





























Speed & Innovation Together

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#### **About US**

The American Society of Engineers of Indian Origin (ASEI) was founded in 1983 in Detroit Michigan by Mr. Hari Bindal with the objectives of facilitating networking, recognitions, and technical liaison between India and the USA.

Early in 1983, Mr. Bindal contacted over 50 fellow engineers to obtain their consent and join in his efforts for the start-up of the organization. Bindal conducted a signature campaign and received some 150 signatures. He then organized a meeting on May 5, 1983 at the Farmington Public Library, to form an organization of engineers from India. After thorough discussion, a resolution to form the organization was passed and named the "American Society of Engineers from India (ASEI)". In 1992, the name was changed to "American Society of Engineers of Indian Origin", retaining the acronym as ASEI. Some seed money was collected and an ad-hoc committee was formed to plan a kickoff banquet. The kickoff event was held on September 9, 1983, at the Dearborn Community Center and attracted over 300 people. Over 75 became members that evening. Mr. Bagla, Minister for Economics representing the Embassy of India in Washington DC, gave an arousing inaugural speech.

Mr. Navin Pandya, well known in the Detroit area, wrote the constitution and bylaws of ASEI. This constitution was signed by twenty six (26) members who were present in the May 5, 1983 meeting. These 26 members were called the "Founding Members of ASEI". Mr. Bindal, with help from Dr. Hans Bajaria, got ASEI registered with the IRS under Sec 501(C) (6), and also with the state of Michigan as a Nonprofit Educational Organization. Bindal's home address was also the ASEI address. All day-to-day business of receiving membership forms, responding to letters, and keeping the accounts were handled by Bindal. The organization also started a quarterly "ASEI Newsletter" in the same year.

The ASEI original logo, selected from a logo contest, consisted symbols representing India and the USA, a compass, a handshake, and a slogan "Gyano Sarvopari", encircled with name and year of founding. In 1992, the logo was changed to the current "link of two circles", based on ASEI-NCC Newsletter "Link".

Within two years, ASEI grew to over 400 members. Letters from all over USA, Canada, and some from India came complementing the formation of ASEI. The first convention was held in August 1984 in Michigan. ASEI awards and recognition system started from the first annual convention. In 1985, ASEI presented an honorary membership and ASEI memoranda to the visiting Indian Prime Minister Rajiv Gandhi, as he was an engineer by profession.

Periodic technical seminars were held during the beginning years. Mr.Bindal moved from Detroit to Florida in March 1986. Dedicated members, including Nirdosh and Asha Reddy, Noor Kapadia, and Yogi Anand diligently groomed ASEI over the next eight years and held the annual conventions in Michigan with Bindal's dedicated support.

Mr. Bindal moved to Washington DC in 1988, and started the ASEI National Capital Chapter (NCC) in 1990. ASEI NCC hosted the first out of Detroit, 9th National Convention, in the DC area. After that, the 10th National Convention was held in Huntsville, AL, that celebrated the 10th anniversary in 1993. The souvenir published at this convention included the history of previous ten years of ASEI.

Subsequent conventions were held in other cities such as Atlanta GA (1997), Buffalo, NY (1999), Orlando, FL (2000), and the rest back and forth between Detroit and Washington DC.

In 2004, SoCAL chapter started to serve west coast and the Michigan Chapter held one of the largest conventions with over 450 attendees under the able leadership of Mr. Perry Mehta.

Several new chapters, including two student chapters (Akron, OH; and College Park, MD) and one in New Delhi, India, were installed during this period to a total of 12 chapters. In 1996, three new programs were added including ASEI scholarships, and other awards. Today we are celebration 30<sup>th</sup> anniversary, which is a remarkable voyage starting 1983. We are happy to host our 30<sup>th</sup> anniversary at national capitol. We welcome you all and appreciate your absolute commitment to be part of our journey.

#### **ASEI Mission**

Utilize the expertise and resources of the Indo-American community for promoting the following major activities:

- Networking
- Community Service
- Technology Exchange
- · Indo-American business relationship



#### **ASEI Vision statement**

"An organization of technical professionals of Indian origin providing a platform for networking, community service, and technology exchange"

The Cleveland, Ohio Chapter was founded in 2003 with the initiatives of Mr. Jagannath Kottha and Mr. Paramjit Singh. This chapter hosted ASEI 20th and 22nd Annual Conventions in 2003 and 2005, respectively.

In April 2009, a delegation of ASEI met with India's past President, Dr. Abul Kalam, who is an engineer, and presented him with the ASEI memoranda and an Honorary Membership of ASEI.

The Southern California Chapter (SoCal) was founded by Boeing engineers: Sharanpal (Paul) Sikand, Darsh Aggarwal, Jayant Patel, Ravi Kahandal, and Sham Hariram in 2004. The SoCal Chapter hosted the first West coast and a very successful 23<sup>rd</sup> National Convention in 2006, which attracted over 400 attendees. A sanitation symposium was organized in 2008. ASEI SoCal Chapter also hosted the 25th National Convention in 2010 and 26th National Convention in 2011.

Following is a list of the ASEI leadership from 1984 to date.

	P	ast Chairmen/Presid	lent of the N	lation	al Board	
Year	Chairman	President		Year	Chairman	President
1983-84	Constancio Miranda	Jayprakash B. Shah				
1985	Hansraj Bajaria	Yogendra Anand				
1986	Navin Pandya	Nuruddin Kapadia		2000	Ravi Singh	Dhirendra Saxena
1987	Nuruddin Kapadia	Venkat Rao		2001	Dhirendra Saxena	Vipin Mehta
1988	Venkat Rao	Nirdosh Reddy		2002	Vipin Mehta	Ravi Rout
1989	Nirdosh Reddy	S.M. Shahed '		2003	Vipin Mehta	Ravi Rout
1990	S.M. Shahed	Asha Reddy		2004	Ravi Routr	Jag Kottha
1991	Asha Reddy	Shailesh Vora		2005	Jag Kottha	Perry Mehta
1992	Shailesh Vora	Sudhir Jain		2006	Jag Kottha	Perry Mehta
1993	Ram Reddy Nomula	None		2007	Jag Kottha	None
1994	Chandrika Prasad	None		2008	Jag Kottha	None
1995	Chandrika Prasad	None		2009	Jag Kottha	None
1996	Jagdish Agrawal	Shiv K. Jindal		2010	Paul Sikand	None
1997	Shiv K. Jindal	Manohar Singh		2011	Shreekant Agrawal	None
1998	Manohar Singh	Gajanan Deshmukh		2012	Shreekant Agrawal	None
1999	Gajanan Deshmukh	Ravi Singh		2013	Shreekant Agrawal	None

NATIO	NATIONAL CONVENTIONS, DATES, PLACES AND THEMES			
No.	Date	Convention Location	Theme	
0	10-Sep-83	Dearborn MI	Founding of ASEI Kickoff Banquet	
1st	4-Aug-84	Troy MI	Succeeding in Corporate America	
2nd	17-Aug-85	Troy MI	US-INDIA Business Opportunities	
3rd	23-Aug-86	Novi, MI	Achieving Your Potential	
4th	3-Oct-87	Southfield MI	Career Planning & Enhancement	
5th	6-Sep-88	Dearborn MI	Career Planning & Enhancement	
6th	16-Sep-89	Troy MI	Path to (Personal) Progress	
7th	15-Sep-90	Dearborn MI	Quality: A Key to Success in the Nineties	



.——		- Handilan Gont	
8th	14-Sep-91	Dearborn MI	Customer Focused Management
9th	6-Sep-92	Reston VA	Technology & Indian Economic Reform
10th	5-Sep-93	Huntsville AL	10th Anniversary, Technology Transfer
11th	4-Sep-94	Dearborn MI	Emerging Business Opportunities in India
12th	3-Sep-95	Bethesda MD	US India Business Collaboration
13th	1-Sep-96	Troy MI	21st Century- Opportunities Ahead
14th	31-Aug-97	Atlanta GA	Engineering Shaping the Future
15th	6-Sep-98	Herndon VA	Visionary Engineers in Communication Age
16th	5-Sep-99	Niagara Falls NY	Technology Challenges in 21st Century
17th	3-Sep-00	Orlando FL	Vision 2000- ASEI Salutes America
18th	2-Sep-01	Troy MI	Entrepreneurship Strategies
19th	16-Nov-02	Livonia MI	Showcasing Technology Expertise Amidst Diversity
20th	31-Aug-03	Cleveland OH	Entrepreneurship for Waking Giant Indian
21st	14-Aug-04	Dearborn MI	Engineering Excellence and Innovation
22nd	24-Sep-05	Cleveland OH	Opportunities, Challenges of Globalization
23rd	9-Sep-06	Cerritos CA	Improving Quality of Life through Technology
24th	31-Aug-07	McLean VA	Engineering for Global Market
25th	18-Sep-10	Anaheim CA	Innovation Technologies for a Greener Tomorrow
26th	24-Sep-11	Fullerton CA	New Frontiers in Information Technology
27th	6-Oct-12	Dearborn MI	Green Engineering And Technology
28th	28-Sep-13	College Park MD	Innovative Technologies: An Engine for Economic Growth

## Message from ASEI Chairman



September 28, 2013

I am honored to welcome our guests, distinguished speakers, and fellow engineers and scientists to the 28th ASEI Annual National Convention, hosted by the ASEI National Capital Chapter (NCC), at the beautiful campus of the University of Maryland at College Park.

This year's convention theme is "Innovative Technologies: An Engine for Economic Growth". The theme reflects ASEI vision and commitment to further technology advancements by linking various technical professions and businesses, and raising awareness of global technical and business issues and challenges in areas that are much needed to propel this nation's economic growth to the next level. The technical sessions in this convention will focus on Information Technology, Healthcare IT, Nanotechnology, Traditional Energy, Renewable energy, Space, and STEM. Our guest speakers are amongst the most recognized leaders from the various corporations, US government organizations, and academia.

ASEI was founded in 1983. In looking back over the past 30 years, ASEI has come a long way from being a regional organization to the National level with multiple chapters. I take pride in mentioning some of its achievements in various programs, including the following:

- The Corporate Excellence Recognition Program (CERP): This program provides a forum for corporations to recognize their very best for their leadership and technical skills. Award categories are: Engineering Excellence, Woman Engineer, Young Engineer, Outstanding Achievement, and Service Excellence.
- Academic Excellence Scholarship Program: ASEI has awarded more than \$110K over the years to engineering
  undergraduate and graduate students across the US. Additionally, we have awarded scholarships to students in India via
  our association with SAE.
- Technical Symposia and Networking: Talks on the latest advancements in various technologies are conducted periodically by the various chapters of ASEI. Such events provide a forum for professional networking.
- Cultural events: Annual events to celebrate Diwali, the Indian festival of lights, and Christmas are held to provide the members, families and guests an opportunity to have fun and network.
- Community service: ASEI members provide community service in various areas such as mentoring, teaching, planting trees, cleaning the beach, etc.
- Recognition Program: Every year at the convention, ASEI recognizes members in the area of entrepreneurship, engineering excellence, and service to ASEI.

Our board members are leaders in their own respective fields and are fired up on growing ASEI through increased collaboration with other engineering organizations. Additionally, we are challenging ourselves to work with top-notch universities and open ASEI student chapters there in order to bring young engineers to help achieve the ASEI vision.

I am very thankful to the ASEI NCC chapter for hosting the annual convention in 2013. I am also very thankful to our partners PAN-IIT, WHEELS, MIBRT, USIBC, and USINPAC for joining hands in this convention. Under the leadership of Dr. Ajay Kothari and Mr. Hari Bindal, the convention committee has put together an exciting program for you. I am sure you will enjoy the convention. Thank you for your attendance and support.

Showing from

Shreekant Agrawal

Chairman, ASEI National Board

#### Message from ASEI Convention Chair



September 28, 2013

On behalf of the convention team, I heartily welcome all attendees to this 28th ASEI National Convention being held in USA since the founding of ASEI 30 years ago. Welcome to University of Maryland, College Park, MD, alma mater to many of us. ASEI National Capital Chapter (ASEI-NCC) and ASEI-UMD student chapter are co-hosting this convention today, being held at the Riggs Alumni Center and the Grand Ballroom in Stamp Union.

