“Mobile Life and Technology”

34th Annual Conference

Chinese Institute of Engineers/USA
San Francisco Bay Area Chapter

Since 1917

San Francisco Airport Marriott Water Front
1800 Old Bayshore Highway, Burlingame, California 94010

March 9, 2013
CITS Group
is proud to support
CIE/USA

Sharing our upward-looking vision of a
Brighter Tomorrow
34th CIE/USA Annual Conference Program

“Mobile Life and Technology”
“無線科技與生活”
Saturday 9 March, 2013
San Francisco Airport Marriott Water Front
1800 Old Bayshore Highway
Burlingame, CA 94010

1.00PM  Registration
1:20PM  Opening Ceremony
1:30PM  Technical Seminars

Session Moderator:  Dr. William Kao

• 1:30PM-2:15PM  “The role of the GPU in Mobile and the Cloud”
  by Mr. Emmett Kilgariff, Nvidia Corporation

• 2:15PM-3:00PM  “60GHz technologies are coming to improve life quality”
  by Mr. Tao Li, Qualcomm Corporation

• 3:00PM-3:15PM  Break (A word from the sponsor: Prudential)

• 3:15PM-3:45PM  “The Explosive Growth of Mobile Devices and Applications –
  Challenges and Opportunities” by Ms. Jessica Zhang, Dell Computer

• 3:45PM-4:15PM  “Mobile Messaging for Health and Education:
  Using Technology to Penetrate China’s Rural Interior”
  by Ms. Alexis Medina, and Prof. Scott Rozelle

• 4:15PM-5:00PM  “Engineering Challenges and Technology
  Trends for Mobile Devices SOC Development”
  by Dr. K. Lawrence Loh, MediaTek, USA

5:30 PM  PM Registration
6:00 PM  Dinner Banquet
6:45 PM  CIE/USA-SF General Business and Announcements
7:15 PM  Keynote Speech: San Francisco Mayor Edwin Lee
8:00 PM  Silicon Valley Entrepreneur of the Year Awards
  Entrepreneur -Established Award:  Ms. Weili Dai (Marvell)
  Entrepreneur-Emerging Award:  Mr. Jay Wei (Optovue)

8:30 PM  Technology and Humanity Award
  Professor Chun - Pei Ma (UC Berkeley)

8:45 PM  High School Student Scholarship Awards
9:15 PM  Entertainment
9:45 PM  Adjourn
Form the Chairman
John Y. Xie, Ph.D

On behalf of the 2012 Board of Directors of the Chinese Institute of Engineers/USA – San Francisco Bay Area Chapter (CIE/USA-SF), it is my pleasure to welcome you to attend our 34th annual conference. I would also like to express my appreciation to our corporate sponsors, speakers, volunteers, CIE members, officers, and board of directors for making this event possible.

CIE/USA is a non-profit and non-political professional organization founded in New York 1917. It is a nationwide organization consisting of seven chapters including Greater New York, San Francisco Bay Area, Seattle, Dallas/Fort Worth, New Mexico, OCEESA, and Southern California. Under the coordination of the National Council, CIE/USA co-hosts two biannual international events including the Modern Engineering Technology Seminar in Taipei and the Sino-American Technology and Engineering Conference in Beijing. It also holds the annual Asian American Engineers of the Year Award.

The CIE/USA-SF was established in 1979 to promote technological advancement, well-being of the Chinese-American community, and the U.S.–China Engineering and industrial collaboration. We are honored to have Mr. Ed Lee (李孟賢市長), Mayor of San Francisco, serving as the keynote speaker of the evening banquet. In addition, we will be honoring the recipients of our 2nd year's Silicon Valley Entrepreneur Awards, as well as our traditional Technology and Humanity Award.

I would like to thank the dedications of the chapter officers: President, Mr Richard Yau; Vice President, Dr. Tony Liu; Secretary: Dr. Chi-min Chu; Treasurer: Larry Wang; plus Dr. David Fong for Communication; Dr. Barry Lin for Public Relations; and Mr. Louis Liu and Yingbin Wang as our Web Master; and Ms. Su-syin Chou for sponsorship. I would like to extend my special thanks to all directors of the Board: Mr. Norman Lo, Ms. Su-syin Chou, Dr. Chi-Min Chu, Dr. David Fong, Dr. Fredrick Hsia, Dr. William Kao, Dr. An-Yu Kuo, Mr. Patrick Lam, Dr. Barry Lin, Dr. Tony Liu, Dr. Joe Tai, Dr. Larry Wang, Mr. Richard Yau, Dr. Alex Zhu, Dr. Andy Lee; Dr. Eric Pai; Dr. Tien-Cun Yang; Dr. Yazhou Liu, and Dr. Wen Wang. My deep appreciation goes to Mrs. Sally Tang, CPA, for her dedication as the account to CIE/USA-SF.

Finally, I would like to express my gratitude to Dr. Chi-min Chu for serving as the Chairman of the 2013 CIE/USA-SF Annual Conference

John Y. Xie, Ph.D.
2012 Chairman, CIE/USA-SF
From the President
Richard Yau

On behalf of Chinese Institute of Engineers U.S.A., San Francisco Bay Area Chapter (CIE/USA-SF), I am honored to welcome you to our 2013 Annual Conference. With your continuous support, we have successfully brought exciting technical and humanities programs to enrich our communities.

