



IISc AANA Newsletter

Volume 4, Issue 1, January 31, 2016

Indian Institute of Science Alumni Association of North America, Mountain View, CA, www.iiscaana.org

Message from AANA Chair and Co-Chair

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We feel honored you have chosen us as the chair and co-chairs of IISc AANA for a three-year term starting October 2015. We look forward to serving IISc alumni in North America as well as the Institute itself to the best of our abilities over this term.

Having been members of the Board of Directors of IISc AANA, we are particularly delighted to begin our tenure now, for two reasons. First, the AANA is in excellent shape thanks to the leadership of the outgoing chairs Drs. Arkal Shenoy and Satish Nagarajaiah. AANA has held a successful global conference in Chicago, expanded and strengthened the association's chapters, especially on the east coast, designed and implemented a new website, and built an excellent support platform for some of the Institute's activities in North America. We are delighted to build on the momentum that they have generated.

Second, under the leadership of the new Director, Prof. Anurag Kumar, the Institute has made a credible and substantial commitment towards engaging alumni and supporting them. Professor Kumar has created the Office of Development and Alumni Affairs (ODAA) under the leadership of Prof. Rangarajan. We feel incredibly fortunate that the leadership of IISc has made engaging alumni one of its priorities. We hope to take advantage of this and bring IISc AANA and its members even closer to the Institute.

Sunil Kumar and Gajanana Birur

VISIT AND REGISTER ON ODAA WEBSITE

<http://alumni.iisc.ernet.in>

Three IIScians receive 2016 Padma Awards

Dr. V.K. Aatre, (1961 ME EE)
Padma Vibhushan

Prof. Dipankar Chatterji
(1973 Ph.D. MBU)
Padmashri

Dr. H.R Nagendra,
1965 (ME) - 1969 (Ph.D. Mech)
Padmashri

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Dr. Gaj Birur

Dr. Guneet Walia

Dr. Meena Rao

Dr. Murthy Gudipati

IISc Director and Delegation in Silicon Valley



The IISc visitors with the AANA Office bearers. From left: Govindan Rangarajan, Subbarao Gunupudi, Arkal Shenoy, Gaj Birur, Mohan Raj Goyal, Anurag Kumar, Mrs. Anurag Kumar, Usha Vijayaraghavan, and Prabhakar Sundarrajan (Detailed report inside this newsletter)

EDITOR'S MESSAGE:

Dear IISc AANA members and Friends;

This issue of the newsletter covers the AANA events during the last twelve months. Please send your thoughts, comments, activities, ambitions, and dreams that you want to realize through IISc AANA, IISc AA, and IISc – with a focus on “giving back” to the society where you live and where you come from (newsletter@iiscaana.org).

Srinivasan Kasturi

Any tax-deductible donation to IISc AANA helps support educational activities of IISc students.

IISc AANA Life membership has many privileges: priority accommodation at IISc campus guest house (on availability basis), networking with academics, technologists, and entrepreneurs in the U.S. and India, etc.

AANA West Coast Conference - Silicon Valley, October 11, 2015

The AANA West Coast conference was held on October 11, 2015 at India Cultural Center, Milpitas, CA. The conference was organized by AANA Silicon Valley Chapter (Anita Jhunjhunwala, President). The program included the following:

- 1) Registration, Networking - IISc Professors and Bay Area Alumni
- 2) Welcome by Anita Mukherjee, AANA/IISc Update by Gaj Birur & G. Rangarajan
- 3) Mind to Market Panel Discussion
- 4) Prof Usha Vijayaraghavan, Chair of Office of Int. Relations Prof Govindan Rangarajan, Chair ODA
- 5) Distinguish Alumni + IISc AANA Award
- 6) Director Prof. Anurag Kumar's address followed by Q/A
- 7) Mind to Market (Entrepreneurial Presentation)
- 8) Starting a new venture (Entrepreneurial Session + Q/A)

The conference was organized by the AANA Silicon Valley chapter to coincide with the visit by IISc director Prof. Anurag Kumar, ODA Chair Govindan Rangarajan and OIR Chair Usha Vijayaraghavan to the US. The purpose of the visit was for promoting relations with AANA and visit a few research universities for collaborations and also to recruit faculty members for IISc. Over 100 alums actively participated in the day's activities. The director and the ODA and OIR Chairs described the activities with details of the current status at the institute and the planned activities of their offices. There were three panels that discussed the entrepreneurial topics and were eagerly listed to by the audience. One of the interesting actions by the audience was the pledging of the financial support to AANA and IISc.