We also welcome our honored guests who have gracefully allowed us the pleasure of their company today. Your outreach with the Indian-American community is known throughout and is deeply and heartily appreciated by the community! We hope you will all go away with a renewed perception of how the Indian-American community has and continues to contribute to this our adopted land.

ASEI is a national nonprofit American society of Indian-American engineers, scientists and technologists. Since its inception, ASEI has strived to present the contributions of Indian-American technologists.

scientific community to our country, institute a channel of communication between technical organizations, lend a helping hand to charitable organizations, provide assistance to engineering students at the Local and National levels, and organize networking events.

The theme of the convention is "Innovative Technologies: An Engine for Economic Growth" which parallels very much the vision outlined by President Obama for the country over last five years. We believe that many of such innovative technologies can be extensive contributors to the economic growth in the country, be they in energy, healthcare, information technology, nanotechnology or space. The Indian-American community is very much at the forefront of these avenues having been pioneers and inventors of many such incipient and innovative technologies.

Senator Mikulski said it best: "Our nation is in an amazing race for discovery and new knowledge to remain competitive and to foster an innovation society. Future scientists, mathematicians and engineers will create new ideas that will lead to new breakthroughs, new products and new jobs. These innovations will have power to save lives, create prosperity, protect the homeland and make America safer, stronger and smarter". We, the Indian-American community intend to meet these goals.

With best wishes,

Dr. Ajay P. Kothari

Chairman - ASEI National Convention 2013

## Message from Governor Martin O'Malley

STATE OF MARYLAND OFFICE OF THE GOVERNOR



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#### A MESSAGE FROM GOVERNOR MARTIN O'MALLEY

Dear Friends:

Welcome to the American Society of Engineers of Indian Origin's (ASEI) 28th National Convention at the University of Maryland, College Park.

A national organization of Indian American engineers, scientists and Technical Professionals, ASEI continues to make important contributions of our economy by providing innovative technologies to move our State and our country forward.

There is no progress without jobs. We know that the more our students learn the more they earn. That's why in today's innovative economy, STEM education is more important than ever. Our State is home to the nation's second highest concentration of science, technology, engineering, and mathematics (STEM) workers and has one of the fastest STEM job growth rates in the nation. Working together, we can equip our students with the skills they need to compete and win in today's modern economy

Please accept my warm wishes for a successful event.

Sincerely

Governor



# Message from Hosting Chapter President (ASEI-NCC)



Dear Sponsors, Patrons, Guests, Members, Students and Attendees:

I welcome you all and appreciate your absolute commitment to attend the ASEI 28th National convention, today. I am confident that you will see the value you expected. I acknowledge and thank the convention team, both at the National and at local chapter including UMD student chapter for their selfless exhausting effort to make this convention a realization.

We recognize that Innovative Technology is an essential ingredient of economic growth, we aligned our convention theme "Innovative Technologies: An Engine for Economic Growth" to President's Obama's focus on job creation through leading America to 21st century digital infrastructure. I am sure your participation in this convention will make it ASEI one more successful event.

ASEI, founded in 1983, has held 28 successful conventions in last 30 years. I am happy that National Capitol Chapter is hosting this convention, as it is the 30th anniversary of the founding of ASEI.

Our mission is to help the next generation with the skills they need to excel in engineering, science and technology. We collaborate with corporations and professionals to create various platforms, give awards and scholarships, to inspire young engineers and students. Each year, we recognize entrepreneur, industry leaders and mentors with service excellence award for their contributions.

To date, ASEI has provided student's scholarships for more than \$110,000 in public-corporate partnerships. We have given up to 25 scholarships in one year in various categories.

ASEI is constantly strengthening its partnerships with industry leaders, businesses, universities, engineering organizations and local community group to broaden its reach and provide platform for fellow engineers to thrive and realize socially responsible. If you want to join the family of ASEI, please meet our membership chair Mr. Dr. Kupp Sridhari or ask our volunteer at registration desk.

Once again, I appreciate your attending the convention, making ASEI your platform to network, mentor, connect to likeminded member and promote your business. We strongly encourage you to become mentor for engineering students and help them achieve their goals. Should you require any special need, please do not hesitate to contact me. Thank you for your participation!

I wish you all good luck!

Mindel

Hari B. Bindal, PE

## Message from Ambassador of India - Nirupama Rao



भारत का समहित बारणस्य से सी.

AMBASSADOR OF INDIA 2107 MASSACHUSETTS AVE, N.W. WASHINGTON, D.C. 20008

September 16, 2013

#### MESSAGE

I am happy to learn that the American Society of Engineers of Indian Origin (ASEI) is organizing its 28th National Convention on September 27-28, 2013 at the University of Maryland, College Park.

Over the years, members of ASEI have made impressive contributions in the fields of innovation and technology development in the United States and have forged mutually beneficial partnerships between our two countries. The theme of ASEI's Convention this year, "Innovative Technologies: An Engine for Economic Growth" is extremely relevant for expanding India-U...S trade and economic partnership. India is on a sustained path of inclusive economic growth and striving to become a knowledge and innovation-driven society. As a catalyst for economic growth, the innovation space and technology development have been dynamic areas of cooperation among entrepreneurs, engineers, scientists from our two countries. I am confident that members of the ASEI will continue to play an important role in harnessing mutual complementarities so as to achieve the full potential of technology, innovation and economic partnerships between our two democracies.

On the occasion of their National Convention, I commend all members of the ASEI and wish them every success in their future endeavors.

(Nirupama Rao)

Ambassador of India to the United States

Nimpama Rao

## Message from Senator Barbara Mikulski



WASHINGTON, D.C. 20510

BARBARA A. MIKULSKI MARYLAND

September 28, 2013

Dr. Shreekant Agrawal, Chairman American Society of Engineers of Indian Origin Sterling, Virginia 20164-8672

Dear Dr. Agrawal & Friends:

Greetings to the members and guests of the American Society of Engineers of Indian Origin on the occasion of your 28th Annual Convention. Thank you for the kind invitation to share this informative event with all of my good friends from the Indian American community. Congratulations to all of this evening's distinguished award winners. You have worked hard to earn the respect and admiration of your peers. Savor the satisfaction this recognition must surely bring to you.

The American Society of Engineers of Indian Origin, National Capital Chapter, represents some of the preeminent cutting edge businesses and entrepreneurs in the Mid-Atlantic region. Both the public and private sector have come to depend on the high quality of goods and services your members provide. Collectively, you set the bar high for professional services and game-changing solutions to current challenges.

Friends, I have great respect for the work that you do. And I share your support for STEM education programs for our children. This is an investment that creates jobs and meets a compelling human need. That's why I am ALWAYS pleased to support science, technology, engineering, and math (STEM) funding in the Commerce, Justice & Science Subcommittee bill. These dollars will provide teacher training in the areas of science, technology, engineering, and math as well as the tools to energize and inspire our next generation of STEM students.

Our nation is in an amazing race for discovery and new knowledge to remain competitive and to foster an innovation society. Future scientists, mathematicians and engineers will create new ideas that will lead to new breakthroughs, new products and new jobs. These innovations will have the power to save lives, create prosperity, protect the homeland and make America safer, stronger and smarter.

Thank you for all you do every danto keep the dream of America alive for all our children.

United States Senator

Willelder

#### Message from Mayor of College Park Andrew Fellows

#### CITY OF COLLEGE PARK, MARYLAND

1500 Knox Road, Collegy Park, Maryland 20749-3300 - 249-187-3501 - Facsimile 304-620-8029



Office of the Mayor

Andrew M. Fellows Mayor September 10, 2013

To Participants of the ASEI 28th Annual National Convention:

On behalf of the City of College Park, I would like to extend a warm welcome to all attendees of the ASEI 28th Annual National Convention being held at the University of Maryland on Saturday, September 28, 2013.

The theme of the convention, "Innovative Technologies: An Engine for Economic Growth" is an important topic, especially in our challenging economic climate. It is important to attend events such as this which serve to bring inspired people together. With the variety of interactive workshops, demonstrations and resources available at this convention I am confident that you will find the support you need to remain on the cutting edge in your field. Your keynote speaker, Maj. Gen. Charles Frank Bolden, Jr., (USMC-Ret.), 12th Administrator of the National Aeronautics and Space Administration, is a model for all that can be achieved.

I hope that you will enjoy your time in College Park, and will have an opportunity to visit our local attractions and businesses. Information on dining and events in College Park is available at www.shopcollegepark.org.

Best wishes for a successful convention!

Very truly yours.

Andrew M. Fellows

Mayor

Home of the University of Maryland



## Keynote Speaker



Charles F. Bolden, Jr., NASA Administrator (July 17, 2009 - present)

Maj. Gen. Charles Frank Bolden, Jr., (USMC-Ret.) was nominated by President Barack Obama and confirmed by the U.S. Senate as the 12th Administrator of the National Aeronautics and Space Administration. He began his duties as head of the agency on July 17, 2009. As Administrator, Bolden leads a nationwide NASA team to advance the missions and goals of the U.S. space program.

At NASA, Bolden has overseen the safe transition from 30 years of space shuttle missions to a new era of exploration focused on full utilization of the International Space Station and space and aeronautics technology development. He has led the agency in developing a Space Launch System rocket and Orion spacecraft that will carry astronauts to deep space destinations, such as an asteroid and Mars. During Bolden's tenure, the agency's support of commercial space transportation systems for reaching low-Earth orbit have enabled successful commercial cargo resupply of the space station and significant progress toward returning the capability for American companies to launch astronauts from American soil by 2017. The agency's dynamic science activities under Bolden include an unprecedented landing on Mars with the Curiosity rover, launch of a spacecraft to Jupiter, enhancing the nation's fleet of Earth-observing satellites, and continued progress toward the 2018 launch of the James Webb Space Telescope, the successor to the Hubble Space Telescope.

Bolden's 34-year career with the Marine Corps also included 14 years as a member of NASA's Astronaut Office. After joining the office in 1980, he traveled to orbit four times aboard the space shuttle between 1986 and 1994, commanding two of the missions and piloting two others.

Bolden earned a Master of Science degree in systems management from the University of Southern California in 1977. In 1978, he was assigned to the Naval Test Pilot School at Patuxent River, Md., and completed his training in 1979. While working at the Naval Air Test Center's Systems Engineering and Strike Aircraft Test Directorates, he tested a variety of ground attack aircraft until his selection as an astronaut candidate in 1980.

## Banquet Speaker



Dr. Wallace D. Loh President, University of Maryland

As the 33rd president, Loh leads the state's flagship institution with 37,000 students, 12 colleges and schools, 9,000 faculty and staff, an annual \$1.7 billion operating budget (including \$500 million in external research funding) and a \$1 billion fundraising campaign.

Previously, he served as executive vice president and provost at The University of Iowa. He also served as dean of arts and sciences at Seattle University, director of executive policy and chief policy advisor to Governor Gary Locke of Washington (now the U.S. Ambassador to China), vice

chancellor for academic affairs and dean of faculties at the University of Colorado-Boulder, and dean of the University of Washington Law School.

While working in Washington State government, Loh formed and staffed Governor Locke's "2020 Commission on the Future of Post-Secondary Education." The Commission's work resulted in the "Washington Promise Scholarship" that expanded college access for students from low- and middle-income families.

Born in China, he moved with his family to Peru. After graduating from high school there, he immigrated alone to the U.S. and became a naturalized citizen. Education: J.D., Yale Law School; Ph.D., The University of Michigan; M.A., Cornell University; B.A., Grinnell College; graduate study, Universiteit te Leuven (Belgium).



#### **Inaugural Speakers**



Dr. Darryll J. Pines

Dean, The Clark School of Engineering

Darryll J. Pines became Dean and Nariman Farvardin Professor of Aerospace Engineering at the Clark School on January 5, 2009, having come to the school in 1995 as an assistant professor and served as chair of the school's Department of Aerospace Engineering from 2006 to 2009.

