



Program (1/2)

Main Forum (12:00 to 1:45 pm) -- invitation only [Room: Champagne I, II]

Moderator: Robert Eberhart, Research Fellow, SPRIE, Stanford University

12:00 - Lunch:

12:40 - 12:55 **Opening Remarks:** Johnsee Lee, Ph.D., President, ITRI

12:55 - 1:35 **Keynote Speech:** Richard Dasher, Ph.D., Executive Director, CIS, Stanford University

"What's Next after the Storm: The Impact of the Current Economic Crisis on R&D Globalization"

1:35 - 1:45 **Conclusion**

Focus Sessions (2:00 to 4:45 pm) -- invitation only

#1 Medical Devices [Room: Krystal B]

Chair: Gwo-Bin Lee, Ph.D., Deputy General Director, Medical Device Technology Center, ITRI

2:10 - 2:30 **MD-1** Marietta Wu, Ph.D., General Manager, Greater China & Director, Venture Capital, Burrill & Co.

*"A Paradigm Shift in the New Global Economy -
Implications on Investing in the Medical Devices Sector"*

2:30 - 2:50 **MD-2** Gwo-Bin Lee, Ph.D., Deputy General Director, Medical Device Technology Center, ITRI

"Microfluidics and Its Applications for In-vitro Diagnosis (IVD) Devices"

2:50 3:10 **MD-3** Winston Ho, Ph.D., President & CEO, Applied BioCode

"Digital Magnetic Beads for Multiplexed Molecular Diagnostics"

3:10 - 3:30 **MD-4** Chung-Cheng Liu, Ph.D., VP & General Director, Biomedical Engineering Lab, ITRI

"Molecular Technology for Personalized (Precision) Medicine Applications"

3:30 - 3:45 **Break**

3:45 4:45 **Panel Discussion: Medical Device Business and Investment Opportunities**

Moderator Marietta Wu, Ph.D., General Manager, Greater China & Director, Venture Capital, Burrill & Co

Panelists: Peter J. Fitzgerald, MD, Ph.D., Professor, Medicine (Cardiology) & Engineering (Electrical) & Director, Center for Cardiovascular Technology, Stanford University Medical Center

Wei Zhou, Ph.D., J.D., Partner, Wilson Sonsini Goodrich & Rosati

Gwo-Bin Lee, Ph.D., Deputy General Director, Medical Device Technology Center, ITRI

Roxanne Duan, Ph.D., VP of Research, Adlyfe

Peter S. Wyles, VP & General Manager, Diabetes Care - A1CNow+, Bayer HealthCare LLC

Focus Sessions (2:00 to 4:45 pm) -- invitation only

#2 Green Energy [Champagne III]

Chair: Simon Tung, Ph.D., VP & General Director, Energy and Environment Research Lab, ITRI

2:10 - 2:30 **GE-1** Matan Friedman, Senior Associate, Bessemer Venture Partners

"Trends and Opportunities in Cleantech Investing"

2:30 - 2:50 **GE-2** Simon Tung, Ph.D., VP & General Director, Energy and Environment Research Lab, ITRI

"ITRI Current Initiatives and Future Strategy on Green Energy Technology Development"

2:50 3:10 **GE-3** Erfan Ibrahim, Ph.D., Technical Executive, Power Delivery & Utilization, EPRI

"EPRI's Smart Grid Vision & AMI/HAN Research Overview"

3:10 - 3:30 **GE-4** Alex Peng, Ph.D., Deputy General Director, Material and Chemical Research Lab, ITRI

"Challenge and Application of Portable Fuel Cell and Power Lithium Battery"

3:30 - 3:45 **Break**

3:45 4:45 **Panel Discussion: Green Energy Business and Investment Opportunities**

Moderator Simon Tung, Ph.D., VP & General Director, Energy and Environment Research Lab, ITRI

Panelists: Matan Friedman, Senior Associate, Bessemer Venture Partners

Erfan Ibrahim, Ph.D., Technical Executive, Power Delivery & Utilization, EPRI

Hun-Chi Lin, Ph.D., CEO, GTB Power Enterprise

Alex Peng, Ph.D., Deputy General Director, Material and Chemical Research Lab, ITRI

Robert Weiss, CTO, DayStar Technologies



Abstracts

Keynote

Richard Dasher, Ph. D, Executive Director, CIS, Stanford University

“What’s Next after the Storm: The Impact of the Current Economic Crisis on R&D Globalization”

Globalization has been one of the most pervasive aspects of business change since the beginning of the Internet and information technology revolutions a generation ago. The trend toward globalization has expanded upstream in the supply chain from global sales and distribution to offshoring of business processes. In recent years a trend toward global-scale R&D can likewise be seen in the widespread interest in open innovation as well as in the establishment of overseas R&D operations by earlier stage (start-up) companies as well as by multinationals. One of the immediate effects of the recent economic downturn, however, has been a sharp drop in intra-Asia and worldwide exports and an increased focus in China and India on developing domestic markets. This presentation will examine how these trends are likely to impact the globalization of R&D. What are the implications for regions that are characterized by clusters of R&D institutions?

Focus Session: Medical Devices

MD-1 Marietta Wu, Ph.D., General Manager, Greater China & Director, Venture Capital, Burrill & Co.
“A Paradigm Shift in the New Global Economy - Implications on Investing in the Medical Devices Sector”

The global financial crisis has affected all components of the VC value chain. Sea changes to the financial industry are inevitable and are already happening. Where will the new funding sources come from? How do VCs manage their portfolio companies through this trialing time? Where will companies find exits? Will global arbitrage be a possible solution to this financial crisis?”

MD-2 Gwo-Bin Lee, Ph.D., Deputy General Director, Medical Device Technology Center, ITRI
“Microfluidics and Its Applications for In-vitro Diagnosis (IVD) Devices”

In the past decade, microfabrication of miniature fluidic devices has attracted considerable interest and made substantial impacts. One of the most promising applications for microfluidic devices is their biomedical applications. In this talk, we will first make a brief introduction about microfluidic technology developed at MED/ITRI and also NCKU. Their potential applications for IDV devices will be the focus of this talk. Several compact point-of-care devices have been developed for detection of metabolic and infectious diseases. We will also talk about the potential collaborations with biomarkers and assays companies regarding the applications of the developed platform technology.