Under the Chinese Institute of Engineers U.S.A. found in 1917, the CIE/USA-SF was established in 1979 to promote technological advancement and networking, the well being of the Chinese-American engineering community, and the engineering community, and the engineering and industrial collaborations among the U.S., China and Taiwan. We have continued to pursue these missions through a sound organization structure and well planned activities. Over the years, CIE/USA-SF has broadened it to Asian American in order to help serve the needs of our SF bay area members.

I would like to express my most sincere appreciation for the dedication and commitment of our chapter officers, Dr. Tony Liu, Vice President, Dr. Chi-Ming Chu, Secretary, Dr. Larry Wang, Treasurer, Board members, Group Officers and all volunteers. Through teamwork and collaboration with other CIE/USA chapters and the fellow Chinese engineering organizations in the bay area, we are proud to keep contributing to our members and engineering communities. The following are a few highlights of activities in 2012 – 2013.

- 2012 Annual conference (Theme: Smart Engineering)
- Co-organized Math and Speech Competitions
- Solar Seminar
- Co-organized 2012 USA-Taiwan Biomedical Engineering Forum
- Participated in North California Chinese Culture Sports Meet
- Co-organized CIE-CASPA 2012 Summer Symposium
- Co-sponsor in HiRecruit
- Sustainable Water Resource; Development and Applications of Biomimicry on Clean Technology Seminar
- High Speed Rail Seminar
- Financial Seminar
- Social Security Seminar.
- Hydrogen Fuel Cells; Importance of Smart Monitoring, Control and Optimizers to Solar Energy Seminar

We are looking forward to another fruitful year in serving the communities and feeling very grateful for the generous support from the communities as well.
Banquet Keynote Speaker
Mr. Edwin M. Lee, Mayor of San Francisco

Edwin M. Lee, 59, was sworn in on January 8, 2012 as the 43rd Mayor of the City and County of San Francisco. Lee is the first Asian-American mayor in San Francisco history. Lee was elected on November 8, 2011 by the people of San Francisco while he was serving as Interim Mayor, appointed unanimously as successor mayor by the Board of Supervisors on January 11, 2011 to fill the remaining year of former Mayor Gavin Newsom’s term who was sworn in as California’s Lieutenant Governor.

While serving as Interim Mayor, Lee championed balancing the budget to keep San Francisco safe, solvent and successful, reforming City pensions, economic development, job creation and public safety as his top priorities. Mayor Lee has worked hard to keep the economy and economic recovery on track, create jobs for residents and everything that supports a thriving economic climate like parks, transit, housing, quality of life in neighborhoods and public safety.

In the current term, Mayor Lee will keep his focus on economic development and job creation, taking responsibility for building San Francisco’s future, taking responsibility for helping each other and making City government more responsive, efficient and accountable through innovation and technology. This is what it will take to keep San Francisco a thriving, diverse, dynamic city of great neighborhoods, but also one that is a global hub for innovation and new economy industries.

In 2010, Mayor Lee was appointed to a second term as City Administrator by Mayor Newsom and his appointment was confirmed unanimously by the Board of Supervisors. As City Administrator, Mayor Lee spearheaded government efficiency measures and reforms that reduced the size and cost of government, from reducing the vehicle fleet to consolidating departments and back office functions to save tax dollars. He implemented the City’s move to cleaner vehicles and an infrastructure to support electric vehicles and green City government. Mayor Lee also developed and oversaw implementation of the City’s first ever Ten Year Capital Plan to guide our capital priorities and infrastructure investment.

Working with the Department of Emergency Management, Mayor Lee has overseen the City’s disaster recovery and response planning efforts, bringing every department together to coordinate response and recovery for the next major earthquake or emergency. With the Fire Chief, Mayor Lee led efforts to work with PG&E to assess the City’s gas and electric infrastructure and ensure its safety and reliability. For the 2010 U.S. Census, Mayor Lee organized the outreach efforts to ensure our City continues to make progress on inclusion and cultural competency.

Mayor Lee first began working for the City and County of San Francisco in 1989 as the Investigator for the City’s first Whistle Blower Ordinance and has since served as the Executive Director of the Human Rights Commission, Director of City Purchasing, and Director of the Department of Public Works before he was first appointed as City Administrator in 2005.

Prior to his employment with the City and County of San Francisco, Mayor Lee was the Managing Attorney for the San Francisco Asian Law Caucus, for which he worked from 1979 to 1989. Mayor Lee was born in Seattle, Washington. He graduated Summa Cum Laude from Bowdoin College in 1974 and from Boalt Hall School of Law, University of California, Berkeley, in 1978. Mayor Lee is married to his wife Anita and is the father of two daughters Brianna and Tania.