As dean, Pines has led the development of the Clark School's current strategic plan and achieved notable successes in key areas, such as improving teaching in fundamental undergraduate courses and raising student retention; achieving success in national and international student competitions; giving new emphasis to sustainability engineering and service learning; promoting STEM education among high school students;

increasing the impact of research programs; and expanding philanthropic contributions to the school. Today, the school's one-year undergraduate retention rate and five-year graduation rate is 90 percent and 65% respectively, the university's Solar Decathlon team placed first worldwide in the most recent competition against other leading universities, our Engineers Without Borders chapter is considered one of the nation's best, and the Engineering Sustainability Workshop launched by Pines has become a key campus event.

Pines has been director of the Sloan Scholars Program. Pines also served as Program Manager for the Tactical Technology Office and Defense Sciences Office of DARPA (Defense Advanced Research Projects Agency).

Pines received a Distinguished Service Medal. He also held positions at the Lawrence Livermore National Laboratory (LLNL), Chevron Corporation, and Space Tethers Inc. At LLNL, Pines worked on the Clementine Spacecraft program, which discovered water near the south pole of the moon. A replica of the spacecraft now sits in the National Air and Space Museum.

Pines is a fellow of the Institute of Physics, the American Society of Mechanical Engineers and the American Institute of Aeronautics and Astronautics, and has received an NSF CAREER Award.

Pines received a B.S. in mechanical engineering from the University of California, Berkeley. He earned M.S. and Ph.D. degrees in mechanical engineering from the Massachusetts Institute of Technology.



**DELEGATE ARUNA MILLER** 

Democrat, District 15, Montgomery County

Aruna Miller was born in India and arrived in the United States in 1972. Along with her two siblings and parents, Aruna lived in Poughkeepsie, New York, where IBM employed her father as a mechanical engineer. She attended public schools in New York and then attended Missouri University of Science and Technology in Rolla, where she was graduated with a degree in Civil Engineering.

In 1990, Aruna moved to Montgomery County, Maryland where she married her college sweetheart, David Miller. Aruna and David have been happily married for over twenty years and have three daughters: Meena, Chloe, and Sasha who attend Montgomery County Public Schools. Through her career as a transportation

engineer, Aruna has worked in Virginia, Hawaii, and California. However for the last twenty years, she has been employed by Montgomery County as a transportation engineer. She has overseen programs that advanced access to schools, employment centers, and community facilities that are safe for pedestrians, bicyclists, transit users, and those with disability.

As a Democrat, Aruna has worked on fund raising efforts for presidential candidates and has worked as a precinct official. In December 2006, Aruna successfully ran to represent Montgomery County Democrats as an At-Large member of the Montgomery County Democratic Central Committee. Aruna also serves on the Board of Directors for the Montgomery County Public Schools Educational Foundation, Inc. (MCPS EF). Since its inception, the MCPS EF has awarded more than 1 million dollars in scholarships in addition to more than \$900,000 in grants.

Aruna Serves on the Ways and Means (revenue subcommittee transportation subcommittee) and is a member of the Land Use and Transportation Committee, Montgomery County Delegation.



#### **Luncheon Speakers**



**Dr. Arun Seraphin, Office of Science and Technology Policy (OSTP), The White House**: Dr. Arun A. Seraphin is the Assistant Director for Defense Programs at the White House Office of Science and Technology Policy (OSTP). His areas of responsibility include developing and implementing White House initiatives and policies in areas including defense research and engineering; defense manufacturing and industrial base; and promoting innovation in government research and engineering organizations. He is currently on detail to OSTP from the Defense Advanced Research Projects Agency (DARPA) where he is the Special Assistant for Policy Initiatives to the Director of DARPA.

In 1996, Dr. Seraphin earned a Ph.D. in Electronic Materials from the Massachusetts Institute of Technology, where he performed research on silicon nanotechnology. His research focused on the development of novel silicon nanostructures and tailoring their optical properties. He also holds

bachelor's degrees in Political Science with a concentration in American Government and Engineering Science with a concentration in Materials Science from the State University of New York at Stony Brook.

Abstract: Dr. Seraphin will discuss how engineering, scientific and technology professionals in general and those from the Indian-American community can participate in the STEM program.



**Dr. Pramod S. Khargonekar, Assistant Director, National Science Foundation**: The National Science Foundation (NSF) selected Pramod P. Khargonekar to serve as assistant director for the Directorate of Engineering (ENG). Khargonekar leads the ENG directorate with an annual budget of more than \$800 million. ENG invests in frontier engineering research and education, cultivates an innovation ecosystem, and develops the next-generation engineer.

NSF's investments in engineering research and education aim to build and strengthen a national capacity for innovation that can lead over time to the creation of new shared wealth and a better quality of life. The engineering directorate also supports NSF's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

Khargonekar's engineering research encompasses control systems theory and applications, smart grid and renewable energy, semiconductor manufacturing, and modeling and control of neural systems, among other areas. He has received many awards and honors, including the IEEE Baker Prize, American Automatic Control Council's Donald Eckman Award



#### **DELEGATE SAM ARORA**

Democrat, District 19, Montgomery County

Sam Arora is a Maryland state Delegate from District 19 and serves in the House Judiciary Committee. An advocate and small businessman, Sam came to the House of Delegates with more than a decade of public service experience.

#### A Career in Public Service, Fighting for Progressive Values

Arora's experience in government includes positions in the U.S. Senate and clerkships with the criminal appellate division of the U.S. Attorney's Office and Maryland Attorney General Douglas F. Gansler. Under Gansler, Arora published resources for Maryland non-profit organizations to navigate the State's legal requirements and helped

prepare legislation to ban the sale of the hallucinogenic drug Salivia divinorum in Maryland.

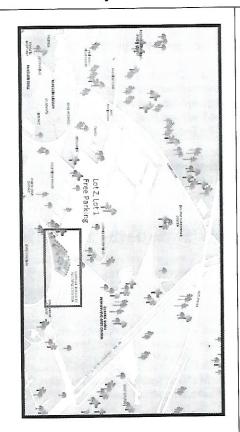
A graduate of Georgetown Law, Arora has also been a leader in the American Bar Association, where he served on the policy-making body of the 410,000-attorney organization.

#### **Small Business Experience**

Arora is Vice President for Business Development of the Arora Group, a Montgomery County business that provides health care services to veterans, active-duty military personnel, and their families.

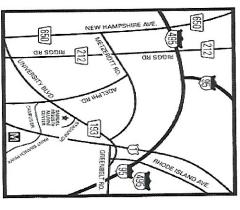


## Convention Venue Layout

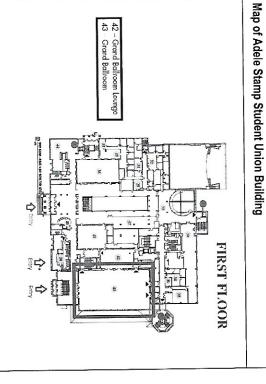


THE SAMUEL RIGGS IV ALUMNI CENTER is situated on the University of Maryland, College Park, campus—conveniently located off of I-495 and close to the College Park Metro Station. The center is at the hub of the university's northwest corner next to the Clarice Smith Performing Arts Center and Bral Stadium.

Map of Riggs Alumni Center



From Poute 1.



## **Convention Schedule**

			Friday, S	eptember 27, 20	13
Time Event		L	ocation	Remark	
Start	End		Location		Remark
4:00 PM	9:00 PM	Registration	Clario	n Inn Lobby	
4:00 PM	6:00 PM	Cocktail/Network	Clarion In	n Banquet Hall	
6:00 PM	10:00 PM	Dinner/Entertainment		n Banquet Hall	
			Saturday,	September 28, 20	013
Start	ime End	Event	Location		Remark
7:00 AM	4:00 PM	Registration	Riggs Alumi	ni Center - Lobby	Desks for Pre-registered and New Registrants
7:30 AM	4:00 PM	Exhibits		iter - Orem Alumni Hall	Back of the room and Lobby
7:15 AM	8:00 AM	Breakfast	Riggs Alumni Cen	ter - Orem Alumni Hall	Continental
8:00 AM	8:45 AM	Inaugural/plenary	Riggs Alumni Cen	ter - Orem Alumni Hall	Joint
8:45 AM	9:30 AM	Panel - Contributions of Indian-Americans	Riggs Alumni Cen	ter - Orem Alumni Hall	Joint Panel of 45 minutes
9:30 AM	9:40 AM	Break	Riggs Alumn	i Center - Lobby	Refreshments & Setup
	10:55 AM	55 AM Technical Panels	Room A	ter - Orem Alumni Hall Room B	
9:40 AM			Track 1 Healthcare IT	Track 2  Energy Issues &  Traditional Energy	Panels of 1 hr 15 mts each, Capacity 150 each
0:55 AM	12:10 PM	Technical Panels	Information Technology		Panels of 1 hr. 15 mts each
2:10 PM	1:45 PM	Luncheon	Riggs Alumni Cent	er - Orem Alumni Hall	Includes Luncheon Speakers, WHEELS and scholarsh awards
:45 PM	1:50 PM	Break	Open		Setup
		PM Technical Panels		er - Orem Alumni Hall	
:50 PM	2:50 PM		Room A Track 1	Room B Track 2	
			Nanotechnology	Space/Aeronautics Govt & Commercial	Panels of 1 hr 15 mts each, Capacity 150 each
50 PM	3:00 PM	Break			Refreshments & Setup
00 PM	4:00 PM	Panel Discussion	ST	EM	Joint Panel of I hr
00 PM	5:30 PM	Break	Op	oen	Time for change and dress up
00 PM	8:00 PM	Registration	Grand Ballroom Lo	obby, Stamp Union	Desks for Pre-registered and New Registrants
30 PM	6:30 PM 8:30 PM	Social/Cocktail hour  Welcome, Keynote and  ASEI Awards	Grand Ballroom Lounge Stamp Union  Grand Ballroom, Stamp Union		Appetizers, soft drinks, and Cash Bar  MC (2), National Anthems (6 mts), UMD Cheerleaders Dance (6 mts), MC (2), ASEI-UMD Welcome (3 min), Convention Chair (5), UMD President (5 mts), ASEI Stat (10), Keynote Speech by NASA Administrator General Charles (20 min), ASEI Awards (15), 2 Guests (10),
80 PM	9:35 PM	Dinner and CERP Awards	Grand Ballroom, Stamp Union		Boeing banquet (15), HFH/WHEELS (10)  1 hr 5 mts. CERP Awards
5 PM	10:30 PM	Entertainment	Grand Ballroom, Stamp Union		Indian Kathak Dance (15 mts), UMD Cheerleaders (8+10
30 PM	11:00 PM	Closing	Grand Ballroom, Stamp Union		mts), Bhangra (15 mts)  Check cleanliness, Payments, Security, Lights,
				otember 29, 2013	Equipment
DAM 1	11:00 AM	Board Meeting	Clarion	nember 29, 2013	

#### **Technical Session Speakers**

#### Panel: Contributions of Indian-Americans



**Dr. Gulab Bhavanani**, **Program Director**, **WHEELS Global Foundation**, **PanIIT**: Gulab is Program Director for WHEELS - a public-private partnership program launched by Capital IIT Alumni Association, designed to promote social entrepreneurship and encourage skilled professionals to spawn ventures to create jobs and contribute to the improvement of lives of citizens in the US and India. As an entrepreneur, he launched and ran a successful call center products company delivering technology and consulting services to commercial and government clients.. Mr. Bhavnani serves on the board of the Capital IIT Alumni Association, and is on the PanIIT Leadership Council. He also is active as an independent consultant, specializing in outsourcing. Gulab Bhavnani graduated from IIT Kharagpur in 1966, and started his technical

career with IBM Corporation in Calcutta.

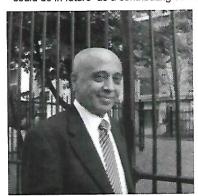
**Abstract:** Indians have travelled and settled all over the world, long before Mahatma Gandhi in South Africa began a remarkable journey that brought us independence from foreign rule in India more than 50 years ago. Since then, Indians have brought about steady and effective change wherever they have settled, and particularly in the industrial West.



**Dr. Abraham Thomas, Founder, Global Organization of People of Indian Origin (GOPIO):** Dr. Abraham has been serving the NRI/PIO community for the last 40 years. He served as the first president of the Federation of Indian Associations (FIA) of New York which does the largest India Day Parade outside India and the National Federation of Indian American Associations (NFIA).