Praveen Jain of AANA Board of Directors introducing the 'Mind to Market' panel



A view of the attendees

IISc DELEGATION AT STANFORD UNIVERSITY - October 12, 2015

Brief Summary of Visit

Following the IISc AANA West Coast Conference, Prof. Anurag Kumar, Prof. Govindan Rangarajan and Prof. Usha Vijayaraghavan visited Stanford University and met with senior faculty members on October 12, 2015. The meeting was arranged by Prof. Ram Akella of UC Santa Cruz. They met first with Prof. Ann Arvin, Vice Provost and Dean of Research, and discussed broad issues related to running interdisciplinary research programs at Stanford University and IISc. They also discussed potential areas for collaborative projects, best practices for industry interactions and fundraising, and the academic processes involved in hiring and evaluating faculty members.

The delegates also met with several other senior faculty members: Prof. Ashish Goel (Management Science and Engineering), Prof. Krishna Saraswat (Electrical Engineering), Prof. Jim Plummer (former Dean of Engineering), Prof. Abbas el Ghamal (Chair, EE and ISL member), Prof. Krishna Shenoy (Electrical Engineering & BioX), and Prof. Jitendra Malik (former Chair of EE & CS, UC Berkeley). These faculty members provided valuable insights into Stanford's research and entrepreneurial environment, associations with industry, collaborative research programs, and processes for faculty hiring and tenure.

In the afternoon, an interactive information session was held for about 50 graduate students and postdoctoral scholars interested in pursuing faculty positions at IISc. The delegates made presentations about IISc and its academic and hiring processes. Attendees asked several questions regarding the application and tenure process, start-up grants and process of getting grants from national agencies. The delegates also met with Prof. Thomas Kailath, Emeritus Professor at Stanford University and recipient of the National Medal of Honor, and extended IISc's invitation for a Centenary Lectureship.



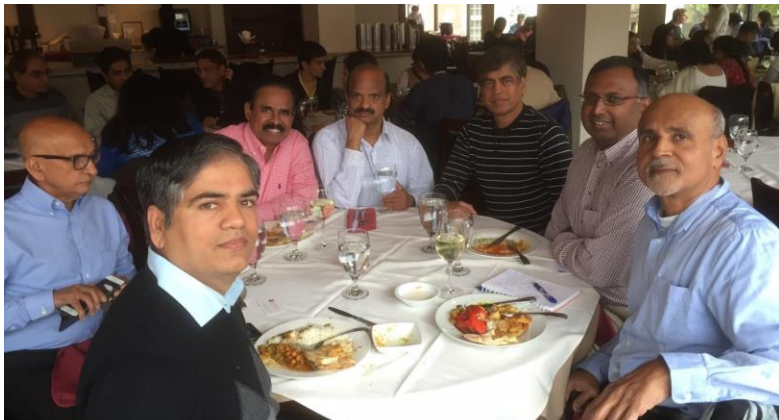
Prof. G. Rangarajan, Prof. Usha Vijayaraghavan, and Prof. Anurag kumar at Stanford University Campus



IISc Team with some of the graduate students

Meeting with North-East Area IISc Alums

A luncheon meeting was organized by AANA to encourage Boston area IISc alumni/ae to form an AANA chapter for the North East region. Because of the presence of number universities and research labs in the area and a large number IISc alumni/ae working in these universities and labs, AANA wanted to encourage the alumni/ae to form a chapter. The coordination was led by Selva Nataraja and supported by Prof. Manickam Sugumaran and Ramesh Peelamedu. Six Alumni and one alumna participated in the meeting and were enthusiastic about forming a chapter and hold coordinated events starting first quarter of 2016