Public Service History
2010 - Present Mayor of San Francisco
2005 – 2010 City Administrator
2000 – 2005 Director, Department of Public Works
1996 – 2000 Director, City Purchasing Department
1991 – 1996 Director, Human Rights Commission
1989 – 1991 Whistleblower Ordinance Investigator & Deputy Director of Employment Relations
CIE/USA-SF
Silicon Valley Entrepreneur of the Year Award

Ms. Weili Dai
Co-founder, Marvell Technology Group Vice President and General Manager of Communications and Consumer Business

Weili Dai is one of the most successful women entrepreneurs in the world today. Widely considered a technology visionary, she is the only woman co-founder of a global semiconductor company, and since it began in 1995, she has helped Marvell's rise to become one of the top semiconductor companies in the world. Ms. Dai's business acumen, strategic thinking, product leadership, endless passion and personal network have contributed greatly to Marvell's fast rise to success. Her close relationship with her customers and the foundation of the trust shared with them has given her a strong reputation for professionalism and integrity throughout the technology industry. Ms. Dai has served a pivotal role in creating some of the Company's most important strategic partnerships and under her leadership Marvell's technology has become an integral component of many of the world's most important products in enterprise, communications, mobile computing, consumer and emerging markets. She has also become a driving force in expanding access to technology in the developing world and an ambassador of opportunity between the US and China, particularly in the arenas of education and green technology. Ms. Dai has become a powerful advocate for the better use of technology to improve the human condition.

For her contributions to technology and society, Newsweek named Ms. Dai one of the "150 Women Who Shake the World" and was recently profiled by CNN International for the Leading Women Series: Leading the Female Tech Charge, Leading Women Principles Fair and Care, Educating for Future Success, and Leading Women Inspire Others. Additionally, Forbes Magazine lists Ms. Dai as one of the "World's 100 Most Powerful Women".

Ms. Dai has held a number of significant positions within Marvell since she co-founded the Company: she has served as Chief Operating Officer, Executive Vice President, and General Manager of the Communications Business Group. She has also been a Director of Marvell Technology Group Ltd. and Corporate Secretary of the Board. Prior to co-founding Marvell, Ms. Dai was involved in software development and project management at Canon Research Center America, Inc. Ms. Dai holds a Bachelor of Science degree in Computer Science from the University of California at Berkeley.

Ms. Dai is an active philanthropist, leading Marvell's global civic engagements, including major partnership with the One Laptop Per Child program (OLPC). She is a member of the executive committee for TechNet and Bay Area Council; sits on the board of the disaster relief organization, Give2Asia; and was named to the prestigious Committee of 100, an organization representing the most-influential Chinese Americans. In recognition of their generosity, Sutardja Dai Hall at her alma mater UC Berkeley was named for Ms. Dai along with her husband Sehat Sutardja, CEO of Marvell and Pantas Sutardja, CTO of Marvell. Sutardja Dai Hall is home to the Center for Information Technology Research in the Interest of Society (CITRIS). Celebrated as the glue behind her company, family and community, Ms. Dai is the proud mother of two sons who are Electrical Engineering graduate students at UC Berkeley; Christopher and Nicholas are currently Ph.D candidates.

Ms. Dai was selected as the first woman commencement speaker at the University of California, Berkeley, College of Engineering graduation ceremony on May 12, 2012.
Jay Wei
Founder & President/CEO

Jay graduated from Electrophysics department, National Chao Tung University in 1979. Jay went to Institute for Modern Optics, University of New Mexico, Albuquerque, NM to study Optical Engineering in 1982. Jay went to University of California at San Diego for Ph.D program in EECS for one year before started his professional career in Optical System Design.

Jay started his professional career with Optotech in 1985 to work on optical storage. In 1987-1991 Jay joined Kaiser Electronic to work on advanced optical design for head up display (HUD) and Helmut mounted display (HMD) for air fighter aircraft. In that period, Jay mastered the optical design skill for complicated optical system. In 1991 Jay joined Therma Wave to work on LCD panel inspection and repair instrument. Jay designed the first LCD laser repair system which was delivered to Toshiba, Sharp, LG, Samsung, and the first Taiwanese LCD manufacture Unipac Optoelectronics for production use. After exposed to three different industries in his early career what most interesting to Jay is to apply the technology for medical use. He joined Carl Zeiss in 1992 when a new image modality, Optical Coherence Tomography (OCT), was just invented from Massachusetts Institute of Technology. Jay started as a research scientist and then served as a director for advanced development to complete all phase OCT technology development in Carl Zeiss from 1992 to 2003. Today, OCT has become a standard care for eye examination.

Jay’s role in the history of OCT development is to develop prototypes for OCT clinic investigation, commercialized the OCT technology, and pioneered the current billion dollar OCT industry.

He left Zeiss in 2003, started Optovue to develop next generation OCT technology. His vision of the clinical use of OCT technology has resulted in the first FDA cleared Time-domain OCT in 1996 and Fourier-domain OCT system, the RTVue® in 2006. Jay has been granted over 30 patents in ophthalmic devices. He gains reputation as the pioneer of OCT technologist in the 20 years OCT evolution.