MD-3 Winston Ho, Ph.D., President & CEO, Applied BioCode

"Digital Magnetic Beads for Multiplexed Molecular Diagnostics"

Barcoded Magnetic Bead (BMB) married the semiconductor technology and biotechnology into a breakthrough bioassay platform that can significantly multiply the throughput. Its flagship product, BMB microbead, has the most highly multiplexed barcodes (3 - 1,024) in the world. Therefore, it has the ability to easily and reliably analyze hundreds of targets in one test tube or one microwell for molecular (protein and nucleic acid) diagnostics and molecular medicine applications. Because its all-in-one assays property, it has the potential to set the "Gold Standard" for molecular assays and clinical diagnostic industry. The technology not only offers multiplexity, but also saves labor, time, reagent, and consumable. Applied BioCode focus its efforts on the Immunoassay and Molecular Diagnostic test segments within the market where high value, high-return applications include test assays for Infectious Diseases, Pharmacogenomics, Cancer, Genetic Screening, Human Leukocyte Antigen (HLA), Autoimmune Disease, and etc.. These segments generate annual revenues of approximately \$6.0 billion, each with double-digit growth rates over the past few years.

MD-4 Chung-Cheng Liu, Ph.D., VP & General Director, Biomedical Engineering Lab, ITRI

"Molecular Technology for Personalized (Precision) Medicine Applications"

Scientific progress in imaging, genomic technology, molecular medicine, and biochemistry are driving disease management along the spectrum from intuitive medicine toward precision medicine. These changes will impact the medical practice and the business model of healthcare industry in the near future. One of the major changes will increase of the relative value of diagnosis in comparison to treatment. Cancer diagnosis and treatments are currently in the middle of this revolution. In this presentation, I will showcase two examples from ITRI: lead drug molecules for effectively treating AML (Acute Myelogenous Leukemia) by targeted therapy and its companion diagnostics, and a prognostic tool for lung cancer patients after receiving surgical procedures by micro-array platforms and an innovative algorithm. Both products and their associated technology platforms are available for partnering.



Focus Session: Green Energy

GE-1 Matan Friedman, Senior Associate, Bessemer Venture Partners
"Trends and Opportunities in Cleantech Investing"

In this presentation, Matan will speak about the impact of:

- the credit crisis (on project finance),
- the stimulus package (on smart grid, transportation on energy efficiency),
- price of oil (on biofuels)
- other smaller trends such as water desalination growth etc'.
- what's 'hot' and what's 'not' from the vc perspective

GE-2 Simon Tung, Ph.D., VP & General Director, Energy and Environment Research Lab, ITRI
"ITRI Current Initiatives and Future Strategy on Green Energy Technology Development"

Today we face the enormous energy and environmental challenges to our economy and the global climate change. Recently we have witnessed our worst economy storm and leaving us vulnerable to instability of our energy security and our society. In addition, we also realized the potentially adverse effects of global greenhouse gas emissions and their impact. Under these climate change impact, all global countries launched more green energy initiatives including investment in distributed energy system, advanced metering infrastructure, green building reducing their energy consumption, and the renewable energy development program. All green energy research programs are rolling out to make significant progress toward our energy saving and climate change goals through a continued process of energy efficiency improvement, environmental mitigation, adaptation measures, and development of renewable energy.

Global industry is facing higher energy costs, tight legislation pressure, and increasing green environmental awareness to meet the world's demand for energy sustainability. Industry, research organization and policy makers now also recognize climate change as the most significant environmental, economic and security threat facing humanity. Various innovative green energy solutions have been put forward in helping to respond to the global challenge of climate change. There is a high potential for green energy development with substantial economic and environmental payoffs. In this paper, the ITRI current initiatives in the area of green energy development will be presented, including the distributed energy system, advanced metering infrastructure (AMI), the next generation fuel cell and hydrogen storage system, bio-waste to energy research, and the renewable energy development.

In the second part of this paper, we will identify the ITRI future role in responding to energy sustainability and climate change issues. Realization of the tremendous benefits from the intelligent transportation, low-carbon community, and advanced metering infrastructure will be our nation green energy opportunities in the near future. We will also present our future strategy according to our designed framework, entailing convergence of green energy opportunity with low carbon technology.



GE-3 Erfan Ibrahim, Ph.D., Technical Executive, Power Delivery & Utilization, EPRI
"EPRI's Smart Grid Vision & AMI/HAN Research Overview"

If the US electric sector could achieve a very aggressive target to increase the generation of renewable energy to 100GWe by 2030, then the technical potential for CO₂ emissions can sharply reduce from 3100 to 1500 million metric tons. It is necessary to create a high efficiency electricity network of the future by integrating four evolving infrastructures which are Low-carbon generation, Smart grids, Local energy network and Electric transportation. I will be providing a synopsis of why we are developing Smart Grids in the US and what EPRI is doing in its research portfolio to support the Smart Grid Initiative. I am also providing an overview of the HAN interoperability work going on in the industry under the ZigBee+HomePlug Liaison.

GE-4 Alex Peng, Ph.D., Deputy General Director, Material and Chemical Research Lab, ITRI
"Challenge and Application of Portable Fuel Cell and Power Lithium Battery"

Through many years of assiduous research and development in the field of portable fuel cell and power lithium battery, Taiwan has built a competitive R&D and application platform, which welcomes cooperation to all industry people and academia researchers who are interested in the application of notebook PC, smart phone, light electric vehicle (LEV) and electric scooter.

In concerning of environment and energy consumption, Taiwan's government is launching so called "silent revolution", which is driving the local electric scooter market to the volume of 160 thousand with infrastructure building and financial support. Power Lithium battery is regarded as the heart of such LEV and will be the focus of future R&D. Taiwan has successfully developed a global leading e-scooter testing standard- TES (Taiwan E-scooter Standard) that ensures the implementation of high safety Lithium battery. The advanced materials development is important to sustain the leading-edge technology in power lithium battery, which includes: high safety thermal run-away inhibitor, which prevents internal short and nail penetration casualty resulting in smoke and explosion. A novel Carbon Nano Channel has been introduced in cathode material-LiFePO₄ to reduce electron resistance from 10⁻⁹ to 10⁻² for safety lithium battery, with high rate charge and discharge property.