IISc Alums at the luncheon meeting at Maharaja Restaurant in Harvard Square. Counter Clockwise- Gaj Birur, Selva Nataraja, Shastri Bhamidipati, Govinda Bhisetti, Manickam Sugumaran, Harmesh Sharma, and Ramesh Peelamedu; (Geetha Sugumaran was not present when the picture was taken)

IISc Director's Visit to Chicago (October 2015)

(Reported by Prof. Meena Rao, Member of AANA BOD)

Over 50 members of the Midwestern Chapter of IISc AANA were treated to an informative and delightful evening at Shikhar Restaurant/ Ashyana Banquet facilities in Downer's Grove, a Western suburb of Chicago on Friday October 9, 2015. Director Prof. Anuraag Kumar, Prof. Rangarajan and Prof. Usha Vijayaraghavan spent the evening with the group after Sunil Kumar had escorted them to a schedule of meetings with President Zimmer, Provost Isaacs of the University of Chicago, as well as Matt Tirell, the Director of the Institute for Molecular Engineering at the University. A key output of the conversations was the expressed intent to hold joint symposia between IISc and U. Chicago, using the University's India Center. In particular, Provost Isaacs seemed very keen to make this happen. This seems very promising for future collaboration between the two institutions. After the meetings with key leaders of the university, the IISc team met with prospective faculty candidates. The few candidates in areas ranging from nanotech to biology had a very informative conversation with the Institute team. Prof. Rangarajan spent an additional couple of hours meeting Development officers from the University to learn about fundraising at scale.

Prof. Kumar shared with the group his vision and mission for IISc moving forward. His information was data-driven, clearly articulated and conceptualized. Prof. Rangarajan followed with specifics on how he envisages the new Alumni and Development offices can function effectively and efficiently to realize the IISc goals. He strongly encouraged all alumni to register on the IISc portal alumni.iisc.ernet.in. The service is free and the goal is to increase awareness and encourage networking. Two other highlights of the evening were Prof. Kumar bestowing the Distinguished Alumni Award on Prof. Sunil Kumar and Dr. Ramesh Swaminathan being recognized for his invaluable contributions as the president of the Midwest IISc AANA chapter.

Prof. Kumar underscored that while IISc is the only Indian institution that appears in the Q rankings, we cannot rest on these laurels and much needs to be done. The status and ranking of Indian Science is a complex issue, some aspects of which can and will be addressed internally at IISc and other aspects are more of a national problem. IISc is taking on an aggressive, multipronged approach and many in the audience were impressed with the progress made in the approximately 2 years under Prof. Kumar's leadership. International recognition of faculty and student research are a key hallmark of success. Two important offices have been created to help the international profile— an office of International Studies, led by Prof. Usha Vijayaraghavan and an Office of Development and Alumni Affairs (ODAA). Both Prof. Kumar and Prof. Rangarajan, emphasized that an area where IISc AANA can be useful is in identifying funds for the travel of IISc faculty and students to attend and present at international conferences; the government restricts the use of national funds for these purposes.

There were a number of other individual conversations over a scrumptious dinner provided by Mr. Jain, the owner of our "favorite haunt", the venue of the 2nd AANA Global Conference.



Prof Rangarajan addressing the AANA members with Ganapathi Dharmasankar (AANA Mid-West President), Prof Sunil Kumar, and Prof Anurag Kumar looking on

The IISc Career Support Group- The beginning and beyond

Ananda Ghosh, Cornell University and Abhinav Dey, Emory University

It is great to write about the IISc Career Support group which was born out of a necessity to help large numbers PhDs who were coming out from the Indian Institute of Science to develop their career in a foreign land. Embarking on a journey in a foreign land brings with itself, different problems which either we are unaware of or don't have the skills or knowledge to work our way through. Ever since its inception, this group has grown in its membership from 40 to 1500 and continues to grow.