Dr. Abraham was presented with Bharatvanshi Gaurav (Person of Indian Origin Pride) Award by former Vice President of India Bhairon Singh Sekhawat on January 4th, 2008, Pravasi Bharatiya Samman (Overseas Indian Honor) Award by President of India on January 9th, 2008 and Life. A graduate of Columbia University, Dr. Abraham is a materials scientist and nanotechnologist by profession and is President of Innovative Research and Products, Inc., an industry and market research firm based in Stamford, CT, USA. Tel: 203-329-8010, E-mail: <a href="mailto:gopio@optonline.net">gopio@optonline.net</a>, <a href="www.gopio.net">www.gopio.net</a>

Abstract: With strength of 3.7 million, Indian Americans constitute the third fastest growing community in America after Mexican and Filipino Americans. It has made substantial contribution to the American society in various spheres whether political, social economic and cultural. It has made some impact in science and technology, health care, education, hospitality, IT and new generation technologies. By mobilizing the community through various community organizations, the community had also made substantial contribution to improved US-India relations. Dr. Abraham will provide a perspective of the Indian American community and what we could do in future as a contributing community.



**Tejinder Singh, Editor, IndiaAmericaToday.com**: **Tejinder Singh**, a veteran multimedia political and business journalist, is the founder and editor of India America Today (on the web at www.indiaamericatoday.com), an independent media organization and news provider based in Washington, DC.

India America Today strives to empower and unlock the potential of the Indian American community through the teamwork of professionals who are dedicated to truth, quality, and the highest ethical standards to produce a compendium of news, objective coverage of events and eclectic professional view points.

Previously, **Tejinder** distilled the mountains of EU paperwork into easily digested reports for readers of APM News, formerly part of Reuters. He also has years of experience in broadcast journalism, working with BBC, South African Broadcasting Corp., and Flemish-English and Indian networks.

**Tejinder** was the National Press Club's Chair of the Newsmakers Committee for 2010. He currently serves on that committee, as well as the Broadcast Committee and the International Correspondents Committee.

He is the current Vice-President (Print) for the Asian American Journalists Association (AAJA-DC).





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# Best Wishes to ASEI on the 28th National Convention 2013 and 30th Anniversary of Founding of ASEI from Astrox Corporation



# Dr. Ajay P. Kothari President

Phone: 301-948-4646 | Fax: 301-328-0251 a.p.kothari@astrox.com | www.astrox.com



#### Panel: Healthcare Information Technology



**Dr. Vish Sankaran, Healthcare Strategist:** Mr. Sankaran is a business growth and change strategist to multiple companies including integrators, product companies, Quality Improvement Organizations (QIO), Medicare Administrative Contractors (MAC), Accountable Care Organizations (ACO), venture capitalists, national labs and state health companies. He also serves as a strategist to federal and state health agencies (Medicare, Medicaid, HIT) in the areas of business solutions, enterprise transformation, program planning, solution design and implementation. Also, Served as the CMS business and technology transformation expert responsible for improving program performance, enhancing customer experience and reducing cost of operations. Provided technical and architecture consultation on business operations and the development, implementation and evaluation of HITECH and Affordable Care Act (ACA) programs.

Abstract: Delivery system, payment & revenue models are evolving. ACA is driving major policy changes in the health industry. Value based, patient centered care is forging ahead! Growth for healthcare companies in the past was about increasing price on a captive customer base. Growth in the future will be about providing value to purchasers. Payers are facing competition from other agile payers, risk bearing large provider systems, and from companies outside healthcare who have mastered customer engagement. To be successful, payers will have to move from financing health care to coordinating health as wellness solution companies and providers will have to deliver higher quality care at lower cost.



Dr. Shantanu Agrawal, MD, Centers for Medicare & Medicaid Services (CMS): Shantanu Agrawal is a Board-certified Emergency Medicine physician and Fellow of the American Academy of Emergency Medicine. He is currently the Director of Data Sharing and Partnership and Medical Director for the Center for Program Integrity (CPI) at the Centers for Medicare & Medicaid Services (CMS). CPI's mission is to prevent and detect waste, abuse, and fraud in Medicare and Medicaid. Prior to joining CMS, Dr. Agrawal worked for McKinsey and Company, where he served mainly provider and payer clients in the public and private sectors. Dr. Agrawal completed his clinical training and education at the Hospital of the University of Pennsylvania and Cornell University Medical College. He also has a Masters degree in Social and Political Sciences from Cambridge University. Dr. Agrawal continues to work clinically and hold an academic position in Washington DC.

Abstract: The Center for Program Integrity (CPI) at the Centers for Medicare & Medicaid Services (CMS) is charged with the prevention and detection of waste, abuse, and fraud in Medicare and Medicaid. Formed just prior to the passage of the Affordable Care Act and enhanced by this legislation, CPI has focused on novel technologies and approaches to meet its mission. Among these efforts and programs are advanced predictive analytics, provider screening and assessment, partnerships with the private sector, and creation of novel data sources for the broader healthcare community.



Dr. Ram Sriram, Chief, Software and Systems Division, Information Technology Laboratory, National Institute of Standards and Technology, Gaithersburg, MD 20899: Ram D. Sriram is currently the chief of the Software and Systems Division, Information Technology Laboratory, at the National Institute of Standards and Technology. Before joining the Software and Systems Division. He was also the manager of the Sustainable Manufacturing Program. Prior to joining NIST, he was on the engineering faculty (1986-1994) at the Massachusetts Institute of Technology (MIT) and was instrumental in setting up the Intelligent Engineering Systems Laboratory. Sriram has a B.Tech. from IIT, Madras , India , and an M.S. and a Ph.D. from Carnegie Mellon University.

**Abstract:** We are witnessing a new revolution in computing and communication. The Internet, which has spanned several networks in a wide variety of domains, is having a significant impact on every aspect of our lives. The next generation of networks will utilize a wide variety of resources with significant sensing

capabilities. Such networks will extend beyond physically linked computers to include multimodal-information from biological, cognitive, semantic, and social networks This talk will present a future vision for healthcare, which will involve smart phones, smart devices, and social networks, and research challenges associated with the emergence of such a smart networked society.

r. Aneel Advani, MD, Senior Vice-President, Healthcare, Everis Group, Associate Professor (Adjunct), Johns Hopkins University: Dr. Aneel Advani is a physician informaticist and a leader in applying health information technology to improve the health of communities and populations and advance public health and population medicine. Dr. Advani is currently Senior Vice-President for Healthcare at everis Group, a multinational management and information technology consultancy which develops and manages





several open source HER. Dr. Advani has served in various leadership capacities in federal service, including as the Associate Director for Informatics/CMIO at the Indian Health Service and CDC.

Abstract: The national health IT roadmap for the US includes both input subsidies for the adoption of EHRs by health providers as well as a vision for national health interoperability. We will review this roadmap in the context of the European experience in building national health IT infrastructure, specifically concentrating on the case of Spain as a signal example of European approach to health IT development. We will also cover the relationship between health reform, population health improvement, and the development of national health IT infrastructure and programs, learning for the experience of Spain with implications for the US policy and programs.

## Panel: Information Technology



Dr. Arun Sood, **Professor Computer Science and Director International Cyber Center, George Mason University and CEO, SCIT Labs, VA:** Dr. Arun Sood is Professor of Computer Science in the Department of Computer Science, and Director of the International Cyber Center at George Mason University, Fairfax, VA. His research interests are in security architectures; image and multimedia computing; performance modeling and evaluation; simulation, modeling, and optimization.

Dr Sood leads a university spin-off called SCIT Labs Inc, which is commercializing SCIT technology under license from GMU. Dr. Sood received the B.Tech (EE) degree from the Indian Institute of Technology (IIT), Delhi, in 1966, and the M.S. and Ph.D. degrees in Electrical Engineering from Carnegie Mellon University, Pittsburgh, PA, in 1967 and 1971, respectively.

**Abstract:** Abstract: Virtualization technology has provided IT managers a new approach to reduce systems costs. Adopting virtualization has lead to increases in the server utilization. The trend to cloud has had a dramatic impact in this regard. While stand-alone server average utilizations were in

the 15 to 20 % range, the cloud average server utilization is more than 65%. The capital and operations cost reductions are significant, and in some organizations have lead to Cloud – First strategies, which leads to the Cloud Computing strategy being a major part of IT infrastructure planning.

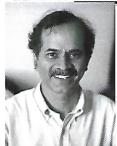


**Dr. Ashit Talukder**, Chief, Information Access Division, National Institute of Standards and Technology, Gaithersburg, MD 20899: **Dr. Ashit Talukder** leads and manages the Information Access Division in the Information Technology Laboratory at the National Institute of Standards and Technology (NIST). At NIST he leads and directs a division of over 100 researchers and staff, and leads Research Programs. He received his Ph.D. in computer science from Carnegie Mellon University and a MS from Iowa State University. He was previously at the Jet Propulsion Laboratory, California Institute of Technology, NASA.

**Abstract:** This presentation will cover the latest research and development activities in Big Data and its impact across various fields. Adoption of Big Data technologies can be accelerated by creation of reference datasets and challenge problems to drive improvements in Big Data R&D and tools. Advances in Big data science can be fostered by formulating new measurement methods and benchmarks, and metrics and models to measure performance of Big Data solutions, and creation of reference

architectures and guidelines for interoperability. Details of a new program at NIST will be discussed to assemble a broad multisector community of interest including researchers, end-users, and solution providers focused on advancing data science and Big Data technologies across all components of analytics, visualization, interaction, and data lifecycle management.





Dr. Rama Chellappa, Chair, Department of Electrical and Computer Engineering, University of Maryland: Prof. Rama Chellappa received the B.E. (Hons.) degree in Electronics and Communication Engineering from the University of Madras, India in 1975 and the M.E. (with Distinction) degree from the Indian Institute of Science, Bangalore, India in 1977. He received the M.S.E.E. and Ph.D. Degrees in Electrical Engineering from Purdue University, West Lafayette, IN in 1978 and 1981 respectively. During 1981-1991, he was a faculty member in the department of EE-Systems at University of Southern California (USC). Since 1991, he has been a Professor of Electrical and Computer Engineering (ECE) and an affiliate Professor of Computer Science at University of Maryland (UMD), College Park.

Abstract: Research in computer vision has undergone several generational shifts from adhoc/heuristic approaches in the sixties and seventies to model-based mathematical approaches in the eighties and

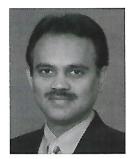
nineties to the more recent data-driven machine learning approaches. In this talk, I will briefly discuss some key developments in the data-driven approach and discuss how we can leverage the tremendous computational power and sensing capabilities that are at our disposal so that robust vision systems can be designed and transitioned. Examples from face/iris/object recognition, image-based indexing and retrieval, video processing and 3D modeling will be presented.



Vijai Garg, Founder / CEO / CTO, PROplus Systems Inc: Mr. Garg has enjoyed a successful and versatile career marked by many achievements. During his tenure at the Department of Space in India (1979-1989), his creativity manifested itself in the area of computer analysis where he developed logical techniques to overcome their computers' physical limitations.

Mr. Garg developed the SuperLayer architecture, a Rapid Application Development (RAD) toolset. SuperLayer was developed in SuperLayer itself and is an abstract layer and is used a language of development for Glovia. These 4GL forerunners allowed application developers to focus only on business knowledge, independent of technology details.

Abstract: In the global economic of the 21st century, the systems that supported the business could be thought of as "an environment in a box." IaaS, SaaS, PaaS, all are defined as a process the information services over the cloud, be it a public, private, or hybrid cloud. Providing web services to these boxed applications have traditionally been focused through DataBase integration and require Reverse Engineering and posing huge risk on compromising functionality. The world businesses are full of business processes that were developed before the current cloud was defined. This industry of legacy to cloud is highly infested by services industry and are doing it in a very crude way, by reverse engineering instead of re-engineering This presentation answers the questions like; What is Cloud? How can I effectively use Cloud and keep my Business Process?