The portable fuel cell development at ITRI has successfully integrated Direct Methanol Fuel Cell (DMFC) with notebooks, smart phones and hand held devices. Pure methanol of 3 gram can generate 4Wh which equals to 1 pack of Li-ion battery. In the development of passive DMFC, ITRI has autonomous control through novel MEA and stacking design, which allow water back diffusion from cathode to anode. ITRI will continue its effort in developing low cost and high performance MEA and DMFC system.

We sincerely welcome further exploration of portable fuel cell and power lithium battery market together with ITRI. Joining ITRI team and forming patent portfolio with ITRI are also welcome. With our joint efforts, we may create high safety lithium battery for green transportation and DMFC for the power of next generation portable product.



Tech&Biz Showcase – Track 1

S1-1 Herb Lin, President, ITIC

"Advancing Innovation and Entrepreneurship Beyond Technology"

Investment into innovation maintains to be the fertile soil to help germinate long-term industry growth even in the midst of the current economy changes. As an investing arm of ITRI, ITIC has been instrumental in leading Taiwan's initial ventures into technology-based businesses, and continuously working with entrepreneurs to achieve their goals through its extensive resources in industry. This presentation will provide the insights on global financial market, the role of Taiwan industry, ITIC investment activities and the advantages of its numerous supports which entrepreneurs can take to advance their venture towards the next great success.

S1-2 John Chen, Ph.D., VP & General Director, Display Technology Center, ITRI

"e-Paper - the Technology and Applications"

The display programs in ITRI are driven to meet the need of future mobile lifestyle, and to answer the call for 'Greener' panel, i.e. energy efficient and environmentally friendly. Accordingly, our present development work encompasses energy saving measures and mobile devices. For energy saving applications, DTC is developing the technology of roll-to-roll coatable, bistable cholesteric liquid crystal display (Ch-LCD). For mobile devices, DTC is inspired to deliver a rollable AMOLED, where the development activities are mainly flexible substrate, backplane, passivation and encapsulation technologies.

S1-3 Andy Wu, Ph.D., Deputy General Director, SoC Technology Center, ITRI

"Android SoC Platform Techniques and Business Opportunities"

During the past years, the global embedded software market has grown rapidly, while a main trend has emerged to integrate communication, computing, TV, and broadcast network into intelligent handheld devices. The Android has been widely adopted by the worldwide intelligent mobile industry since its initial proposal by Google in 2007. Android adapts the Linux OS and provides the execution environment for Java applications. Besides, it also offers an open source platform and defines the interfaces between the software layers in its software stack, hence providing hardware and software suppliers of various disciplines an environment for their further development and a new business opportunity. The key feature of Android is the capability of hardware and software integration, and it covers Android HAL and application platform development, Android performance and library customization for software/hardware module interfaces including OpenMAX, OpenGL/ES, and SGL, and Android dynamic and intelligent power management technologies. Besides, Google sets up and maintains an "Android Market" website, like "iPhone App Store", to provide the users with more applications and services.

S1-4 Manas Saksena, Ph.D., Senior Technologist, Marvell Semiconductors

"Enabling Technologies for a new Era of Smart Connected Devices"

Smart, wireless, Internet connected devices are finally becoming a reality, and bringing in business opportunities in areas such as green energy, healthcare, asset management, industrial automation, and consumer devices. In this talk, I will give a brief overview of the enabling technologies that are fueling the development of low-cost, low-power, small form-factor devices, that are being used in conjunction with Internet and Web-based software to bring about innovative services to consumers and businesses.

S1-5 Chris Cytera, Product Line Director for FlexiTV, Mirics

"Mirics FlexiTV™ -Global Broadcast Reception for PCs, Netbooks and MIDs"

In this presentation, Chris will talk about Mirics FlexiTV™, a multi-standard broadcast TV receiver for notebook PC and other portable processor-based devices. Using the main CPU for demodulation, any analog or digital TV and radio standard can be received, irrespective of whether the modulation scheme is based upon OFDM, VSB, AM, FM or other method. This allows maximum standards flexibility, and a single hardware design for worldwide terrestrial TV and radio reception. FlexiTV™ uses a unique reconfigurable RF front-end with digital interface called SmartTuner™, such as the MSi3101 RF-to-USB solution. Both SmartTuner™ and the software demodulation technology are developed in-house by Mirics, resulting in a highly optimized multi-standard PC TV and radio receiver system at the lowest possible cost.

S1-6 Tsun-Chieh Chiang, Ph.D., Deputy Director, Division of Communication Systems, Information and Communication Research Lab, ITRI

"A DSRC, WiMAX and PND Integrated Solution with MTWAL"

DSRC (Dedicated Short Range Communications) is a short- to-medium range communication technology that will play a major role in next-generation vehicular telematics for vehicle-to- roadside and vehicle-to-vehicle communications. WiMAX (Worldwide Interoperability for Microwave Access) is considered as a "4G" candidate of next-generation wireless broadband technology. It is also seen as one of most suitable technologies in telematics for vehicle-to- infrastructure communications.

ITRI has well developed WAVE (Wireless Access in Vehicular Environment)/DSRC and WiMAX technologies. To integrate these two communication technologies with a PND (Portable Navigation Device), ITRI has further developed its own OBU (On Board Unit) and RSU (Road Side Unit). In addition, ITRI has a WiMAX test bed, i.e. MTWAL (M-Taiwan WiMAX Application Lab), located in the ITRI Chung-Hsin campus. Inside the campus, four RSU's are installed to construct a telematics experimental environment. Several telematics applications such as congestion avoidance and emergency alert were applied and demonstrated at CVPC (Connected Vehicle Proving Center) in Ann Arbor, Michigan, last year. ITRI continues to put R/D effort into telematics to advance cutting-edge technologies. Furthermore, ITRI will cooperate with worldwide ICT leading companies to enable a productive contribute to the telematics industry.



S1-7 Michael Cottle, VP of Worldwide Sales, deCarta
"The Next Wave of Connected Navigation and LBS Services for PNDs and Mobile Devices"

In this presentation, Michael will explore some of the innovative Location Based Services that are emerging on the market.