Why did we have a forum like this to begin with? Some of us realized that the best thing, which happened in those 400 acres of lush green campus, was the bright and brilliant group of friends we had. In Bangalore if we ever had a problem and at whatever time of day it was, we could use our vast network of friends and solve almost all the problems. One of the things, which we missed dearly, in fact very dearly, was this "access" to our group of friends. I mean they were there, but as one graduated from the Institute, they not only got scattered, but the bonding that happened because of the campus wall was no longer there. What remained was the nostalgia which Gulzar penned quite brilliantly in Urdu "Chod aayein hum woh Galiya" (Those streets got left behind)

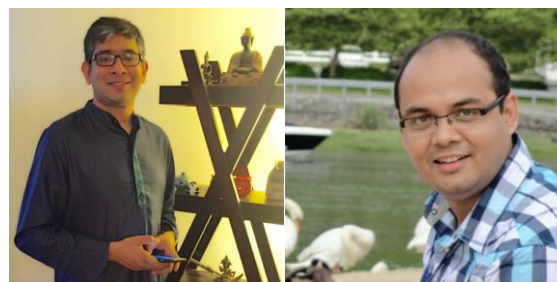
The other thing that we realized was how ill equipped PhDs from IISc were if they had to think about a career outside science. Although most IISc PhDs would love to spend their entire life in Science, the present funding scenario with too many graduates in Biotechnology or other natural sciences have created a very unstable future for the PhDs. We saw top US universities like Yale, Cornell, NYU, Columbia have a very aggressive **career counseling offices** working day and night for PhDs to help them from getting disillusioned with failure to secure tenure-track positions. Unfortunately, IISc is still way behind these programs resulting in hundreds of PhDs with no apparent direction to take if their academic career didn't take off. So one objective of the forum was to crowd source ideas and knowledge about how the real world works and what needs to be changed if one has to seek a job outside academia.

We also realized that the alumni network is not well connected. There is for sure gap between senior well-established IIScians with the current students or fresh PhDs and postdocs. The alumni network is no match with IITs or even some top undergraduate colleges of India, for example, St. Stephens Delhi or St. Xavier's Bombay. For an IIScian to compete with US PhDs, one needs to have an excellent network within the organization in which they are applying. From our experience and from others we heard that it was a pain to network resume in the company. However, if you search LinkedIn for IIScians, you would invariably see IIScians in those companies. The question was WHY THEN THE CONCEPT OF ALUMNI NETWORK not working? HOW TO REACH OUT TO SENIOR IIScians and establish a credibility of the candidacy?

The answer was to bring in the alumni in an interactive forum where they could see and talk to each other in spite of the fact that they had never been on the same time frame in IISc. The idea was to bring the alumni and the current students into constructive discussions and to share and support career opportunities. So creating an interactive forum was like staying in the same hostel complex that allows you to knock the door of your friends at your leisure when you are in trouble.

The last six months have been a tremendous success. We launched several initiatives and just like scientific research; some got started some failed. However, the passion to be in touch with IIScians remains unchallenged. Recently we have started a Blog called Club SciWri (www.sciwri.cub) which will be the window to the world for the Career Support Group. We will not only post scientific achievements of IIScians/ other Indian Scientists but will also post discussions in the forum by IIScians and other PhDs outside IISc. Never before we had thought that we will live in a virtual world of IISc after we had left Bangalore and Career Support Group just gave us back that feeling in this foreign land. We now interact with at least 1500 IIScians almost on a daily basis. Isn't it amazing? Also, the forum immediately removed the age barrier.

With this introduction, we end here. In our next write-up, we will talk about issues, which get discussed in the IISc career group for AANA to keep you abreast with the developing and ever-evolving world of fresh IISc graduates.



Ananda Ghosh

Abhinav Dey

Ananda Ghosh and Abhinav Dey are cofounders of IISc Career Support Group. Dr. Ananda Ghosh did his undergraduate and postgraduate from Hindu College, at the University of Delhi before joining IISc Bangalore in 2002 for PhD. Post IISc he did his postdoctoral training at Yale University and Cornell University Med School. Now Dr. Ananda Ghosh teaches at the City University of New York.