Pannala Shekar, Executive Vice President, BNY Mellon Shekar Pannala, Executive Vice President, is the Chief Information Officer for Asset Servicing Technology at BNY Mellon. In this capacity, Shekar provides the technology leadership overseeing Performance & Risk Analytics, Accounting Services, Fund Services, Transfer Agency, Investment Management Outsourcing, Alternative Investment Services and other technology-related aspects of the business. Prior to his current role, Shekar served as CIO for Global Markets and Enterprise eCommerce Services. These responsibilities included managing the applications and development in support of FX, Derivatives and Capital Markets, as well as managing the all online information delivery platforms across the organization including mobile channels.

Shekar has a B.S. in Electronics and Communications with distinction, an advanced certification in Computer Science from National Center for Software Technology (NCST) in India and also completed

the Advanced Management Program from the Wharton School of Business.

Abstract: Financial industry has lead innovation over the decades and technology plays a crucial role in fueling such innovation. With over \$26 trillion in assets under custody and/or administration, and \$1.4 trillion in assets under management, BNY Mellon is the world's largest global custodian. It is no surprise that technology plays a significant role at BNY Mellon in introducing new products and helping our clients succeed in the marketplace. Learn more about the culture of innovation at BNY Mellon and how technology makes it possible to advance our strategic thinking.



## Panel: Energy - Traditional



Dr. Eric Wachsman Director, University of Maryland Energy Research Center, William L. Crentz Centennial Chair in Energy Research , University of Maryland: Dr. Eric D. Wachsman, Director of the University of Maryland Energy Research Center, is the William L. Crentz Centennial Chair in Energy Research with appointments in both the Department of Materials Science and Engineering, and the Department of Chemical Engineering at the University of Maryland.

He received his Ph.D. in Materials Science & Engineering from Stanford University, and his B.S. in Chemical Engineering from the University of California at Berkeley. He is a Fellow of The Electrochemical Society and The American Ceramic Society. In addition, he is Editor-in-Chief of *Ionics*, Editor of *Energy Systems*, Editor of *Energy Technology*, Editor of *Scientific Reports*, formerly an Associate Editor of *Journal of the American Ceramic Society*, Chair of the New Technology Subcommittee and the National Capital Section of The

Electrochemical Society, former Councilor of the Florida Section of the American Ceramic Society, and a member of the American Chemical Society, the International Society for Solid State Ionics, and the Materials Research Society. He has more than 220 publications and 8 patents on energy related technologies.

Dr. Wachsman is a frequent invited panelist on fuel cell and hydrogen energy research, ranging from the US Department of Energy "Fuel Cell Report to Congress" and "Basic Research Needs Related to High Temperature Electrochemical Devices for Hydrogen Production, Storage and Use," to the National Science Foundation "Workshop on Fundamental Research Needs in Ceramics," NATO "Mixed Ionic-Electronic Conducting (MIEC) Perovskites for Advanced Energy Systems," and the National Academies "Global Dialogues on Emerging Science and Technologies." He also serves on numerous boards and was appointed by the Governor to the Board of Directors of the Maryland Clean Energy Center.



Manny Singh, Chief Electrical Engineer, Bechtel Corporation: Manny Singh has more than 26 years of solid engineering design, functional management and project execution experience on Nuclear and Fossil Power Generation, OG&C, and Industrial plants, including over 19 years in supervisory roles. Manny has led large multidiscipline engineering teams with a successful record in performing / overseeing and execution of conceptual and detailed design of various, complex, grassroots and retrofit power projects.



Dr. Satish Kulkarni, Director Energy Initiatives, Virginia Tech, WHEELS Global Foundation, PanIIT: Dr. Kulkarni is the Director of Energy Initiatives at Virginia Tech and concurrently, Research Professor of Engineering Science and Mechanics and Affiliate Professor, Nuclear Engineering Program/ME. He also oversees the energy portfolio of WHEELS at Pan IIT. Previously, he was the Counselor for Science, Technology, Environment and Health Affairs at the Embassy of the United States of America in New Delhi, India as a Limited Term Foreign Service Officer with the Department of State. He helped facilitate collaborations between US and India in the nuclear energy /science field and developed the terms of reference of the S&T Endowment Fund for Innovation and Entrepreneurship as part of the Indo-US S&T Agreement.

He has a Ph.D. in Engineering Mechanics from Virginia Tech, MS and BS in Civil Eng from IIT Kanpur and Calcutta Univ, respectively.

Abstract: Introduction of nuclear power followed closely the development of nuclear weapons, and national security and energy security became interlinked. As a result, more than any other energy source, nuclear S&T and policy became two sides of the same coin. Proliferation became a major concern and the Nonproliferation Treaty (NPT) and its control mechanisms were established to stop the spread of nuclear weapons. Thus, in spite of Fukushima, several countries are forging ahead with ambitious plans to build nuclear power plants and the supporting infrastructure. Oil producing countries too have recognized that their petroleum reserves are finite and are considering nuclear power. These developments amplify the concerns about safety, safeguards and security, and increase the probability of nuclear proliferation and/or terrorism These include the end of nuclear testing, proliferation prevention, the Indian nuclear program and the US-India Civilian Nuclear Agreement.





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## Panel: Energy - Renewable



Dr. Mahesh Murthy, W. L. Gore and Associates: Mahesh is currently employed as a Global Product Manager at W.L. Gore & Associates, Inc. (Gore), a \$3BB fluoropolymer company headquartered in Newark, Delaware. In his 17 years at Gore, Mahesh focuses within this business include clean energy technology such as fuel cells and other energy storage devices such as batteries and capacitors. Mahesh's educational qualifications include a Ph.D. in Chemical Engineering and an MBA. Besides work, Mahesh enjoys traveling and exploring different regions of the world.

**Abstract:** Energy is a vital resource that supports economic growth. In the case of developed economies such as the US, energy is generally quite reliable; however the issues are related to energy security with less dependence on imports, improving efficiency while minimizing the release of greenhouse gases. On the other hand developing economies such as India have significant shortages

hampering the growth as demand continues to exceed supply. Alternative energy from renewable sources has become a hot topic of discussion as the world continues to look for solutions that provide greater efficiencies, improved reliability and most importantly at a unit cost that makes them attractive over fossil fuels. Along with wind and solar, hydrogen can be a viable source of energy for the future. This presentation will wrap-up, a vision of how we can transform to a more sustainable and greener economy based on renewable energy will be described.



Dr. Jeremy Mundy, Director, Munday lab, laboratory for solar and quantum technology, Energy Research Center, University of Maryland: Dr. Jeremy N. Munday is Assistant Professor in the Department of Electrical and Computer Engineering and Institute for Research in Electronics and Applied Physics, University of Maryland, College Park, MD 20742. His research focuses on fundament solar energy conversion processes with an emphasis on the optics, photonics, and thermodynamics of such systems. This ranges from improving the operation of traditional photovoltaics using macro and nano-structuring to emerging solar energy harvesting techniques using antenna structures. Our end goal is to demonstrate new technologies in order to make large-scale solar energy a reality.

**Abstract:** Solar energy is the most abundant energy resource available to mankind, and tremendous opportunities exist for its expanded use. In 2012, near 50% of all added electric capacity in the US came

from renewable resources, and 3,313 megawatts (MW) of that added capacity came from solar. Recently, scientific advances have helped improve the conversion efficiencies of these devices while simultaneously reducing their costs. In this talk, I will provide a snapshot of the current photovoltaics industry and outline scientific directions aimed at further improvement enabling solar to compete in a cost effective way with fossil fuel based technologies.



Dr. Sheryl Ehrman, Keystone Professor and Chair, Chemical and Biomolecular Engineering, University of Maryland: Sheryl Ehrman received her B.S. in Chemical Engineering from the University of California at Santa Barbara in 1991, and her doctorate from UCLA in 1997. Her professional research experience includes time spent working as a visiting scientist at the National Institute of Standards and Technology, Gaithersburg, MD, and as a National Science Foundation sponsored post doctoral fellow at the Paul Scherrer Institute, in Villigen, Switzerland. Since August of 1998, she has been a faculty member in the Chemical and Biomolecular Engineering Department, at the University of Maryland, College Park. She is also a participating faculty member in the Chemical Physics and Bioengineering Graduate Programs. Her teaching interests include introductory engineering design, thermodynamics, transport phenomena, and particle science and technology.

Abstract: Solar hydrogen production systems are not yet viable at an industrial scale, but development of low cost efficient photocatalyst systems that are stable with respect to corrosion would go a long way towards improving their commercial potential. In this presentation, an overview of aerosol processing for materials synthesis will be given with an emphasis on materials for solar energy harvesting applications. Research activities involving our laboratory and researchers at Dayalbagh Educational Institute (Agra, India) will be reviewed, in particular the synthesis, characterization and performance testing of copper oxide based photocatalysts for production of hydrogen by water splitting. An additional production route involving biological templating of anti-reflecting microstructures will be described. Recent results demonstrating control of nanoparticle size and shape, and results exploring effects of processing parameters on porous film morphology and resulting performance will be discussed.

#### Panel: Nanotechnology and Miniaturization



Dr. Nikhil Koratkar, Professor, Rensselaer Polytechnic Institute, John A. Clark and Edward T. Crossan Chair Professor in Engineering: N ikhil Koratkar is the John A. Clark and Edward T. Crossan Professor of Engineering at the Rensselaer Polytechnic Institute. Koratkar's research has focused on the synthesis, characterization, and application of nanoscale material systems. This includes graphene, graphene oxide, carbon nanotubes, fullerenes, as well as metal and silicon nanostructures produced by a variety of techniques such as exfoliation of graphite, chemical vapor deposition, and oblique angle sputter and ebeam deposition. He is the co-author of over 110 archival journal papers (these papers have garnered over 3,200 citations) and is presently serving as an editor of the Elsevier journal CARBON.

Abstract: Conventional graphitic anodes in lithium-ion batteries provide a maximum specific charge storage capacity of ~372 mAh/g. Moreover graphitic anodes cannot provide high power densities due to slow diffusivity of lithium ions in the bulk electrode material. In my talk, I will describe novel photo-flash and laser reduced free-standing graphene paper as high-energy and high-power density capable anodes for lithium-ion batteries. These materials are also structurally robust and deliver stable performance for thousands of cycles of charge and discharge. I will explain the fundamental mechanisms that enable the superior performance of graphene based anode materials over their graphitic counterparts. Such electrodes are envisioned to be mass scalable with relatively simple and low-cost fabrication procedures, thereby providing a clear pathway towards commercialization.



Aditya Rajgopal, President/CTO, ChromaCode: I received my Doctoral, Masters and Bachelor of Science degrees in Electrical Engineering from Caltech. I am currently interested in the confluence between the needs of the medical community and the capabilities of the engineering community. As such, I have concentrated my efforts thus far on inventing and researching novel bio-chemical detectors and point-of-care disease diagnostics instrumentation. As a result of these efforts, I founded a molecular biology company in the greater San Diego Area (ChromaCode), that uses combinatorics and analytics for the design and interpretation of nucleic acid assays. I am currently President/CTO of that venture.

Abstract: Miniaturization allows us to make really small things. Advances in printing technology as allowed us to miniaturize computers from the size of houses to the size of candybars. I will talk about the these printing technologies can be leveraged to make micro laboratories on that are the size of fingers nails. I will show how these lab-on-chips can be used for local temperature control, immuno-sorbent assays, and for DNA manipulation. Furthermore, I will talk about a new paradigm: labs inside your body. By miniaturizing sensors and electronics enough, we have created structures that can be implanted inside the human body. I will show how these sensors could be used for glucometry and neural measurement.



Dr. Abraham Thomas, President, Innovative Research and Products (iRAP), Inc.: Dr. Abraham is president and founder of Innovative Research and Products, Inc., an industry and market analysis company based in Stamford, CT. Dr. Abraham has been conducting market research in advanced materials for 30 years. Starting as Director of the Advanced Materials Group at Business Communications Co. (BCC) of Norwalk, CT, Dr. Abraham became its Vice President of Research. A graduate of Malaviya national Institute of Technology (Jaipur, Rajasthan) and Columbia University (MS and PhD.), Dr. Abraham had worked earlier for Brookhaven National Laboratory and the University of Denver. Dr. Abraham was a member of the US delegation to Australia in 2008 at the US-Australia Cooperative Workshop on Sustainable Nanomanufacturing, .