Jay has also co-founded the Crystalvue in Taiwan to develop and manufacture OCT and other medical devices. Their join effort has resulted a compact fundus camera which just cleared by FDA in January 2013.
Dr. Ma is a Professor of Astronomy at the University of California, Berkeley. She was born in Taipei, Taiwan, and attended the Fu Hsing School and Taipei First Girls’ High School before moving to the U.S. Dr. Ma received both her undergraduate and Ph.D. degrees in physics from the Massachusetts Institute of Technology. Before joining the faculty at UC Berkeley in 2002, she was a Fairchild Postdoctoral Fellow at the California Institute of Technology and an Assistant and Associate Professor of Physics and Astronomy at the University of Pennsylvania.

Dr. Ma's scientific contributions are in cosmology and extragalactic astronomy. She has studied the properties of dark matter and dark energy, the cosmic microwave background, galaxy formation and evolution, and recently, discovered the two most massive black holes ever found, each with a mass ten billion times that of the Sun. Among the awards Dr. Ma has received are the Maria Goeppert-Mayer Award from the American Physical Society, the Annie J. Cannon Award from the American Astronomical Society, the Lindback Award for Distinguished Teaching at the University of Pennsylvania, the Outstanding Young Researcher Award from the Overseas Chinese Physics Association, Fellowships from the Sloan and Simons Foundations, the Miller Professorship from the Miller Institute at UC Berkeley, and the election as a Fellow of the American Physical Society and the American Association for the Advancement of Science.

Dr. Ma is an avid violin player and began violin lessons at age four. She toured Europe and the United States with her youth symphony orchestra from Taipei during the summers when she was eight, nine, and fourteen years old, performing more than 100 concerts. After receiving the first prize in the 1983 Taiwan National Violin Competition as a high school student, she continued parallel studies in physics at MIT and music at the New England Conservatory in Boston. She has given numerous violin recitals and chamber music concerts in the Boston area and California. Her string quartet is working on a long term project of learning and performing the entire set of 16 quartets by Beethoven.
2013 CIE Annual Conference afternoon Technical Program

Theme: Mobile Life and Technology
Session Moderator: Dr. William Kao

Dr. William Kao received his BSEE, MSEE and PhD from the University of Illinois Urbana-Champaign. He worked in the Semiconductor and Electronic Design Automation industry for 30 years holding senior and executive engineering management positions at Texas Instruments, Xerox Corporation, and Cadence Design Systems.

Dr. Kao currently teaches Renewable Energy, Clean Technology and Business Sustainability courses at UC Santa Cruz Silicon Valley Extension.

Dr. Kao currently serves as an advisor and consultant for several local Clean Tech firms, and is a Clean Technology consultant for the China Government in the areas of Solar Energy, Energy Storage, Smart Grid and Green Cities. He consults for the Taiwan Ministry of Science and Technology in the areas of renewable energy, energy storage, and smart grid, and consults for the Malaysian Government on education planning for a new Knowledge Based Economy based on Emerging Technologies: clean tech, biotech, nanotech, wireless/mobile and cloud computing.

Mr. Emmett Kilgariff, Nvidia Corporation
Talk Title: “The role of the GPU in Mobile and the Cloud”

Abstract: The new computing paradigm involves mobile computers with many sensors and apps connected to data and computers on the cloud, yielding innovative new use cases and applications. Mr. Kilgariff will discuss the role of the GPU (Graphics Processing Unit) in this new paradigm, both on the mobile device, doing heavy lifting for the user interface, games and image processing, and also in the cloud, enabling data security and applications to run on any device.

Speaker Bio: Emmett Kilgariff graduated from Purdue with a BSEE in 1980. He is currently VP of GPU architecture at Nvidia Corporation, where he has worked for the last twelve years, and has been responsible for dozens of GPUs. Since graduating from Purdue, Emmett has worked at many different companies, including Sun Microsystems, SGI, 3dfx, Nvidia, etc.

Mr. Tao Li, Qualcomm
Talk Title: “60GHz technologies are coming to improve life quality”

Abstract: 60GHz is a globally available unlicensed frequency band (57GHz-66GHz). Among a few standards enabling operations in frequencies around 60GHz and capable of very high throughput, we expect 802.11ad/WiGig sponsored by Wi-Fi Alliance (WFA) and WiGig Alliance (WGA), will become the mainstream standard for 60GHz and will be widely supported by all major chip vendors and OEMs. Wi-Fi/WiGig 60GHz devices can transfer data and stream high definition videos from very short range to room range at multi-gigabit per second speed (up to 6.7Gbps) with high power efficiency, enabling new wireless connectivity, computing, multi-media and mobile applications.

Speaker Bio: Mr. Tao Li received his BSEE from Peking University in 1995, MSEE from Purdue University, West Lafayette in 1998, and MBA from UCLA Anderson Business School in 2008. Tao Li has worked in the wireless industry for over 13 years. He joined Qualcomm as a hardware engineer, participated and led several 2G/3G modems GPS receiver, and multi-mode mobile TV receiver development and commercialization. After transferring to product management, he managed the mobile TV product line, the integrated solutions and business partnerships of terrestrial/cable/satellite broadcast technologies for the media processors, and the business and product development for advanced Wi-Fi technologies including 802.11ad/WiGig. He currently has over 8 US and international patents (granted/pending).
Jessica Zhang, Dell Computer

**Talk Title: “The Explosive Growth of Mobile Devices and Applications – Challenges and Opportunities”**

**Abstract:** Ever-accelerating mobile and wireless communication technology progress is driving explosive adoption of mobile devices and applications at home and work. Popular trends such as the consumerization of information technology and BYOD (Bring Your Own Device) are further blurring business and personal boundaries. This talk will discuss the impact of these technology and business trends on the work/life environment that intimately affects our day-to-day life, some of the key challenges, as well as solutions such as coping with lost or stolen mobile devices, productivity improvement, and workflow efficiency that are pertinent to diverse industries across financial services, retail, healthcare, government and education.