Dr. Abhinav Dey graduated from IISc in 2011 from Molecular Biophysics Unit. He is actively involved in bench-based pediatric cancer research at Emory University (Atlanta, USA) and alumni connectivity for his graduate school, IISc. He is a postdoctoral fellow at Emory University and is a recipient of Young Investigator Award from Alex Lemonade Stand Foundation (Philadelphia, PA).

The IISc Alumnicle: Casually Inspiring tête-à-tête with Murthy Gudipati

Interviewed by Abhinav Dey, PhD (MBU, IISc; 2005-2011) ALSF Young Investigator (Emory University) Co-founder of Career Support Group Vice-President IISc AANA (South East Chapter)

Published in IISc Career Support Group Facebook Page and ODAA Alumni Resources Webpage

For the rest of the world it is 67P/Churyumov-Gerasimenko, but for him it is a long distance cousin of fried ice cream. It is this simplistic view and keen sense of observation by Dr Murthy Gudipati that makes us proud to be IIScians. His seminal contributions towards the Rosetta mission to comet 67P/Churyumov-Gerasimenko ushered in the People's choice Breakthrough of Year 2014 by Science magazine. As he sifts through the origins of life in the solar system, he has been a very pragmatic in mentoring young scientists from his alma mater through his activities in the IISc Alumni Association of North America (AANA). The IISc Career Support Group caught up with him to learn about his life as a scientist and his message to young researchers attempting to make this world a better place.

What do you enjoy about being a scientist at NASA and how did your training at IISc make you competitive for this career?

From my very childhood, I always liked to sit in the “front seat”. In India, I used to sit next to the driver’s seat during bus journey, because I got the view to enjoy. Working at NASA as a scientist, now I have the same feeling, but it is the “virtual front seat” on a journey through the Universe. I get to see the history being made from my front seat and at times, I’m a part of that moment.

During my Ph.D. days at IISc and even at my M.Sc. times at the University of Hyderabad, we developed two key aspects of being a researcher: (a) Independent Thinking; (b) Go across and beyond your boundaries. These formative years of my life spent in such vibrant Institutions and with the independence of thought made me what I am today. I was and I’m not afraid of taking up new challenges and go cross-cutting through classical boundaries of traditional research.

IISc was the place where I could expand, explore, and engage in activities to reach and go beyond my limits. I was at almost all the Departments (both science and engineering) for one or the other reason and I had friends all over on the Campus.

One thing I remember from my childhood is that I was a “pain in the neck” to many people around me and myself as well. I kept on asking “why” even to myself sometimes seeking answers within my own thinking process. I never accepted anything for granted and I never subscribed to any “belief systems”, though I respected all of them as an outsider. If I didn’t get a rational answer, I didn’t accept it. I had excellent

teachers who encouraged this curiosity to understand and provided me with their knowledge and mentoring.



“From my very childhood, I always liked to sit in the “front seat”. In India, I used to sit next to the driver’s seat during bus journey, because I got the view to enjoy. Working at NASA as a scientist, now I have the same feeling, but it is the “virtual front seat” on a journey through the Universe. I get to see the

history being made from the front seat and at times, I’m a part of that moment.” – Murthy Gudipati

I think these are some of the aspects that made me prepared to take up multidisciplinary research career starting from “theoretical chemistry with E.D. Jemmis at UH (now at IISc)” to my present research of understanding the “evolution of organics and ice in the Universe”.

I never felt “competitive”. Even today, I do not compete and compare with others. My goal is to do my best what I can and enjoy what I do. When I cannot influence with whom I’m competing, why bother? I failed more than I succeeded, but every time I fell down, I got up, dusted-off my bruises and went ahead with my passion and goals.

At what point of your academic learning did you determine that you would pursue a career in space science?

See, you can never “determine” what you would do in the future – it is just impossible. You can aspire, you can dream, you can have a goal and fascination. My fascination to space started when I was sleeping in the fields of my village during harvest seasons (Peanuts and Rice). It was dark sky but for the fireflies. But then, the sky was full of stars, our galaxy “milky way” stretching across, and at times so called shooting stars, that now we know as meteors. I didn’t know all these names at that time, but my fascination to know and understand what it is up in the sky had its birth in those days, perhaps when I was around 11 years old.