Abstract: Nanotechnology and nano-enabled technologies are becoming cutting edge technologies which have become launching pad for new businesses and creating numerous products. The presentation looks some of the new generation nanomaterials including nanoceramics, nano silver & gold, nanotubes, graphene, nanofiber nanodiamonds, which are increasingly used for nanoenabled applications and review nanomanufacturing for new generation miniaturized products including computer chips, packaging, actuators & sensors and energy generation and storage devices. Some of the emerging markets forecasted by Innovative Research and Products are presented.



## Panel: Space and Aeronautics



Kavya Manyapu, Flight Test-Commercial Space Program, The Boeing Company- Space Exploration: Kavya K. Manyapu is a flight test engineer at the Boeing Company building NASA's next Commercial Spacecraft, CST-100. She holds a M.S in Aeronautics and Astronautics from MIT and a B.S in Aerospace Engineering from Georgia Institute of Technology and has worked on several space projects with various companies including Human Mars exploration studies. In 2010, she was selected as a crew member for an analog Mars Mission organized by Mars Society. She is a private pilot and a certified SCUBA diver and presently training in Aerobatics. Apart from her day job, Kavya enjoys educating and inspiring students to pursue careers in Engineering and Science and has reached out to over 1500 students in the past 2 years. She is also a professional Indian classical dancer and has won a National Award from the President of India titled 'Balashree' in 1999. Her distinguishing awards include Woman Engineer of the Year Award from the American Society of Engineers of Indian Origin (ASEI), Outstanding Alumna of the Year and Outstanding Engineering Student of the Year Awards from Georgia Perimeter College, Youth Achievement Awards from Telugu Association of North America (TANA) and Metro Atlanta (TAMA) among

others. She is passionate about human space exploration and believes in the universal applicability of space research for the betterment of our planet.



**Dr. Ajay P. Kothari, President and CEO, Astrox Corporation:** Dr. Ajay Kothari is President and Founder of Astrox Corporation, an Aerospace R&D company located in suburban Washington DC. He has been Principal Investigator or Program Manager on more than 25 contracts from DOD and NASA, focused on rocket and hypersonic vehicle designs and studies which have led to an innovative hypersonic vehicle design for the Air Force in collaboration with Boeing. He has been a pioneer in developing the Inward Turning Hypersonic Vehicles which will be able to go to Low Earth Orbit.

He was President of his high school and was recipient of the "Best Student of the School" award for scholarship and extracurricular activities. He was also awarded National Merit Scholarship and has over 40 publications. He was awarded the "Engineer

of the Year" award by ASEI (American Society of Engineers of Indian Origin) in 2011 and has been invited to speak on aerospace subjects by many entities.

Abstract: This paper looks at the likely demands for orbital space tourism at a range of price levels significantly lower than those currently being offered via the Russian Soyuz vehicles, and explores the extent to which vehicle architectures can be developed which would make such price levels achievable. Conclusions are provided by identifying two such vehicle architectures which therefore represent a "sweet spot" where supply and demand for orbital trips would balance, and where therefore a commercial business could be developed to augment any governmental uses for such vehicles. The vehicles which emerge from the study are Two-Stage-to Orbit, fully reusable transportation systems using rockets and hypersonic air-breathing rocket based combined cycle vehicles.

## Panel: Science, Technology, Engineering and Math (STEM)



Suresh Shenoy, Senior Vice President, IMC, WHEELS: Suresh V. Shenoy is Executive Vice President at Information Management Consultants, Inc., a Virginia based systems consulting and Technology Company. The Capital IIT Alumni Association and the Fairfax County Chamber of Commerce. Mr. Shenoy also serves on the TechAmerica Board of Directors, the Board of Directors for Fairfax 2015 – the biennial World Games of Police and Fire Fighters with 12,000 athletes competing from 80 countries and is program leader for the WHEELS Foundation and serves on their board. He was the Program Committee Chairman of the PanIIT Global Conference held in Washington, DC in 2005. Mr. Shenoy served as co-President of the PanIIT Alumni Association in North America for the 2006-2008 Term. He is on the adjunct faculty of the School of Information Technology & Engineering at George Mason University where he teaches a course in Entrepreneurship and Business Innovation. Mr. Shenoy has traveled widely throughout Europe, Asia and the

Middle East, has a Bachelor's degree in Engineering from the Indian Institute of Technology, Bombay (1972), and a MBA from the University of Connecticut (1975).



Dr. Mamta Patel Nagaraja, Women@NASA, NASA Headquarters, Washington DC: Dr. Mamta Patel Nagaraja manages the Agency-wide Women@NASA program, trains astronauts who fly to the International Space Station (ISS) and flew aboard the U.S. Space Shuttle, and works in NASA's Mission Control Center as a certified flight controller for the communications system of the ISS. Dr. Nagaraja holds a Bachelor of Science in aerospace engineering from Texas A&M University, a Master of Science in mechanical engineering from the Georgia Institute of Technology, and a Doctor of Philosophy in biomedical engineering from Georgia Tech and Emory University. She is on Twitter @beyondthecurls and blogs on science and engineering for the Huffington Post.

**Abstract:** During this presentation, Dr. Nagaraja will discuss ways in which toys, online resources, and everyday items can be used to introduce young children to the concepts of engineering and science. As well, she will present recent data from a study looking at girls and STEM choices in an effort to spur discussion on the existence of the gender gap in technical fields. Moreover, her presentation will share some of the efforts NASA is making towards STEM outreach.



Dr. Arun Seraphin, Office of Science and Technology Policy (OSTP), The White House: Dr. Arun A. Seraphin is the Assistant Director for Defense Programs at the White House Office of Science and Technology Policy (OSTP). His areas of responsibility include developing and implementing White House initiatives and policies in areas including defense research and engineering; defense manufacturing and industrial base; and promoting innovation in government research and engineering organizations. He is currently on detail to OSTP from the Defense Advanced Research Projects Agency (DARPA) where he is the Special Assistant for Policy Initiatives to the Director of DARPA. In 1996, Dr. Seraphin earned a Ph.D. in Electronic Materials from the Massachusetts Institute of Technology

Abstract: Dr. Seraphin will discuss how engineering, scientific and technology professionals in general and those from the Indian-American community can participate in the STEM program.



Vikrum Aiyer, Advisor to the Deputy Secretary, Department of Commerce: Vikrum Aiyer is a political appointee for speech writing and a Special Advisor in the Obama Administration. A former communications aide to Congressman Ed Markey (D-MA) and DC Mayor Adrian Fenty (D) he has worked on communications strategies for campaigns, federal agencies and trade associations, including the State Department, the White House Initiative on Asian Americans & Pacific Islanders and the National Education Association.

Currently, he crafts messages for the President's Secretary & Under Secretary of Commerce for IP, where he frames the Administration's innovation and intellectual property strategies. Aiyer also spearheads public engagement and IP-outreach strategies aimed at boosting exports for small businesses and spurring advanced manufacturing opportunities in America. Aiyer attended the University of California, Berkeley and did his graduate work at the George

Washington University's School of Political Management. He lives in Washington, DC. where he serves on the steering committees for Refugees International, Big Brothers Big Sisters, and the Susan G. Komen Foundation.

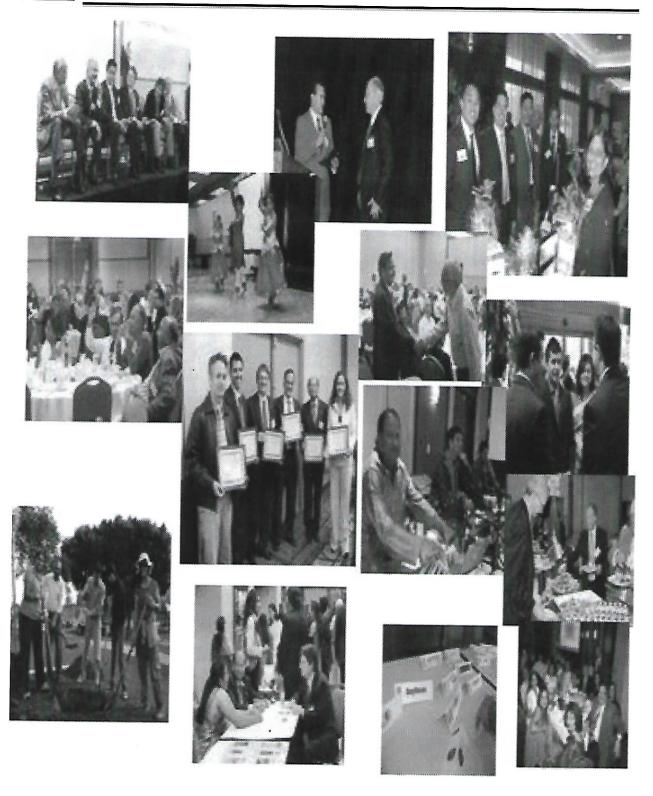
## **ASEI Past Convetions and Activites**













#### **ASEI Historical Moments!**

## Did you know ASEI was founded in 1983?





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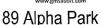
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#### ASEI Scholarship Awards

Each year, ASEI awards scholarships to outstanding student members that have achieved academic excellence in their field of interest. ASEI's investment into the educational pursuits of its younger members provides the necessary support they need to attain their goals. Scholarship awards are based on (a) demonstrated ability, (b) academic achievement, including GPA/honors/awards, (c) career objectives, (d) financial hardship, (e) faculty recommendations, (f) student involvement in science fair, campus activities, (g) industrial exposure including part-time work and internships, and (h) involvement in ASEI and other community activities.

#### ASEI KALPANA CHAWLA SCHOLARSHIP

This scholarship is instituted in memory of the highly accomplished NASA astronaut named Kalpana Chawla. She was one of the seven distinguished astronauts who lost their lives on the Columbia Shuttle Flight STS-107. This scholarship is in recognition of her contribution in the field of aerospace engineering for the benefit of mankind. The candidate will be judged for excellence in academics, leadership, and technical expertise. This annual scholarship will be awarded to one deserving graduate student in engineering at the ASEI National Convention. The scholarship amount is \$1500.

#### ASEI UNDERGRADUATE AND GRADUATE SCHOLARSHIPS

ASEI awards several merit scholarships every year to students attending graduate & undergraduate studies in any field of engineering, architecture, computer or allied science at an accredited college or university in the USA. The scholarship awards are presented at the ASEI National Convention. The scholarships range from \$500 to \$1000.

#### CRITERIA FOR SCHOLARSHIPS SELECTION

- a. The student should be an Indian by birth, ancestry, or relation
- b. The candidate should be enrolled as a full time student in engineering, architect, computer or allied science in an accredited college or university in USA
- c. Grade Point Average requirement based on a 4.0-point scale
  - a. 3.2 for Undergraduate scholarship
  - b. 3.5 for Graduate scholarship
  - c. 3.7 for Kalpana Chawla scholarship
- d. ASEI membership
- e. Must be present at the convention to receive the award

For information on how to apply for these scholarships, please inquire at scholarships@aseisocal.net



#### **ASEI Scholarship Winners**



Harinder Jit Singh (Kalpana Chawla Scholarship): Harinder Jit Singh is a doctoral candidate at the Department of Aerospace Engineering at University of Maryland College Park. His research focuses on theoretical and experimental analysis of occupant- protection seat suspension for helicopters, a project supported by The U.S. Naval Air Warfare Center at Patuxent River MD. The goal of the research is to minimize injuries to an occupant subjected to impact that a helicopter may encounter during hard or crash landing. Harinder also has served as a scientist at Defense R&D Organization, India where he worked on

upgrading military fighter jets and helicopters, after completing his bachelors in Aeronautical Engineering from Punjab Engineering College, India.



Parth Agarwal (Graduate Scholarship): Parth Agarwal is currently pursuing M.S. in Telecommunications Engineering at the University of Maryland-College Park (UMD), with a focus on Wireless networks, anticipated graduation in May 2014. B.E. in Electronics & Communications Engineering from Dharmsinh Desai University, India in 2011, he handled the role of Application Engineer for about a year before coming to pursue higher studies at UMD. Work Interests in Networks, Network Designing, Wireless Networks and Project Management. Have published his work in International journals and presented at International IEEE conference, had Interested in Soccer, Table Tennis, Computers and Biking as a hobby.