**Speaker Bio:** Jessica Zhang is a seasoned product management and marketing professional with over 15 years of experience in the mobile and wireless communication enablement technology industry. She is currently a Sr. Product Manager for the K Mobile product line at Dell KACE which was successfully acquired by Dell for its leading industry solutions for managing massive fleets of computers, smart phones and tablets and a complex myriad of enterprise and personal applications. Prior to Dell, Jessica worked at Synopsys for seven years where she led a number of product launches and marketing initiatives with key players in the global wireless communications products supply chain.

Jessica was the Vice President of Mobile Internet at the Silicon Valley Chinese Wireless Technology Association (SVCWireless) and a founding member of the “SVCWireless Best Mobile App Competition” - a flagship start-up catalyst program promoting mobile app discoverability and monetization. Jessica holds an M.S. in Computer Engineering from the University of Cincinnati, OH, and an MBA from the Haas School of Business, University of California at Berkeley.

Ms. Alexis Medina, and Professor Scott Rozelle, Stanford University

**Talk Title: “Mobile Messaging for Health and Education: Using Technology to Penetrate China’s Rural Interior”**

**Abstract:** China’s poorest villages are often its most remote. Health and educational outcomes in these areas are the lowest in the nation, but rugged geography makes sustained social and educational campaigns difficult, if not impossible. The Rural Education Action Program (REAP) at Stanford University is experimenting with an alternative way of reaching these far-flung communities: mobile technology. Could text messaging be an effective tool to lift these areas out of poverty? To answer this question, we take a closer look at a sustained project to improve community health by teaching rural parents about good child nutrition—all via mobile technology.

**Speaker Bio:** Alexis Medina is the Program Manager for Health and Nutrition at the Rural Education Action Program (REAP) at Stanford University. She has been researching the economics of social issues in China for over ten years, and has co-authored several academic publications on the intersection of health and education in rural China. She has extensive experience in international program management and development-related fieldwork, including at the Harvard University School of Public Health. Alexis speaks fluent Mandarin, and holds a Master’s in East Asian Studies from Yale University.
Abstract: In recent years, mobile computing devices such as smart phones and tablets have become ubiquitous to fill in everyone’s life in the modern world. The industry dynamics have demonstrated large mid-to-entry smart phones/tablets business opportunities for SOC developers to catch. Overwhelming innovations and applications around the mobile platforms have become major driving forces for semiconductor companies to develop SOCs with multiple dimensions of technologies such as CPU, GPU, memory accesses, multimedia/image signal processors, cellular MODEMs and wireless/wired connectivity. It is well known that Power, Performance and Cost (PPC) have always been the three most important factors to consider for mobile devices, while full capabilities in developing advanced IC technologies such as fabrication process, packaging and innovative circuits/systems designs will continue to be the entrance ticket to play in the SOC business.

Speaker Bio: Dr. Kou-Hung Lawrence Loh received his Ph.D. degree in Electrical Engineering from Texas A&M University, College Station, Texas in 1991. After graduation, he joined IMP Inc., in Pleasanton, CA, as a Staff Engineer, where he contributed to magnetic recording read/write channel circuits and systems design. From 1993 to 1998, Dr. Loh was with Cirrus Logic Inc., Fremont, CA, where his last position was Director of Analog IC Engineering. In June 1998, Dr. Loh became an independent consultant, and later he founded Silicon Bridge Inc., where he successfully led a number of consulting/technology development projects with major US and Taiwan fabless semiconductor companies including MediaTek Inc., Altera Corporation, Faraday and VIA Technology, etc. In October 2004, Dr. Loh joined MediaTek Inc., Hsinchu, Taiwan, a world-leading fabless semiconductor company in wireless communications, connectivity, networking, optical storage and digital home/consumer business. From 2005 to 2010, he represented MediaTek and served for 5 consecutive years in ISSCC Technical Program Committee (ITPC). Dr. Loh holds the position as MediaTek’s Corporate Vice President and President/GM of MediaTek USA Inc. He is responsible for North America/Europe R&D/business operations as well as MediaTek’s global centralized engineering group in circuits, analog/mixed-signal and RF design for all product lines and technologies development.
Master of Ceremony
David Y. Fong, Ph.D

Dr. David Y. Fong’s accomplishment extends beyond engineering to music and community services. He graduated from National Taiwan University with a BSEE degree and from University of Cincinnati with M.S. and Ph.D. degrees. After his graduate study, he served as an assistant professor in Department of ECE at Clarkson University, Potsdam, New York. He later joined Lockheed Palo Alto Research Laboratories as a staff scientist, Photon Dynamics as a program manager, KLA-Tencor Corporation as a project manager, e-Commerce Technology as a VP of Engineering, and Marena System Corporation as an acting VP of Engineering. In 2002, he founded Forte Connections and has since served as the president. He is also a co-founder and senior VP of CITS Group.