Tech&Biz Showcase – Track 2

S2-1 Chung-Wen Lan, Ph.D., General Director, Photovoltaics Technology Center, ITRI
"Photovoltaic Research and Development at Photovoltaics Technology Center of ITRI"

For the past three years, tremendous effort has been made at Photovoltaics Technology Center (PVTC) on several key PV technologies ranging from wafer-based and thin film solar cells to PV modules. Significant progress has been made including the nano-textured black silicon, micromorph silicon tandem thin film, and dye-sensitized solar cells. For example, the light reflectance on silicon surface has been reduced to 3% for the wavelength of 300-900nm by PVTC's novel wet processing. With the Double Braggs Reflector (DBR), the efficiency of PVTC's silicon tandem solar has reached 12%. Transparent thin-film solar module up to 4% with a high rendering index has also been fabricated. Besides, novel dyes have been developed. The dye cell has reached a higher than 10% efficiency, while the module has reached an over 8% efficiency with good stability. As part of the outreaching program, PVTC is seeking partners for collaboration and investment, both on research and business development.

S2-2 Jon Hsu, Ph.D., Deputy General Director, Electronics and Optoelectronics Research Lab, ITRI
"Briefing of Electronics and Optoelectronics Research Laboratories (EOL) of ITRI"

Technology advances in electronics and optoelectronics have played significant roles in the industrial development in Taiwan. Both sectors currently account for notable shares of respective markets worldwide. The Electronics and Optoelectronics Research Laboratories of the Industrial Technology Research Institute (EOL/ITRI) provide a strong support to both sectors, starting from technology development all the way to innovation commercialization.

For over 30 years, the research team at EOL has assisted the industry in Taiwan achieve remarkable contributions. DRAM, IC design, Mask ROM, foundry, testing, packaging, LED, LCD display and laptops are just a few examples. To accelerate the advancement of further technology development, EOL undertakes a major mission to develop next-generation 3D IC, flexible electronics, opto-semiconductor light source and applications, and 3D interactive image technologies. Leveraging the allied resources from government, industry and academia worldwide, EOL is continuously dedicated to making greater impact and contribution to the industry and the quality of life as a whole. The passion and ambition of developing new technologies at EOL will never end, in a drive to help ensure a progressive society and a sustainable future.



S2-3 Abbas Rafii, Ph.D., Co-Founder, Canesta
“Canesta's 3D Perception Technology and Applications”

Canesta is the inventor of a revolutionary, low-cost electronic 3D perception technology that enables machines and ordinary electronic devices to perceive and interact with nearby objects or users in real time. With their low-cost, small footprint, and highly reliable designs, Canesta chip and software technologies open up new worlds of applications for consumer electronics. Developers can achieve a more natural human interface for all kinds of devices – from PCs to TVs, mobile phones, and more. Canesta also enables entirely new functions in consumer-generated content production and immersive virtual world and gaming experiences. In this talk, we present the company's innovative technologies and applications, and give a brief corporate overview.

S2-4 Charles Chiang, Ph.D., Scientist, Synopsys
“3-D Chips and System in a Package (SIP) – towards ‘More than Moore’ ”

The semi-conductor industry's roadmap -known as Moore's law- succeeded in delivering a scaled technology node every 18 month doubling the density of devices per square mm and increasing the performance by 50% at constant power until it recently hit several brick walls seeded in the limits of Physics and.... In the realities of Economics! The industry is now faced with the financial decision of further scaling at an ever growing cost and diminishing returns or seeking alternatives such as 3-D stacking of chips and other forms of “vertical” integration such as SIP (system in a package). In this talk I will cover the basics of this second alternative of 3-D chips; review the current status from the aspects of design tools readiness (EDA tools), physical reliability, cost, and promise.

S2-5 Gary Zweiger, Ph.D., Vice President, Business Development, BioNanomatrix
“Imaging DNA: Using Nanoscale Devices to Enable Routine Testing of DNA Structural Variation and Whole Genome Sequencing”

BioNanomatrix is developing unique nanoscale imaging and analytic platforms designed to dramatically reduce the time and cost needed to analyze the genome. The company's patented technology delivers comprehensive analyses of genomic and epigenomic information with single-molecule sensitivity, while avoiding the fragmentation and complex data reassembly required by other approaches.

S2-6 Yong-Chie Heng, Ph.D., General Director, International Business Center, ITRI
“The European Satellite Navigation Competition (ESNC)”

The European Satellite Navigation Competition (ESNC) encourages innovative satellite navigation applications. It expects to develop and combine the satellite navigation application service industries with Galileo, the European Satellite Navigation System. Since 2004, the ESNC has been held and organized by the Anwendungszentrum GmbH Oberpfaffenhofen and the Munich ITC Trade Fair SYSTEMS, with sponsorship of the Bavarian Ministry for Economic Affairs. 3 regions in Germany, France, and Sweden were original participants. In 2008, the participating regions were expanded and not limited to Europe. The participation of Taiwan and Queensland/ Australia etc. has made the ESNC extend to 16 regions with a total of 1200 inventions taking part in

the ESNC. Taiwan has been one of the participating regions of the ESNC since 2008, and will introduce its innovation to the world through the competition, leading to more active incubation of satellite navigation applications and services.

For more details about ESNC2009, please refer to the following website:

<http://www.galileo-masters.eu/>

<http://galileo.itri.org.tw/>

S2-7 Alex Fan, Director of IP Legal Division, Technology Transfer Center, ITRI
"2009 Taiwan International Patent Auction, TIPA"

Starting from 2007, ITRI's Taiwan International Patent Auction (TIPA) has become the best known platform to facilitate IP assets transactions between foreign sellers and Taiwanese buyers. Many companies have participated in these auctions including Sarnoff, Motorola, Honeywell, and many more.

This year, the TIPA 2009 auction, focuses on matching IP transaction among the buyers and sellers from all over the world. We have collected patents from different companies in several countries and of various fields, such as: Wireless communication and networking, WiMAX & 3G, GPS, Digital TV (DTV), digital broadcasting (DB) Video/Audio players & software, IC related technology, light emitting diode (LED) lighting and LCD.

Strong networks with Taiwan industries and experienced IP business teams are the utmost advantages characterizing TIPA. In the past years, ITRI has annually provided a variety of technological, research, and consulting services for more than 30,000 domestic companies. In addition, most of TIPA's team members have been involved in these activities for many years, each with more than one field of expertise.



