberspace Security, Beijing University of Posts and Telecommunications, Beijing China, November 24, 2016.
59. College of Physics and Information Engineering, Fuzhou University, Fuzhou, China, July 2, 2016.
60. School of Physics and Information Engineering, Minnan Normal University, Zhangzhou, China, July 1, 2016.
61. School of Electronic Information Engineering, Tianjin University, Tianjin, China, June 27, 2016.
62. School of Telecommunication and Information Engineering, Xi'an University of Posts and Telecommunications, Xi'an, China, June 23, 2016.
63. School of Telecommunication and Information Engineering, Xi'an University of Posts and Telecommunications, Xi'an, China, April 16, 2015.
64. School of Engineering, University of Bridgeport, Bridgeport, Connecticut, U.S.A, March 6, 2014.
65. INFINITUS, Infocomm Center of Excellence (Nanyang Technological University), IEEE Circuits and Systems (CAS) Society Singapore Chapter, IEEE Industrial Electronics (IE) Society Singapore Chapter, Singapore, November 15, 2013.
66. School of Electronic Information and Electrical Engineering, Shanghai Jiao Tong University, Shanghai, China, May 17, 2013.
67. IEEE CAS Society Santa Clara Valley Chapter, Santa Clara, California, U.S.A, September 26, 2011.
68. IEEE CAS Society Singapore Chapter, Center for Signal Processing, and Division of Information Engineering, School of EEE, Nanyang Technological University, Singapore, December 13, 2010.
69. Institute of Image Communication and Information Processing, Shanghai Jiao Tong University, Shanghai, China, September 8, 2010.
70. School of Electrical & Electronic Engineering (EEE), Nanyang Technological University, Singapore, July 11, 2008.
71. IEEE Signal Processing (SP) Society Santa Clara Valley Chapter and IEEE CAS Society Santa Clara Valley Section, Santa Clara, California, U.S.A, February 11, 2008.
72. Institute for Infocomm Research (Singapore), IEEE CAS Society Singapore Chapter, IEEE Industrial Electronics (IE) Society Singapore Chapter, and IEEE SP Society Singapore Chapter, Singapore, January 24, 2008.
73. Huawei Technologies, Shenzhen, China, October 21, 2007.
74. The Center for Advanced Computer Studies, University of Louisiana at Lafayette, Lafayette, Louisiana, USA, December 19, 2006.
75. Institute of Information Systems and Applications, National Tsing Hua University, Taiwan, November 24, 2006. (Invited through sponsorship by Taiwan National Science Council and Lee Center of NCTU.)
76. Department of Electrical Engineering, National Cheng Kung University, Taiwan, November 23, 2006. (2 talks). (Invited through sponsorship by Taiwan National Science Council and Lee Center of NCTU.)
77. College of Electrical Engineering and Computer Science, National Taiwan University, Taiwan, November 22, 2006. (2 talks).
    (Invited through sponsorship by Taiwan National Science Council and Lee Center of NCTU.)
78. Lee Center for Networking Research, Center for Telecommunications Research, and Department of Electronics Engineering, National Chiao Tung University (NCTU), Taiwan, November 21, 2006. (4 talks).
    (Invited through sponsorship by Taiwan National Science Council and Lee Center of NCTU.)
79. Communication University of China, Beijing, China, April 29, 2006.
80. Genesis Microchip Inc., Alviso, California, U.S.A, March 17, 2006.
81. Division of Information Engineering & the Center for Signal Processing, School of Electrical & Electronic Engineering, Nanyang Technological University, the IEEE SP Singapore Chapter, and the IEEE CAS Singapore Chapter, Singapore, July 28, 2005. (2 talks).
82. Communication University of China, Beijing, China, July 12, 2005.
83. Institute of Image Communication and Information Processing, Shanghai Jiao Tong University, Shanghai, China, July 7, 2005. (2 talks).
84. Department of Electronics Engineering, National Chiao Tung University, Hsinchu, Taiwan, June 24, 2005. (2 talks).
85. Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan, June 23, 2005. (2 talks).
86. Institute for Infocomm Research, Singapore, February 17 and March 1, 2005. (2 talks).
87. Department of Computer Science and Information Engineering, Tamkang University, Tamsui, Taiwan, March 30, 2004.
88. Department of Electrical Engineering, National Dong Hwa University, Hualien, Taiwan, March 25, 26, and 29, 2004. (3 talks).
    (Invited as Distinguished Visiting Professor/Special Invited Speaker through a program sponsored by Taiwan Ministry of Education.)