Dr. Fong is a respected chorus conductor in the Bay Area. His knowledge in choral music is in the level of a professional choral music conductor. He served as conductor of Ching Ching Chorus from 1990 to 2010 and the music director and conductor of National Taiwan University Alumni Chorus in Northern California since 2005. He also served as the presidents of Bridge and Gate Productions in 1991-1994 and Dimension Performing Arts in 1995-2000, both non-profit organizations promoting Chinese performing arts and culture.

Dr. Fong has contributed significantly to CIE-SF chapter serving as president, chairman, and board member. He promoted the technological exchange between the US and Taiwan through METS serving as the US Committee chair in 2006, and between the US and China through SATEC serving as the US Committee chair in 2012. He was the recipient of CIE Technology and Humanities Award in 2010.

In September 2012, he was accorded the “State Friendship Award” by the Chinese Government, recognizing his contributions to the advancement of technology in China

Christie Wang earned a B.A. English from Sun Yat-Sen University, Guangzhou, China, a Master of Education from Boston University and a J.D. from Northwestern School of Law. At Northwestern, she served as the first Chinese Editor-in-Chief, Northwestern Journal of International Law and Business, supervising more than sixty journal members and editors. Under her leadership, the Journal co-sponsored the biggest International Taxation Annual Conference in the country.

Christie is currently an In-house Counsel at Hewlett Packard Company based in Palo Alto, CA where she was exposed to various areas of law. Prior to that, Christie summered at O’Melveny & Meyers, LLP, Palo Alto office, and at K&L Gates, LLP, Seattle office as the receiver of K&L Gates Diversity Fellowship. While in Silicon Valley, Christie gave a series of legal seminars focusing on start-up company business and legal issues as community service.

In college, Christie was a senior instructor at New Oriental Education and Technology Group, the largest educational company in China. Later, she co-founded and managed a private high school licensed by Ontario Ministry of Education, Toronto, Canada.

Born and raised in China and having immigrated to Canada and U.S., Christie speaks English, Mandarin, and Cantonese. Christie has been a bilingual MC/hostess for various conferences and expositions, and performed as a singer in different shows.
Master of Ceremony
Emily Song

Emily Song is a Product Design student at Stanford University. She is designing toys for children with autism, and will start a crowd funding campaign for her designs in the spring. In her spare time, Emily enjoys swing dancing, silversmithing and figure skating. She has worked as a TV hostess at China Central Television (CCTV) for 4 years.

Honor Guest
Benny Yee

Mr. Yee immigrated to San Francisco after serving as a second lieutenant in the Air Force of Taiwan.

He has been a real estate broker and developer in the greater bay Area for more than 4 decades. He owns and operates Benny Yee & Associates Real Estate, a private real estate investment, brokerage and property management company located in the Sunset district of San Francisco.

As a dedicated community activist, Mr. Yee has served on numerous boards, commissions and committees with the federal, state government and the City and County of San Francisco. Highlighting his involvement in the City and County of San Francisco, he served as a Commissioner on the San Francisco Redevelopment Agency Commission for 13 years and was twice elected by his fellow Commissioners as its president.

Mr. Yee was first appointed by former Governor Jerry Brown to the California Contractors State License Board in 1975, then to the Task Force on Housing Affordability, and then Council on Economic Development through 1983.

Governor George Deukmejian appointed Mr. Yee as an Advisor and reappointed him to the Contractors State License Board in 1984. In 1986, Mr. Yee was elected as Chairman unanimously by his colleagues as its first Asian Chairman of the Board in its 90 years history. He is still the first Asian Chairman of the Contractors State License Board as of March of 2013. He also served as a Member of the US District Court, Merit Selection Panel for Northern California by the Chief Judge of Federal Court from 2003 to 2008.

He has served under Governors Jerry Brown, George Deukmejian and Pete Wilson as their Advisors and commissioners at the same time.

Prior significant civic endeavors include the following: at the state level serving as Advisor to Governor Pete Wilson and appointment as a Member of Governor Pete Wilson’s Transition Advisory Council, In San Francisco, Mr. Yee was Chairman of the San Francisco-Taipei Sister City Committee appointed by Mayor Dianne Feinstein from 1984 to 1988. He also served as Chairman of the Chinese American Republican Club of San Francisco, Director of the San Francisco Association of Realtors, Chairman of the Chinese American Political Outreach Program and as an advisor to many Chinatown associations. He has been a long time member of the Chinese American Citizens Alliance since 1976.

Mr. Yee was appointed as commissioner to the California Small Business Board on June 6, 2011 by the California Senate Rules Committee after terming out from serving 13 years on the California Commission on Aging. San Francisco Mayor Lee appointed him as his Special Advisor to the office of the Mayor for Sino Trade and Investment, Southern China, PRC in June 2011 and most recently appointed him as Strategic Advisor of ChinaSF in May 2012.