Opening Remarks:



Johnsee Lee, Ph. D., President, ITRI

Keynote Speaker:



Richard Dasher, Ph. D., Executive Director, CIS, Stanford University

Dr. Dasher has been with the US-Asia Technology Management Center at Stanford University since 1993, becoming USATMC Acting Director in 1994 and Director in 1996. In this capacity, Dr. Dasher holds consulting faculty appointments in the Department of Electrical Engineering (technology management) and the Department of Asian Languages (Japanese business), moving up from Consulting Associate Professor (1996 – 2003) to Consulting Professor since 2004. He has additionally served as Executive Director of Stanford's Center for Integrated Systems since 1998. Dr. Dasher was the first non-Japanese person ever asked to join the senior governance of a Japanese national university, serving a one-year term on the Board of Directors of Tohoku University from April 2004. He continues to serve on the Management Steering Council of Tohoku University and as Special Advisor to the Tohoku University president. From 2001-2003, he was a member of the International Advisory Committee to the Japanese Minister of State for Science and Technology Policy in regard to the creation of the Okinawa Institute of Science and Technology. He is regularly called on to consult for local and regional governments in Japan, the U.S. and Asia in regard to innovation-based regional economic development and university-industry relations.

Dr. Dasher maintains an active business consulting practice on international strategy and planning, technology trend and opportunity analysis, and Japan market entry and performance improvement. In addition to projects for large firms, he serves as an outside board director of ZyCube Inc. in Japan and as advisor to several start-up companies in the U.S. and China. Since 2000, Dr. Dasher has been an advisor to the US-Japan Business Incubation Center in San Jose, California.

Dr. Dasher received the Ph.D. in Linguistics from Stanford University and is co-author with Prof. Elizabeth Traugott of the book "Regularity in Semantic Change" (Cambridge University Press, 2002). He is fluent in Japanese and directed the U.S. State Department's Foreign Service Institute training centers in Japan and Korea from 1986-90. From 1990-93, Dr. Dasher was a salaried board director of two Japanese companies in Tokyo, at which he expanded the companies' business lines to include international IP licensing. He taught clarinet and chamber music at the San Francisco Conservatory of Music from 1978-85 and maintains an active interest in performing and enjoying music.

Speakers in Focus Sessions and Tech&Biz Showcase
(in alphabetical order of last name):

John Chen, Ph. D.
VP & General Director, Display Technology Center, ITRI



Dr. Janglin (John) Chen is Vice President and General Director of Display Technology Center of ITRI. Prior to joining ITRI, Dr. Chen was a Research Fellow of Eastman Kodak Company in Rochester, New York, where he held many research & managerial positions from 1982 to 2006, and is the author of 60 technical reports, and 31 issued US Patents. A graduate of Stanford Executive Program, Dr. Chen holds a B.Sc. degree from National Tsing Hua University (1975), and a Ph.D. degree from Polytechnic University in Brooklyn, New York (1982).

Charles Chiang, Ph. D.
Scientist, Synopsys



Charles Chiang joined Synopsys, Inc. in 2001 after working at IBM and EDA companies for 10 years. His research interests include routing, placement, floor planning, and design for manufacturability (DFM). His main research focus was on 3D IC integration until December 2008. He received his Ph.D. degree from the Department of Electrical Engineering and Computer Science, Northwestern University, Illinois, USA in 1991 and Bachelor degree from Tunghai University, Taichung, Taiwan in 1980. Dr. Chiang is the sole recipient of 2007 Synopsys Distinguished Inventor Award and the Synopsys Top Inventor Award recipient from 2005 to 2008. He has published one book on DFM, more than 50 technical papers, granted two patents, and filed 13 US patents. He has served on the technical committee of ICCAD from 2004 to 2007, on that of ASP-DAC from 2007 to 2009.

Tsun-Chieh Chiang, Ph. D.
Deputy Division Director, Communication System Division, Information and Communications Research Labs, ITRI



Dr. T.C. Chiang is Deputy Division Director of the Communication System Division in the Information and Communications Research Laboratories (ICL) of Industrial Technology Research Institute (ITRI), Taiwan. His division is responsible for the evolution of Telematics, Telecare, and Video Streaming applications, focusing on network technology for service creation, implementation, delivery and operation.

Dr. Chiang has a MS degree in electrical engineering and a PhD degree in computer science from Illinois Institute of Technology at Chicago, Illinois, USA. He is also an adjunct professor in National Chiao Tung University, Hsinchu City, Taiwan, since 2008.



Michael Cottle

VP of Worldwide Sales, deCarta



Michael Cottle has worked in the Software Industry for over 25 years mostly in Sales and Marketing roles. He has spent over 10 years in the mobile and LBS markets with companies such as Digital Chocolate, MapInfo and most recently with deCarta, a leader in the LBS/Navigation market. Michael has spoken on various industry panels at CTIA and the Mobile Game Developer Forum. He currently leads deCarta's Worldwide Sales team and it's Consulting Service group who are delivering leading edge wireless and connected navigation solutions to the market.

Chris Cytera

Product Line Director for FlexiTV, Mirics



Chris graduated from the University of Southampton in 1986, starting his career in IC design and with Inmos, later moving into Marketing after acquisition by STMicroelectronics . In October 1994, Chris co-founded Crocodile Clips, a company which develops software for teaching science and technology. Chris then spent nearly 5 years at the wireless IP company TTPCom in Cambridge, then joined mobile video processor start-up Alphamosaic which was subsequently acquired by Broadcom. Chris's current position is Product Line Director for FlexiTV at Mirics.

Roxanne Duan, Ph. D.

VP of Research, Adlyfe



Dr. Roxanne Duan serves as President at Adlyfe, Inc, with a focus on Alzheimer disease detection and imaging using a novel peptide folding mechanism. Prior to joining Adlyfe, Dr. Duan was the Vice President at Functional Genetics, Inc., where she made major impact on developing broad spectrum antibody therapeutics for infectious diseases. Earlier, Dr. Duan was the CEO of a Maryland start up company, Infinity Pharmaceuticals, which focused on discovering rate limiting genes for cancer and type II diabetes. Before Infinity, She served as the project leader and co-inventor of several clinical protein therapeutic candidates, for wound repair, cardiovascular diseases and type II diabetes, at Human Genome Sciences (HGS). Dr. Duan began her career as a Senior Research Fellow at the National Cancer Institute where she studied tumor suppressor genes.