89. Shannon Lecture Series (the Santa Clara Valley Chapter of the IEEE Computer Society and the Stanford Student Chapter of the IEEE, Stanford University), Stanford, California, U.S.A, March 18, 2004.
90. Institute for Infocomm Research, Singapore, February 17 and 19, 2004. (2 talks).
91. Inter-University Semiconductor Research Center, Seoul National University, Seoul, South Korea, April 23, 2002.
92. Faculty of Information Technology and Faculty of Engineering, Multimedia University, Cyberjaya, Malaysia, July 30, 2001.
93. The Center for Advanced Computer Studies (CACS) Centennial Computing Workshop, University of Louisiana at Lafayette, Lafayette, Louisiana, USA, November 5-6, 1999.
94. Focus Seminar on DTV, Center for Signal Processing, Nanyang Technological University, Singapore, September 10, 1999.
95. Institute of Microelectronics (IME), Singapore, July 22, 1998.
96. Singapore MPEG Seminar, Singapore, June 10, 1998.
97. Medianix Semiconductor, Inc., Mountain View, California, USA, May 29, 1998.
98. Focus Seminar on DSP Applications in Multimedia Systems, Center for Signal Processing, School of EEE, Nanyang Technological University, Singapore, April 22, 1998.
99. Television Corporation of Singapore (TCS), Singapore, March 12, 1998.
100. NJR Corporation (New Japan Radio), Mountain View, California, USA, July 9, 1997.
101. Institute of Information Science, Academia Sinica, Taipei, Taiwan, July 8, 1996.
(Invited by Dr. Yuan T. Lee, President of Academia Sinica and a Nobel Laureate.)
102. Institute of Electronics, Chinese Academy of Sciences, Beijing, China, June 18, 1996.
(Invited through Beijing Association for Science and Technology Exchanges with Foreign Countries.)
103. Department of Electronic Engineering, Tsinghua University, Beijing, China, June 17, 1996.
(Invited through Beijing Association for Science and Technology Exchanges with Foreign Countries.)
104. NJR Corporation (New Japan Radio), Mountain View, California, USA, December 18, 1995.
105. Philips Semiconductors, Sunnyvale, California, USA, February 28, 1995.
106. LSI Logic Corporation, Milpitas, California, USA, June 24, 1994.
107. Department of Mathematics and Computer Science, San Jose State University, San Jose, California, USA, May 2, 1994.
108. Hewlett-Packard Laboratories, Hewlett-Packard Company, Palo Alto, California, USA, September 17, 1993.
109. ASPEC Technology, Inc., Santa Clara, California, USA, April 5, 1993 and May 18, 1993.
110. Department of Mathematics and Computer Science, San Jose State University, San Jose, California, USA, October 19, 1992.
111. Faculty Research Seminar, Department of Electrical Engineering and Department of Computer Engineering, Santa Clara University, Santa Clara, California, USA, April 30, 1992.
112. Workshop on VLSI Research and Education, The Center for Advanced Computer Studies, University of Southwestern Louisiana, Lafayette, Louisiana, USA, April 9-10, 1992.
113. 15th Annual Meeting of the SIAM Southeastern Atlantic Section, Western Carolina University, Cullowhee, North Carolina, USA, April 12-13, 1991.
114. The Parallel Processing Connection, Sunnyvale (presentation held at Redwood City), California, USA, January 14, 1991.
115. Department of Electrical Engineering, the University of Rhode Island, Kingston, Rhode Island, USA, October 15, 1990.
116. Department of Electrical Engineering and Computer Science, Santa Clara University, Santa Clara, California, USA, February 1, 1990.
117. Department of Mathematics and Computer Science, San Jose State University, San Jose, California, USA, November 8, 1989.
118. Department of Computer Science, University of Georgia, Athens, Georgia, USA, July 6-7, 1989.
119. IBM General Technology Division, Hopewell Junction, New York, USA, June 12, 1989.
120. Philips Laboratories, North American Philips Corporation, Briarcliff Manor, New York, USA, May 24, 1989.
121. Department of Electrical and Computer Engineering, Louisiana State University, Baton Rouge, Louisiana, USA, April 11, 1989.

PROFESSIONAL APPEARANCES ON MEDIA

Professional appearances on the following public media (over 60 times), 1995-present:

- Newspapers (San Francisco Bay Area, California, U.S.): World Journal, Sing Tao Daily, San Jose Mercury News, Silicon Valley/San Jose Business Journal, The Independent.
- TV (San Francisco Bay Area, California, U.S.): Channel 26 KTSF (Cable Channel 8) – News, Mandarin Journal, CBS (KPIX CBS News Bay Area), FOX (KTVU FOX 2 News).
- TV (Local and International): Singtao TV.
- Radio (San Francisco Bay Area, California, U.S.): AM 1450, Sing Tao Chinese Radio FM 96.1, and KCBS 740 AM.
- News and magazines (U.S.): People, Los Angeles Times, Sing Tao Daily-U.S. Life Magazine.
- News all over the world (related to my genius student graduating at the age of 14 and joining SpaceX) – Besides appearances in some of the above media, there were more: International Daily News (Indonesia), Weibo (China), Yangtse (Nanjing), the Virginian Plot (Virginia), etc.
- Newspapers (Singapore): The Straits Times and Lianhe Zaobao (largest and 2nd largest newspapers in Singapore).
- TV (Singapore): Channel 5, Channel 8, and Channel 12.
- Flyers for Voting (Fremont Union High School District, U.S.): Measure J and Measure K, Nov 2014 Vote.
- Newspaper (Russia): Sobytiya (Events).
- Newspaper (Bangladesh): Prothom Alo (First Light) (2nd largest newspaper in Bangladesh based on circulation).