He has been married to his wife, Alice for over forty years, and they have two daughters and two grand children who live in London, England.
2013 CIE Annual Conference Scholarship Awards

Albert Zhao
Father: Ji Zhao
The Harker School, Grade 11
Academic and extracurricular achievements

- Qualified for AIME twice (9th and 10th grade)
- 7th place in 2013 Stanford Math Tournament Calculus Test
- Attended AwesomeMath
- Member of Math Competitions Group
- Took US Chemistry, Physics, Biology, and Computing Olympiads
- Second place in state in JETS Competition (team competition)
- Research paper on Dependence of Galvanic Cell Lifetime on Salt Bridge Thickness, presented poster at Harker Research Symposium
- Attended Discovering Medicine at Stanford
- Group Leader in P2P Microfinance Winter Rural Alleviation Program

Marc Cunningham
Parent: Parent: Rossana Chion-Cunningham
Lowell High School, grade 11
Academic and extracurricular achievements

- Volunteer with the National Park Service (30+ hrs)
- Speech & debate: Original Oratory, Parliamentary Debate (Automatically Qualified to California State Tournament, Ranked 6th in State of California, 2nd Place at Martin Luther King Jr. Invitational)
- Director of Parliamentary Debate- Lowell Forensics Society
- Member of the Lowell Varsity Fencing Team and Golden Gate Fencing Center (2012 Junior Olympian)
- Member of Junior Statesmen of America
- Honor Roll Recipient 9th, 10th, and Fall of 11th Grade
- MSJ Parent Faculty Association: Senior Board Member
- California Youth Symphony: Concertmaster (Wind Ensemble II)-Clarinet

Eric Kao
Parent: Terrance Kao
Saratoga High School
Academic and extracurricular achievements

- Over 250 hours of community service
- 2011 Summer Intern: Speaker Pro Tempore Fiona Ma
- 2012 Summer Intern: State Senator Jim Beall
- Vision New America Leadership Program Class of 2012
- Saratoga Tzu Chi Club: Vice President
- Saratoga Television Broadcast: Producer
- Helping Hand Tutoring Club: Co-Founder
- California Philharmonic Youth (Senior) Orchestra & Silicon Valley Volunteer Orchestra: First Clarinet
Midori Hsian - Der Chen
Parent: Parent : Horng-Churung Chen
Ruth Asawa San Francisco School of the Arts, Grade 11
Academic and extracurricular achievements
- Board of Advising Youth (BAY) sponsored by the SF Public Library (30+ hours)
- Tap Teacher and Assistant at the Geary Dance Center
- Teen Advocates for Science Communication (TASC), on the Leadership and Design Team (LDT) (50+ hours)
- Ta Kioh Buddhist Temple Great Enlightenment Chinese School volunteer teacher’s assistant (30+ hours)
- CSF (20+ hours)
- Young at Arts Writing Competition: high school nonfiction (3rd place), high school fiction (1st place)
- Publications: Heavy Hands Ink, Eunoia Review, Teen Ink, Weirdyear, 69 Flavors of Paranoia, Umläut, Poetry Now: Young Voices, and Thickjam (various poems and short stories)

Samantha Wu
Parent: James Wu
Homestead High School, Grade 11
Academic and extracurricular achievements
- WCEO Volunteering: teacher assistant (480 hrs.)
- Speech & debate: Public Forum competitor
- Speech & Debate Club: Treasurer
- National Art Honor Society: Treasurer
- Homestead Chamber Orchestra
  - Unanimous Superior CMEA Orchestra Festival 2011, 2012
- Homestead Symphony Orchestra
  - Unanimous Superior CMEA Orchestra Festival 2011, 2012
- El Camino Youth Symphony (Sinfonietta) – 1st violin
- Future Business Leaders of America
  - Introduction to Business Communication Bay Section Champion
  - Introduction to Business, Communication 2nd place CA SLC
- Mathematics Department Award, 2010
- Green and White Award: Biology, English Literature, World History

Jessica Chan
Parent: Kevin Chan
SF Sacred Heart Cathedral Preparatory, Grade 11
Academic and extracurricular achievements
- Active Participant in CSF (California Scholarship Federation)
- Captain of the Sport’s Medicine Club
- First Aid, CPR, and AED certified for 4 years
- Active Member in the Block Club, Earth Action Club, and Lasallian Vincentian Youth
- Varsity Golf Team Member
- 6 Years of Ballet Training
- 2 Time Gold Medalist in the Showstopper American Dance Championships, Regional
- CIE Talent Show & Annual Conference Entertainment program participant
- Academic Department Award for English and LOTE (Language Other than English)
- 1st Place from West Portal Lutheran School Science Project in Human Studies
- 3rd Place from Randall Museum Science Fair
- Merit Award from 56th Annual San Francisco Bay Area Science Fair
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Please visit CIE-SF website: http://www.cie-sf.org/ for detailed class information.
Pre-register at http://www.eventbee.com/v/cieshortcourse2013
Any questions, please contact Tien-Chun Yang at tcyang@sbcglobal.net

EECS1: Flexible Electronics – The Next Wave of Consumer Electronics?
Dr. Tsung-Ching (Jim) Huang

Abstract
Flexible electronics are emerging as an alternative to conventional Si electronics for large-area flexible display and sensor. Made with thin and light-weight material, flexible display can be 100X lighter and 10X cheaper than conventional LCD display. The major goal of this short course is to provide an introductory content about flexible electronics. Recent advances of flexible electronics and their applications will also be discussed. In-depth topics include: 1) reliability simulation framework that can predict the degraded TFT circuits’ performance under bias-stress for displays, 2) Pseudo-CMOS cell library that can make TFT circuits operable under low supply voltage and has post-fabrication tunability for performance enhancement, and 3) case studies for energy harvesting and healthcare applications.