Dr. Duan received her Ph.D. in Pharmaceutical Chemistry from the University of California, San Francisco and worked as a postdoctoral fellow at the Howard Hughes Medical Research Institute at the University of California, San Francisco, on growth factors and their application in cardiovascular diseases. Dr. Duan holds 26 issued patents, 85 published patents more than 25 peer reviewed publications.

Alex Fan

Director of IP Legal Division, Technology Transfer Center, ITRI



Alex Fan is Director of IP Legal Division of Technology Transfer Center of ITRI. He is the Senior Administrator of ITRI with over 25 years of experiences in the international technology transaction practice and the IP management. He is also the senior member of AUTM and LES.

Peter J. Fitzgerald, M.D., Ph. D.

Professor, Medicine (Cardiology) & Engineering (Electrical)

Director, Center for Cardiovascular Technology, Stanford University Medical Center



Dr. Peter Fitzgerald is the Director of the Center for Cardiovascular Technology and Director of the Cardiovascular Core Analysis Laboratory (CCAL) at Stanford University Medical School. He is an Interventional Cardiologist and has a PhD in Engineering. He is Professor in both the Departments of Medicine and Engineering at Stanford. Presently, Dr. Fitzgerald's laboratory includes 14 postdoctoral fellows and graduate engineering students focusing on state-of-the-art technologies in Cardiovascular Medicine. He has led or participated in over 95 clinical trials, published over 300 manuscripts/chapters, and lectures worldwide.

Peter has been principle/founder of eleven medical device companies in the San Francisco Bay Area. He has transitioned eight of these start-ups to large medical device companies. He serves on several boards of directors, advised dozens of medical device startups as well as multinational healthcare companies in the design and development of new diagnostic and therapeutic devices in the cardiovascular arena. In 2001, Peter co-founded LVP Capital, a venture firm, focused on medical device and biotechnology start-ups in San Francisco.

Matan Friedman

Senior Associate, Bessemer Venture Partners



Matan Friedman is a Senior Associate in BVP's California office. He joined BVP in 2008 to focus on the Cleantech sector. Most recently, Matan was Manager of Strategy and Business Development for Ze-Gen Inc., an early-stage Boston-based developer of advanced waste-to-energy technology. While in Boston Matan also engaged in consulting projects for early stage startups in the recycling and water purification sectors. Previously, he was a Business Analyst with McKinsey and Co.'s Tel Aviv office, where he consulted on productivity improvement, business development, strategy and corporate finance. Earlier in his career Matan held a series of roles in the Intelligence branch of the Israeli Defense Force, attaining the rank of Lieutenant. It was during his work on R&D related projects that his interest in energy and efficiency began.

Yong-Chie Heng, Ph. D.
General Director, International Business Center, ITRI



Dr. Yong-Chie Heng is currently General Director of International Business Center, Industrial Technology Research Institute (ITRI). During his professional career, he has managed countless European and international projects, notably the licensing of the global personal satellite communication system in Europe, Middle East and Africa (EMEA) for Motorola HQ in the USA. He has been serving as invited technical adviser to government and industry, both in EMEA region and Taiwan.

Winston Ho, Ph. D.
President & CEO, Applied BioCode



Dr. Winston Z. Ho— Founder and CEO of Applied Biocode, has been working with lab-on-a-chip, biosensors, microfluidics, and biomedical instruments for more than 20 years. He developed innovative technologies and products for clinical diagnostics, such as KetoneMax, FS-Scanner, Chemiluminescence Bio-disc, 3-D endoscope without goggle, etc. Dr. Ho is the Founder and President of Maxwell Sensors Inc. He, also, serves in the Board of EWSA Scientific Instruments, which manufactures photon counting LuminMax luminometer. Dr. Ho published more than 50 scientific papers, and has 11 issued and 9 pending patents. He served as an SPIE program committee, and NIH-NCI, NIAID grant reviewer, and President of S. California Chinese American Optoelectronic Society. Previously he was the Director of Sensor Systems at Intelligent Optical System Inc. and Director of Biomedical Optics at Physical Optics Corporation. He obtained his MS (Biochemistry) and Ph.D. (Biophysics) from Arizona State University; worked as a postdoctoral researcher at Columbia University, New York; and a Research Fellow at University of Arizona (Optical Science Center), Tucson, AZ.

Jon S. Hsu, Ph. D.
Deputy General Director, Electronics and Optoelectronics Research Labs, ITRI



Dr. Jon S. Hsu is currently Deputy General Director of the Electronics and Optoelectronics Research Laboratories in the Industrial Technology Research Institute (ITRI). With the mission to turning research results into industrial applications, ITRI is a non-profit research organization and partially funded by the Taiwan government. Before joining ITRI, Dr. Hsu served as a Science & Technology Advisor at the Ministry of Economic Affairs (MOEA) and held various positions in different industries as well.

Dr. Hsu graduated from National Chiao Tung University in 1977 with a Bachelor of Science degree and graduated from State University of New York at Buffalo in 1986 with a Doctorate. He was also conferred an Executive Master of Business Administration (EMBA) degree by National Chiao Tung University in 2000.

Erfan Ibrahim, Ph. D.
Technical Executive, Power Delivery & Utilization, EPRI



Erfan Ibrahim is a Technical Executive in the Intelligrid program area of the Power Delivery & Utilization Sector. His current research activities focus on the communications infrastructure for the utility Smart Grid with particular emphasis on Home Area Networks (HAN), Advanced Metering Infrastructure (AMI), Building Automation Networks (BAN) and Energy Management Systems (EMS).

Before joining EPRI, Dr. Ibrahim founded and managed The Bit Bazaar LLC (TBB), a full service IT and business consulting firm, offering services to clients in the High Tech, Financial Services, and Energy sectors. At TBB Dr. Ibrahim focused on wireless communications, network management, and information security technologies with a particular emphasis on aligning the IT goals of his clients with their business goals for sustained competitive advantage.