**Pranshu Patel** (graduate Scholarship): Pranshu Patel is a graduate student with the University of Maryland at College Park. I'm pursuing a Master's Degree of Sciences in Telecommunications. His home is in Mumbai, and gained his Bachelor's of Engineering degree from the University of Mumbai with First Class. He is fairly a self-motivated and organized person and he feels that this trait does help him in various fields. He has been able to maintain a good GPA so far in my Master's program and I aim to graduate with one too. My hobbies are reading books, listening to music and driving, dream car being the Lamborghini Aventador which he hope

to at least get to drive (if not own) someday.



**Snigdha Saklani** (Graduate Scholarship): Snigdha is a University of Maryland graduate student. Her major is Telecom engineer and she recently interned at Volvo AB. Her stay here in US has been an enriching experience and she is glad to be considered for this scholarship and proud to be an ASEI member.

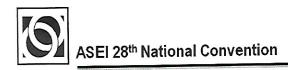


**Salil Goyal** (Graduate Scholarship): Salil Goyal is a graduate student in telecommunications at University of Maryland, College Park. He has done Bachelors of Technology from Chandigarh Engineering College. He has won several awards in technical competitions at IIT's which motivated him to pursue Masters of Science. He likes to be abreast with latest technologies therefore like reading technical newsletters and magazines.



Kaustubh Desai (Undergraduate Scholarship): Originally, from a small town in the state of Gujarat (India), Kaustubh is a sophomore currently majoring in Mechanical Engineering at Case Western Reserve University. In addition to being a student, He works as a Research Assistant at the university's bio robotics lab, and as an Administrative Assistant for the social sciences school. He is also the treasurer for the campus chapter of Hindu YUVA, a cultural organization with firm roots in community service. He loves playing table tennis and soccer, and is a part of the intramural scene on campus! He wants his educational journeys to culminate in a

place where he is a college professor working in the field of artificial intelligence.



#### **ASEI Awards**

ASEI recognizes its membership by offering a variety of awards. In 2010 ASEI recognized outstanding achievers in the following three categories:

#### 1. ASEI Excellence Award

This type of award is presented to an engineering professional or a student of Indian origin with exceptional contribution to the cause of Engineering science and businesses. The applicant will be judged against four criteria - professional achievement, service to the profession, service to ASEI organization and service to the community

- a. ASEI Engineer of the Year
- b. ASEI Entrepreneur of the Year
- c. ASEI Student of the Year
- d. ASEI Service Excellence of the Year
- e. ASEI Life Time Achievement (require over 15 years continuous service to ASEI, not given this year)

#### 2. ASEI Lifetime Achievement Award

This award is presented to an individual who has 1) been a member of ASEI for at least 15 years, 2) served and participated in various capacities in the activities of local and national chapters, and 3) contributed significantly to promote the vision and goals of the ASEI organization. This candidate is selected by the recommendation of the Award Committee and approval by the Chairman of the ASEI board.

- 3. ASEI Corporate Excellence Recognition Program (CERP) Developed in 2005, the CERP awards resulted from the collaboration of ASEI and top corporations within United States. The vision of CERP is to salute the innovative strength that comes from a diversity of human capital. This award recognizes corporate excellence of outstanding engineers of Indian origin who are employed in industry, academia or government entities. Candidates are nominated by their managers and approved by their Human Resources department. The CERP awards are presented for five categories as follows:
  - Corporate Engineering Excellence Award (Professional achievement)
  - Corporate Woman Engineer of the Year Award (Gender specific)
  - Corporate Young Engineer of the year Award (under 35 age, less than 10 years experience)
  - Corporate Outstanding Achievement Award
  - Corporate Service Excellence Award

The CERP awards criteria are based on achievements, innovation, leadership, teamwork, integrity, community service, and leadership roles in other professional societies such as SAE, AIAA and ASME, etc.

For information on how to apply for these awards, please inquire at awards@aseisocal.net

# ASEI Award for Excellence in Engineering, Science and Technology



Padmasree Warrior, Chief Technology & Strategy Officer, Cisco: Ms. Warrior is charged with aligning technology development and corporate strategy to enable Cisco to anticipate, shape, and lead major market transitions. She directs technology and operational innovation across the company. Previously, she served as Chief Technology Officer and Senior Vice President of Engineering responsible for collaboration, cloud computing and data center/virtualization, security, and architectures for business transformation..

She has been recognized by The International Alliance for Women's World of Difference Award, Forbes' "The World's 100 Most Powerful Women," Business Insider's "25 Most Influential Women in Wireless," Aspen Institute's Leadership in Science and Technology Award, and Cloud NOW's Top 10 Women in Cloud Award.

The Wall Street Journal has called Warrior one of "50 Women to Watch," Fast Company included her among the "100 Most Creative People in Business," and The Economic Times listed her as "the 11th Most Influential Global Indian". She was inducted into the Women in Information Technology International Hall of Fame. Warrior holds a bachelor of science degree in chemical engineering from the Indian Institute of Technology in New Delhi and a master of science degree in chemical engineering from Cornell University.

#### ASEI Entrepreneur of the Year



Robert (Bob) Nathan, President and CEO. DataNet Systems Corp: Robert (Bob) Nathan is President and CEO of DataNet Systems Corp., a 25-year Washington DC-based Information Technology services company, with providing IT Services to federal, state, and local governments in the areas of Health IT, Public Safety, Education, and eGovernance applications. His expertise extends to systems/software engineering, systems architecture, network infrastructure, simulation, telecommunications, and project/program management. Bob is the current President of the Maryland India Business Roundtable (MIBRT), and the current national President of IIT Madras Alumni Association of North America (IITMAANA). He sits on the boards of the Capital IIT and PanIIT organizations. Bob was part of the planning group that worked on the largest US Trade delegation led by Maryland Governor Martin O'Malley to India in November 2011. He was also a part of the Prince George's

County's Trade delegation to India Soft 2012, an IT conference organized by Indian Export Promotion Council in Hyderabad, India held in March 2012.

Bob holds a BTech (Chemical Engineering) from the Indian Institute of Technology (IIT), Madras, MS (Gas Engineering) from the Illinois Institute of Technology, Chicago; and MS (Computer Systems Management), University of Maryland University College, College Park.

#### ASEI Service Excellence of the Year



M (Krish) Krishnamurthy, Director, Aerospace & Defense Solutions, Siemens Product Lifecycle Management Industry Sector, Cypress, CA: Extensive experience in leading multi-disciplinary teams for product design, development and implementation across multiple industries. Responsible for reviewing customer situations and developing solution roadmaps for business process improvements. Has built teams in USA and overseas from scratch and transitioned them to operational organizations. Helped identify partners for developing add-on solutions for product development processes Integrations, and Industry specific solutions.

Life Member of ASEI and has held various ASEI positions including Key Note Chair for 2011 National convention, National Treasurer and currently President of ASEI Southern California Chapter. Krish has a MS in Management Sciences and MS in Chemical Engineering from University of Massachusetts and a B Tech in Chem. Eng. from University of Madras. He is active in Toastmasters International and was a Division Governor.

Krish lives with his family in Irvine CA.



### ASEI 28<sup>th</sup> National Convention



#### ASEI Life Time Achievement Award

**Dr. Gajanan M. Sabnis** is Emeritus Professor of Civil Engineering at Howard University, Washington, DC, USA for more than 32 years and combined teaching, industrial and research experience totaling to over four decades, including heading his own Construction Management firm with offices in New York and Maryland for 20 years. Dr. Sabnis involvement ASEI goes back when the organization was established and he has been a staunch supporter of ASEI activities and a strong believer of Indian expertise in technical fields.

A native of Mumbai, he obtained his B.E. from VJTI and M. Tech from IIT, Mumbai and later his Ph.D. from Cornell University, Ithaca, NY in 1967. Dr. Sabnis built and lived in an energy-efficient award-winning home he built in concrete with several recycled construction materials, which received national recognition.

He is the recipient of numerous honors and awards including the James Berkeley Gold Medal from University of Bombay. He is the Distinguished Member of ASCE, ICI, ACCE and Fellow of ACI, IEI and the registered Professional Engineer in MD, VA and DC.

#### **ASEI CERP Award Winners**



#### The Boeing Company



#### Dr. Bala. K. Bharadvaj, Outstanding Achievement

Dr.Bala Bharadvaj is currently the Managing Director of Engineering & Technology at Boeing India, based in Bangalore. In this role, he provides leadership to Boeing's Research, Technology and Engineering activities. Bala has contributed to a variety of projects spanning analysis, design, lab testing and flight testing. He has developed computational codes for aerodynamic analysis of airplanes and helicopters; held key leadership positions in major NASA-Industry initiatives and led the development of long-range technology plans for Boeing.

Bala holds multiple degrees in Engineering and Management: B.Tech. from IIT Madras, Ph.D. from the Georgia Inst. of Tech, USA; and MBA from the University of California. Bala is an Associate



#### Ms. Payal Patel, Woman Engineer of the Year

Payal Patel is currently a Systems Analyst/Project Manager at Boeing with expertise in Manufacturing and Quality. In the past 8 years, she has delivered measurable business value in the form of thousands of manufacturing labor hours saved in support of Rate Readiness improvements within the industry. Her exceptional performance has been recognized by manufacturing leadership with cash awards. Payal earned her Masters Degree in Electrical Engineering from New Jersey Institute of

Technology and has a Dale Carnegie certification in Leadership Skills and Human Relationships.



#### Dr. Krishna Sampigethaya Engineering Excellence

Krishna Sampigethaya is an Associate Technical Fellow at The Boeing Company. He is working on aviation cyber security, transportation cyber-physical systems (CPS), vehicular network security, and the NextGen at the Boeing Research & Technology division. He received Ph.D. degree in electrical engineering from the University of Washington. He has delivered over 5 keynotes and 1 plenary talk on aviation CPS and cyber-physical security. He is the founding chair for the SAE aviation cyber security technical committee. He has authored over 43 research publications, including two recognized with

Best Paper of Session awards at the 2010 and 2012 AIAA/IEEE DASC.





#### Mr. Shawn C. Sankaran, Young Engineer of the Year

Shawn is currently the Autonomy Systems lead on the new 702SP product line at the Boeing Satellite Development Center in El Segundo, CA. His work on GPS, that allowed him to be recognized as a "Modern Day Technology Leader" at the 2012 BEYA STEM Conference. On the side, Shawn is on the steering committee for the Los Angeles chapter of his alma mater (RPI), belongs to several technical and honor societies (e.g. ASME, Pi Kappa Phi, etc.), and has coached several seasons in the Central Redondo Beach Little League.



#### **Piping Technology & Products**



#### Durga D. Agrawal - Engineering Excellence

Dr. Durga Agrawal is the President and CEO of Piping Technology. He has earned his master's and doctorate in industrial engineering from the University of Houston after graduating with a bachelor's in mechanical engineering from the University of Delhi. In 1978, Durga established Piping Technology & Products, Inc. and since then acquired U.S. Bellows, Inc., Sweco Fab, Inc., Pipe Shields, Inc., and Fronek Anchor/Darling Enterprises. Durga serves on Several Department of Commerce ITAC committees, board member of the Texas Higher Education Coordinating Board, and the boards of several non-profit organizations.



#### Futurenet Inc.



#### Jay Mehta - Engineering Excellence

Jay Mehta is the Senior Vice President-Technology of FutureNet Group Inc. He graduated from Gujrat University with a degree in Computer Engineering. Jay has over 20 years of experience in the information technology industry and presently leads FutureNet Groups multiple teams in leading edge technical initiatives to safe guard client assets, maintain their data and achieve clients goals and objectives. He is experienced in ITIL, CMMI, procurement/contract management, process improvement and stakeholder management and collaboration



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#### **Hughes Network System**



#### Rajeev Kubba - Engineering Excellence

Rajeev Kubba is the Senior Director of Consumer Network Engineering for the North American Division at Hughes Network Systems. Mr. Kubba oversees a team of engineers responsible for end-to-end systems engineering and network support of HughesNet® broadband servicess. His team is responsible for providing technical expertise and strives to improve the stability and reliability of the HughesNet nationwide satellite Internet service by providing robust systems and core transport.