Biography
Dr. Tsung-Ching (Jim) Huang received his B.S. degree in Electrical Engineering (EE) from National Chiao-Tung University (NCTU), Taiwan, and his M.S. and Ph.D. degrees in EE and his M.A. degree in Economics from University of California at Santa Barbara (UCSB). He worked as a summer-intern in the Flexible Electronics Technology Division (FETD) of the Industrial Technology Research Institute (ITRI), Taiwan, from 2006 to 2009. After graduation, he was a post-doctoral research associate in University of Tokyo, Japan, for his research on flexible and organic electronics from 2009 to 2011. Dr. Huang was the recipient of Best Paper Award from International Symposium on Flexible and Display (ISFED) 2007, and the co-receipt of Best Paper Award from International Electron Device Meeting (IEDM) 2011. He has more than 25 technical publications in premier IEEE/SID conferences and journals.

EECS2: Optical Interconnects – A Potential Solution to Future High-Performance Computing Systems
Dr. Chin-Hui Chen

Abstract
As Moore’s Law scaling continues to push interconnect bandwidth densities ever higher at all levels within high-performance computing systems, optical interconnects have been widely proposed in order to overcome the bandwidth and power consumption bottlenecks of copper interconnects. The growing interests in optical interconnects have given
rise to “computercom” as a distinct market sector, along with the traditional datacom and telecom markets. This tutorial will overview the technology basics, key requirement and tradeoffs, and then discuss the state of the art and future challenges in this field to show the potential for bringing high bandwidth as close to the processors as possible.

Biography

Dr. Chin-Hui Chen is a postdoctoral fellow at Hewlett-Packard Laboratories. Her research interests include III-V/silicon photonic integrated circuits for applications in optical communication and interconnect. Dr. Chin-Hui Chen received her B.S. in Electrical Engineering from National Taiwan University, Taiwan, and her M.S. and Ph.D. in Electrical Engineering from the University of California, Santa Barbara. She was a post-doctoral researcher associate in Nippon Telegraph and Telephone Corporation, Japan, where she worked on InP-based photonic crystal lasers for high-speed and low-power optical interconnect. She has published over 30 technical papers in IEEE/OSA journal and international conferences. She is a member of IEEE and OSA.

EECS3: High Speed Serial Links: from Ethernet to Thunderbolt

Dr. Haw-Jyh Liaw

Abstract

Many electronic interfaces have changed from parallel buses to serial links. For example, PCI-E, SATA, Rambus memory, and FB-DIMM are cases of parallel interfaces turned into serial. On the other hand, the traditional serial links; such as Ethernet, Sonet, Fibre Channel, and USB; all are being pushed to higher and higher speed. This presentation covers the evolution of high speed serial links in the past decade. Examples derived from the speaker’s experience with 10G Ethernet will be used to illustrate the design considerations between circuit, digital signal processing, and physical media.

Biography

Dr. Haw-Jyh Liaw received B.S. degree from the Department of Electrical Engineering, National Taiwan University; M.S. and Ph.D. degree from the Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign. From 1996 to 2001 Dr. Liaw was with Rambus Inc., worked on Rambus memory interface and high speed backplane links. He co-founded Aeluros Inc. in 2001, where he was in charge of signal integrity, packaging, and system integration of CMOS high speed networking devices. Aeluros became Physical Layer Product Division of NetLogic Microsystems in 2007. NetLogic was acquired by Broadcom in 2012. Dr. Liaw holds 46 US patents and patent applications. He has numerous publications on signal integrity and high speed system designs, including two outstanding papers recognized by IEEE ECTC and DesignCon.

EECS4: EDA Fundamentals and Industry Trend Overview

Dr. Henry Jyu

Abstract

EDA has huge impacts on any electronics from computer chips, cellular phones, pacemakers, controls for automobiles and satellites to the servers, routers and switches that run the Internet. Everything made by the nearly $1 trillion electronics industry results from designers using EDA tools and services. This short course gives an introduction of EDA. What is EDA? What are its role and applications in the industry? Some in-depth analysis will be given on the MOS device technology advancements and circuit simulation technology.

Biography

Dr. Henry Jyu has been working in the EDA industry since 1994. He has worked for EDA startups EPIC and Nassda as well as big company Synopsys. He is currently a R&D Director at Analog Mixed-signal Group of Synopsys. His main responsibility is on technology and product development of circuit simulation, reliability analysis and mixed-signal verification. Dr. Henry Jyu received his Ph.D. degree in Electrical Engineering of Princeton University, and his B.S. degree in Electrical Engineering of National Taiwan University, Taiwan. He received the Best Paper Award in ICCD and held three US patents.
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