Prior to establishing The Bit Bazaar LLC, Dr. Ibrahim's career included the following positions: VP of Sales & Marketing at Jyra Research, Product Manager for Network Management at Pacific Bell Network Integration (now AT&T), Science and Math Lecturer at National University, Nuclear Fusion Research Engineer at UCLA and Plasma Physicist at Lawrence Livermore National Lab.

Dr. Ibrahim received a Ph. D. in Nuclear Engineering from University of California Berkeley, an MS in Mechanical Engineering from the University of Texas Austin, and a B.S. Honors in Physics from Syracuse University (Suma Cum Laude).

Dr. Ibrahim is a Phi Beta Kappa, a Tau Beta Pi, Who's Who Amongst American Colleges & Universities and Who's Who Amongst IT professionals.

Chung-Wen Lan, Ph. D.
General Director, Photovoltaics Technology Center, ITRI



Dr. C.W. Lan is General Director of Photovoltaics Technology Center of Industrial Technology Research Center (ITRI) and Distinguished Professor in Chemical Engineering of National Taiwan University (NTU). He is also Chairman of Taiwan Photovoltaic Industrial Association (TPVIA), and an Executive Committee member of Asia Association for Crystal Growth and Crystal Technology. He received his Ph.D. in Materials Science from the University of Wisconsin at Madison in 1991. His research interests include photovoltaic materials, crystal growth, transport phenomena, and high performance computing.

Gwo-Bin Lee, Ph. D.

Deputy General Director, Medical Electronics and Device Technology Center, ITRI



Dr. Gwo-Bin Lee has Deputy General Director, Medical Electronics and Device Technology Center (MED) of Industrial Technology Research Institute (ITRI) since 2007. Prior to joining ITRI, he was a professor at the Department of Engineering Science as well as directors at Micro Bio-analysis Center, Technology Transfer Group of Micro/Nano Technology Center at National Cheng-Kung University. He received B.S. and M.S. in Mechanical Engineering from National Taiwan University, and Ph.D. in Mechanical and Aerospace Engineering, UCLA in 1998.

Herb Lin

President, ITIC



Herb Lin, the current president of ITIC, has extensive experience in venture capital and in high-tech industry.

Herb worked for Intel Corp. for over 12 years at its USA headquarters, China office and Taipei office. In 2000, he joined Intel's strategic investment arm, Intel Capital, in China. In 2003, he moved to a US-based VC and private equity fund, Crimson Capital Holdings, as senior vice president, to head the Taipei team responsible for the fund's Asian portfolio. He later became senior vice president at a US/Taiwan joint venture VC company, TCW Asiavest Partners, and a leading Taiwan-based VC firm, WK Technology.

Herb holds a B.S. in Bio-industrial Mechatronic Engineering from National Taiwan University and a MS degree in Electrical Engineering at the University of Missouri. He was a PhD candidate in Electrical Engineering in Santa Clara University.

Hun-Chi Lin, Ph. D.

CEO, GTB Power Enterprise



Dr. Hun-Chi Lin is the Chairman and CEO of Global TransBiotech, Inc. (GTB). GTB is applying an asset appreciation business model that focus on in-licensing post-discovery promising technology and product leads in life science area, developing the technology and product leads to achieve predefined goals and create substantial value, and then out-licensing to pharmaceutical and biotech companies for further development and commercialization. He was the Director of Clinical Trials Division at Specialty Laboratories. Earlier, he co-developed Trigen, Inc. a company was focused on the treatment and diagnosis of type-1 diabetes.

Dr. Lin has extensive clinical trial experiences in about 400 clinical studies including drugs, biologics, and medical devices. He has over 30 peer-reviewed publications and numerous presentations in professional conferences and holds 4 patents. Dr. Lin holds a Ph.D. degree in Microbiology from UCLA and a M.S. degree in Food Science and Technology and a B.S. degree in Agricultural Chemistry from National Taiwan University.

Chung-Cheng Liu, Ph. D.

VP & General Director, Biomedical Engineering Research Laboratory, ITRI



Dr. Chung Cheng Liu is Vice President and General Director of Biomedical Engineering Research Laboratory (BEL) in Industrial Technology Research Institute (ITRI) since 2006. He leads 18 core labs including Genomics technology, Pharmaceutical technology, Tissue technology, miniaturized medical device and nano-bio technology. He received the Bachelor's degree in Zoology from National Taiwan University and the M.A. and Ph.D. degree in Biochemical Sciences from Princeton University in 1980.

Alex Peng, Ph. D.

Deputy General Director, Material and Chemical Research Labs, ITRI



Dr. Alex Peng is Deputy General Director at Material and Chemical Research Labs (MCL) of ITRI. He is also the President of Taiwan Battery Association. He is the project leader of Portable Fuel Cell and Lithium Battery. Dr. Peng is making effort to promote application of fuel cell for portable devices and high safety power lithium battery for electric vehicles. Forming R&D and application platform is his current focus.

Abbas Rafii, Ph. D.

Co-Founder, Canesta



Dr. Rafii is a cofounder of Canesta. He has extensive background in software architecture, development, engineering and business management. His current focus is directing the software projects on the design, analysis and applications of company's 3D electronic perception technology. He received his MS and Ph.D. in EECS from Stanford University. Previously, he was a software scientist at Hewlett-Packard Laboratories. Prior to that, he was a system performance specialist at the Hewlett-Packard's commercial and UNIX operating systems labs. He has published papers on computer performance evaluation, heterogeneous object databases and several 3D vision applications. He has also taught Computer Science at University of Oklahoma, U.C. Davis and Santa Clara University. He has been granted 12 patents.

Manas Saksena, Ph. D.

Senior Technologist, Marvell Semiconductors



Dr. Manas Saksena is a senior technologist at Marvell Semiconductors. In his current role, he is leading the technology and business strategy to lead Marvell's wireless and processor products into emerging markets with smart connected devices. He is well-respected in the open-source community and has led Marvell's open-source and Linux strategy. Prior to joining Marvell, he served as CTO of TimeSys. Earlier, he had a career in academia, with seminal research contributions in the area of real-time scheduling and systems design. He has a PhD from University of Maryland, and B.Tech from IIT, Kanpur.