He has continued to provide excellence on many large dedicated network implementations for both North American and International customers. Mr. Kubba received B.E. in Electronics from Manipal University, India and M.S in Computer Engineering from Wayne State University, USA.



#### **Spinovation Corporation**



#### Albert John - Outstanding Achievement

Albert John is the Vice President, Asia Pacific of Spinovation Corporation, Albert has widespread experience in electrical and energy related industry focus on business development Asia pacific. Tactical strategist who addresses cost issues head-on, strengthening productivity and accelerating profit at challenged operations by his leadership. Prior to Spinovation, he worked at BBI and Megabarre where Albert was recognized as best performer for breaking into the new market in Asia Pacific. Albert has history of business growth throughout Asia pacific market, created 49% compounded growth for Spinovation in 24 months. Played key role in directing multi-site operations for Spinovation, business model

restructuring, logistics outsourcing, and cost control, with adept management of cultural and organizational diversity. He was instrumental in encouraging channel partner to improve their productivity and facilitate their business expansion in Asia Pacific and Middle East. Albert has B. Tech in Mechanical Engineering from DBTI, Delhi. Albert lives In Chennai, India with his wife Grace John and three sons.



#### Vinoth Kumar - Young Engineer of the Year

Vinoth Kumar is Implementation Engineer at Spinovation corporation, Chennai, India. Vinoth is responsible for deploying Busbar Trunking system for commercial clients. He is one the engineer who is instrumental in initiating BioGas into Spinovation's product portfolio. He has bachelors in Electrical & Electronics Engineering from Anna University, which he has completed in 2011.











American Society of Engineers of Indian Origin - Michigan Chapter

ASEI - NCC and UMD Student Chapter

On Hosting

The 28th Annual convention

ASEI Michigan Chapter has been very active throughout 2013. The main focus of 2013 activities has been monthly networking events. These networking events are based on presentations by subject matter experts on selected topics while providing networking opportunities to attendees. Topics covered during these events ranged from

- **Engineering Quality**
- Social Media Awareness, Impact of Immigration Laws Career Growth Opportunities in South East Michigan
- Wind Tunnel Testing for Automotive Applications
- Engineering Applications in Commercial and Defense Building Security Systems
  - Biomedical Wireless Technologies
- Finance for Entrepreneurship
- Intellectual Property Protection for Technical Innovation
- Security of Smart Devices
- Automotive Embedded Solutions Connecting Apps to Cars

ASEI Michigan chapter's annual banquet is planned for November 16th. This event is going to feature exhibition of technical projects from local middle and high school students. A multimedia presentation highlighting contribution of India in field of engineering and technology is also planned for the banquet.

www.ASEIMI.org





American Society of Engineers of Indian Origin Southern California Chapter

Southern California Chapter Congratulate and Supports ASEI NCC and ASEI UMD Chapter for hosting

ASEI 28th National Convention

**Convention Volunteers** 

**ASEI THANKS ALL THE VOLUNTEERS** 



ASEI would like to thank all the volunteers, listed below, for their time and tireless efforts in organizing and making the 2011 convention a successful event. These volunteers exhibited the true spirit of ASEI membership.

Sai Sasank Annasamudram	Sai Prasasthi	Anusha Gururaj Jamkhandi
Reha Gupta	Sandeep Reddy Kovvuri	Mohit Agrawal
Dhruv Bhardwaj	Riddhi Shah	Amit Janbandhu
Preeti Lakhole	Anand George	Priyansh jain
Vivian Thayil	Harshit Banthia	

#### Our sincere appreciation for the below individuals

Dr. Lipishree Nayak for singing national anthem on Saturday banquet

Ms. Aastha Verma for MC

Purvi Bhat for Kathak Dance

Annie Kennedy for Cheerleader Dance

Kartik Mathur for Bhangara Dance

Food caterer by Indique Heights (Surfi Rahman and Vinod)

Asha Prints

Dr. Neeraj Bindal, "A Visual Affair" for providing Eye Glass Liquid Cleaner bottle

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Systems Integration & Development, Inc.

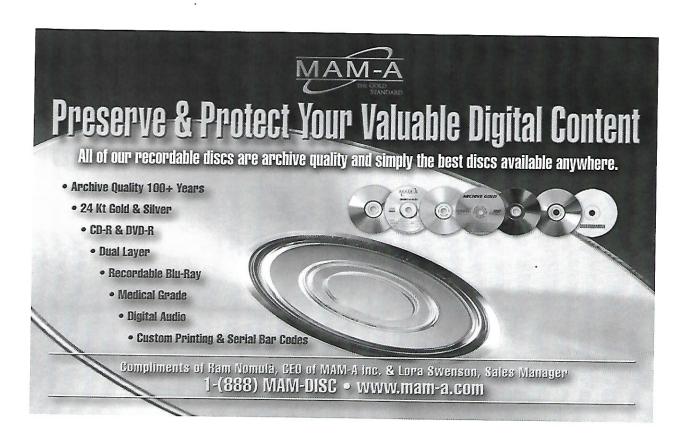
# Systems Integration & Development, Inc., congratulates the National Capital Chapter for hosting the 28th Annual Convention of the American Society of Engineers of Indian Origin. SID shares the ASEI-NCC vision for innovative technologies.

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President & Founder

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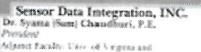
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# Best Wishes and Congratulations on ASEI 28th National Convention and

30<sup>th</sup> Anniversary Celebration of Founding of ASEI From



The Founder of ASEI

Mr. Hari B. Bindal

Best Wishes and
Congratulations on
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Convention
and
30th Anniversary of ASEI
From
Ashok Siddhanti
and
Smita Siddhanti

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and
30th Anniversary of ASEI
From
Vijay Mahida
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Sunanda Mahida

Best Wishes and
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ASEI 28th National
Convention
and
30th Anniversary of ASEI
From
Dr. Shreekant Agarwal
and
Dipti Agarwal

Best Wishes
and Congratulations
from
Dynamic Environmental
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on hosting
ASEI 28th National
Convention

#### **ASEI NCC Chapter Board Members**



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Mr. Manish.Dadhich

Joint Treasurer

#### **ASEI UMD Chapter Board Members**



I'd like to personally welcome each one of you to the ASEI 28th National Convention at University of Maryland, College Park. It's an exciting time for ASEI UMD chapter to grow and be responsive to Innovative Technologies that is guaranteed to fuel our economic growth.

We are very proud to host this exciting event along with our ASEI NCC chapter and national board. We have put together interesting topics, which will inspire and bring people together and ensure ASEI remains at the fore front and continue to inspire students and professionals.

My board members and I would like to thank each of you for attending our convention and bringing your expertise to our gathering. You, as organization leaders, have the vision, the

knowledge, the wherewithal and the experience to help us pave our way into the future. You are truly our greatest asset and we could not accomplish anything without your support and leadership. Throughout this conference, I ask you to stay engaged, stay proactive and help us shape the future. My personal respect and thanks goes out to all of you – Mayur Kathuria, President, UMD Chapter



Rahul Bangera - Treasurer



Salil Goyal - Vice-President



Manish Karani -Public Affairs



Snigdha Saklani- Secretary



Ananya Mohanty - Publicity

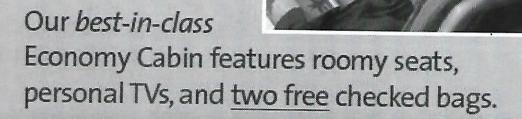


Taran Kalra - Head of Logistics

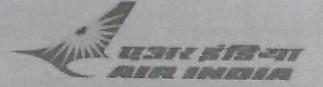


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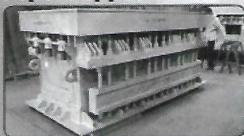
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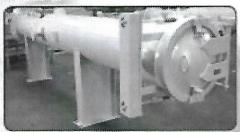






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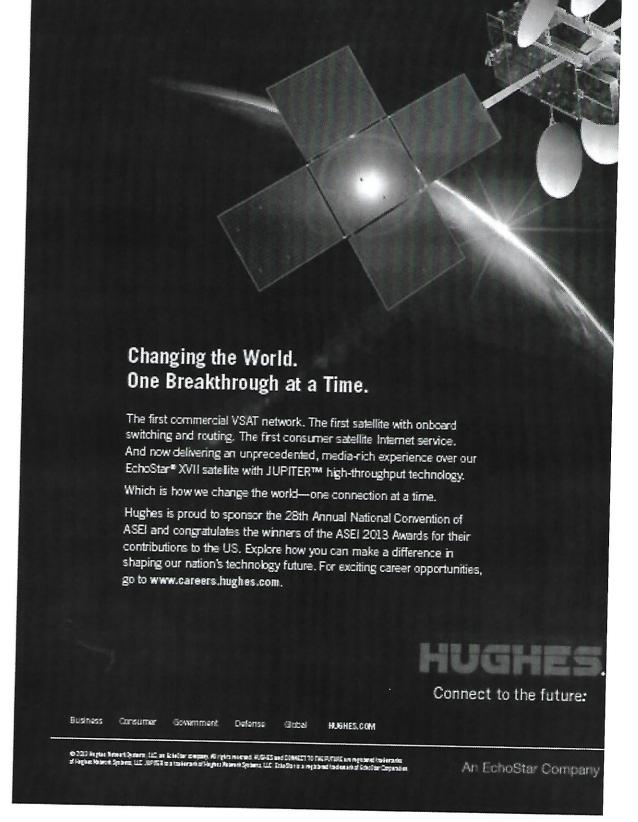


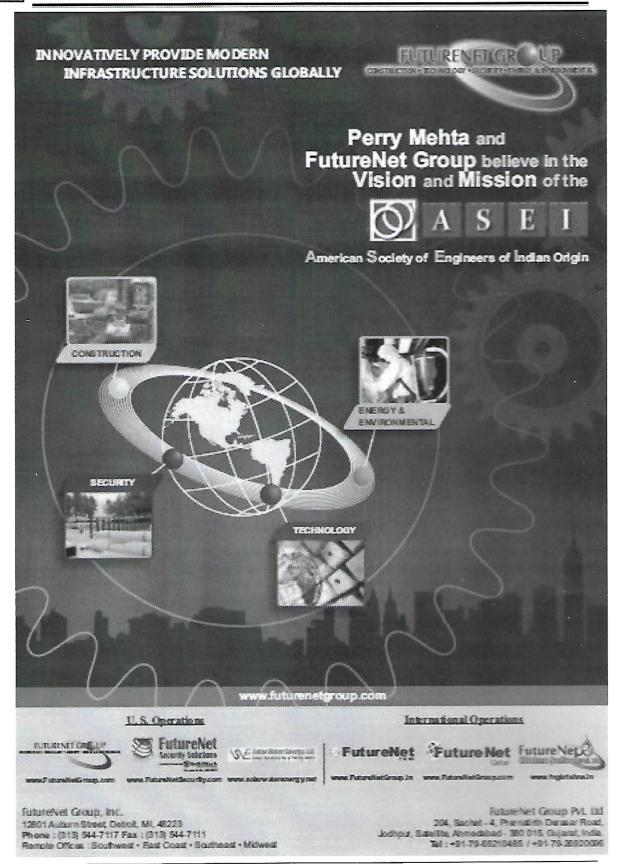
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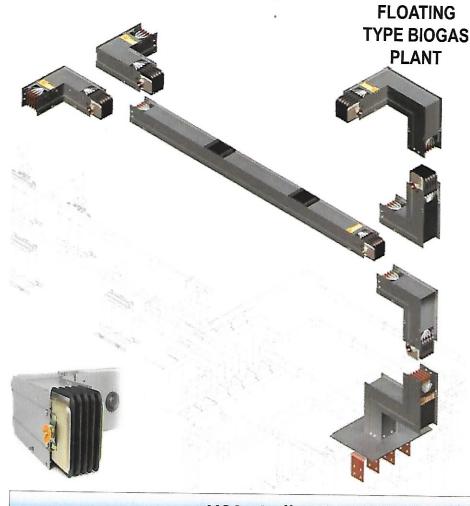
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for 28th National Convention and 30<sup>th</sup>Anniversary



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