Simon Tung, Ph. D.
VP & General Director, Energy and Environment Research Lab, ITRI



Dr. Simon Tung joined ITRI as the Vice President and General Director in 2008 responsible for managing all R&D programs in Energy and Environment Research Lab (EEL). Dr. Tung's technical expertise includes energy technology, environmental engineering, surface engineering, automotive propulsion system, and advanced manufacturing process. Before joining ITRI, Dr. Tung was the Technical Fellow at the largest automotive research center in U.S., General Motors R&D Center. Dr. Tung has 125 publications, holds fourteen U.S. Patents and international patents on novel methods for improving energy efficiency and environmental protection.

Robert Weiss
CTO, DayStar Technologies



Mr. Weiss has served as our Chief Technology Officer since May 2007. He initially joined us in January 2006 as Director of the Equipment Development Group and served as our Vice President of Advanced Technologies from March 2006 to May 2007. From September 2005 to January 2006, he served as a consultant to us. From 1992 to 2005, he was with Intevac, Inc., a supplier of thin film deposition manufacturing equipment, most recently serving as Chief Technology Officer, where he led hardware and process development teams in commercializing tools used in the production of plasma and polysilicon displays, hard disks, and low light cameras. Mr. Weiss has a B.A. in English and Psychology from Grinnell College, Iowa.

Andy Wu, Ph. D.
Deputy General Director, SoC Technology Center, ITRI



Andy (An-Yeu) Wu received the B.S. degree from National Taiwan University in 1987, and the M.S. and Ph.D. degrees from the University of Maryland, College Park in 1992 and 1995, respectively, all in Electrical Engineering.

From August 1995 to July 1996, he was a Member of Technical Staff (MTS) at AT&T Bell Laboratories. In 2000, he joined the faculty of Electrical Engineering Department, National Taiwan University (NTU). In August 2007, he was on leave from NTU and served as the Deputy General Director of SoC Technology Center (STC), Industrial Technology Research Institute (ITRI). He is now supervising PAC (Parallel Architecture Core) and Android/Multicore related projects in STC.

Marietta Wu, Ph. D.

General Manager, Greater China & Director, Venture Capital, Burrill & Co.



Dr. Wu's experience ranges from clinical medicine and medical research to finance and entrepreneurship. In her current role at Burrill & Company, she focuses on venture capital investing in China and Taiwan related life sciences opportunities and manages fund raising effort in Asia. She also serves as an interim COO of Waterstone Pharmaceuticals, a US based pharmaceutical and API manufacturer with key operations in China. In addition, she assists companies seeking trans-Pacific partnerships. Dr. Wu is a frequent speaker and author on China life sciences topics.

Prior to joining Burrill, Dr. Wu held professional positions with Edwards Lifesciences and Eli Lilly & Company. She was Director of Strategy at Edwards, responsible for the strategic planning in the biologics program. At Eli Lilly & Company Oncology and Integrated Biology, Dr. Wu oversaw finance, business development, pipeline valuation, organizational restructure and outsourcing strategy. She also worked at Eli Lilly's M&A Group and with Oncology Discovery Research. Dr. Wu founded BioHorizon, a consultancy focused on value creation in the life sciences industry across the Pacific Rim. She advised a number of biotech start-ups and venture capital firms. Dr. Wu also has leadership positions in several professional organizations promoting cross-Pacific business initiatives including serving as secretary general for the BayHelix Group.

Dr. Wu's scientific expertise centers on basic and clinical research in oncology and neuroscience. She was selected by Nobel Laureate Dr. Marshall Nirenberg as an IRTA Fellow at the National Institutes of Health (NIH). Dr. Wu received her M.D. from Shanghai Second Medical University, a Ph.D. in Medical Sciences with a focus in biochemistry and molecular biology from Medical College of Ohio, and an MBA from the University of Michigan Business School.

Peter S. Wyles

VP & General Manager, Diabetes Care - A1CNow+, Bayer HealthCare LLC



Peter Wyles is the Vice President & General Manager, of Bayer Diabetes Care in Sunnyvale, California, responsible for the A1CNow+ business unit located there. Peter was previously the Vice President & General Manager of Bayer Consumer Care's operations in Canada. From 1997 - 2003, Peter served in the Bayer HealthCare operations in Japan, as the head of pharmaceutical marketing and as the General Manager of the Consumer Care Division. Peter began his career with Bayer in Germany in 1995. Prior to joining Bayer, he held positions in clinical trial management and international licensing at Asahi Chemical Industry Company, Ltd., in Tokyo, Japan. Peter served in the United States Marine Corps and holds a BA from the Pennsylvania State University and an MBA from Thunderbird, The Garvin School of International Management in Arizona.

Wei Zhou, Ph. D., J. D.
Partner, Wilson Sonsini Goodrich & Rosati



Dr. Wei Zhou is a partner and China life science practice lead at Wilson Sonsini Goodrich & Rosati, P.C. His clients include Chinese and U.S. life sciences, pharmaceutical (including generics), clean tech and digital media companies on matters such as company formation, financing, IP strategy and portfolio development, generics and specialty pharmaceutical IP opinion and litigation, technology transfer, business development, due diligence, M&A, and patent litigation.

Prior to joining the firm, Dr. Zhou was a senior vice president of intellectual property and advanced technology at Affymetrix, where he also served as the general manager of Affymetrix' China operations. Earlier, Dr. Zhou was an attorney at Pennie & Edmonds LLP, was a postdoctoral fellow in molecular and cellular gastroenterology at Emory University Medical School, and was a lecturer at Zhejiang University.

Dr. Zhou obtained his J.D. from Stanford Law School, his Ph.D. from Virginia Tech. He is also a graduate of the General Management Program at Harvard Business School.

Gary Zweiger, Ph.D.
Vice President, Business Development, BioNanomatrix



Gary Zweiger, Ph.D. is Vice President of Business Development for BioNanomatrix, Inc. He has worked in Genomics since the inception of the field in the mid-90's, first consulting for investment banks and venture capital firms and then working for and providing leadership in business and market development, strategic planning, and new business creation at Incyte Genomics, Agilent Technologies, Applied Biosystems, and Affymetrix. He is also author of a popular book on the race to sequencing the human genome (*Transducing the Genome*; McGraw-Hill, 2001). Gary received his doctoral degree from Stanford University Medical School's Dept of Genetics and completed his post-doctoral fellowship at Genentech Inc..