What is your role in the Europa mission? Can you share one of the unique aspects of the Europa mission that keeps you inspired?

I’m a science team member and investigation scientist for one of the instruments for the Europa Mission called SUDA (Surface Dust Analyzer) to detect the composition of particles ejected from Europa’s surface and interior to address the question of Europa’s potential for Habitability. As I mentioned above, the main goal of Europa Mission is to determine Europa’s Habitability. Because of its (almost certain) subsurface ocean and liquid presence, Europa is one of the few other potential habitable places in our solar system if life were to somehow evolve there. One of my long-lasting research questions is the “origin of life on Earth”. We still do not know how life began on Earth. Habitability is the prerequisite for life to sustain and perhaps even to originate.

tête-à-tête with Murthy Gudipati (continued)

Can you tell us about some of the challenges that accompany your job with the Europa mission? How do you sail through lean periods of funding in research?

Every day you learn new things. You interact with the whole world in one place – people with diverse cultural, educational, and intellectual backgrounds. A mission is like building a car from scratch. You are like one of the unique parts of this new car – with unique role to play and unique experience, at the same time interacting, understanding, and communicating with everyone around you, who is also unique in a different way. This is very exciting, exhausting, exhilarating, and rewarding experience.

Regarding lean funding periods: We in California are well-trained for this, though it is painful. You start saving water (money) to very core activities. What you can do within your ability under lean-funding phase is to use your brains more and be more creative. Fortunately, even today you can do high-quality research in certain fields without heavy investment.

What is your everyday work life like? How do you achieve work-life balance?

My workday starts when I wake up and ends when I sleep. I give very high priority to my research activity. However, I put family, physical, social, spiritual (not religious), and outdoor activities in the next level of my priorities in my life. Keep in mind, we all live once and we do not want to repent for what we didn't do at the time of kicking the bucket. Each of us has to find our optimal balance. There is no single recipe, but support from your partner would make a tremendous difference. Sometimes work needs to be in the second priority, while other activities take first priority. I did this when my wife was full-time researcher at a company and I had flexible time options in order to take care of our kids at home. I was for some time “a partially sit-home dad” until noon and a researcher in the afternoon.



Photograph: IISc 1984-85, at the steps of the Department of Organic Chemistry. Kailasam Venkatesan; Dorothy Hodgkin; Murthy Gudipati (aka. G.S. Murthy).

As a child, who inspired you to be a scientist?

Secondary school – mathematics teacher; High school – mathematics & botany teachers; College – physics and chemistry lecturers; All these teachers inspired me to “ask questions, search for answers, be curious, and to think “rationally”. However, none of them ever told me that I should become a scientist. But they definitely nurtured the passion in me to seek knowledge through scientific method.

What subjects were you interested in as a young student?

While I was very much inclined to mathematics and natural sciences, I was also very much interested in languages and history. In college, I was the pet student of Physics Head of the Department, whereas my major was in Chemistry. I am glad I took Chemistry in my early student days because of which I can now connect easily all the branches of pure sciences: physics, chemistry, and biology. One of my research areas at present is “astrochemistry and astrobiology”. *“What is your message for parents in India to make their kids excited about a scientific career?”*

My philosophy is “practice before you preach”. We gave complete freedom to our daughters whatever they wanted to pursue. I didn't even look into their grades. My advice to any parent in the whole world: (a) Your children are not your property, they are individuals; (b) Do not try to achieve your dreams through your children, but let them have their own dreams; (c) Let the children enjoy being a child (I was mostly in the trees than on the ground as a child) – do not grind them until they lose interest in everything; (d) Encourage them to seek what they are inspired/passionate about – let it be science, art, music, etc.; (e) Do not push them to be doctors and engineers only – even though their aptitude is in pure mathematics (for example); (f) Live by example.

In your opinion, what roles should the IISc alumni play to help the institute at different stages of their careers after they leave the campus?

Mentoring, providing information, inspiration, and guidance. Help them to learn networking. Help build their personalities – let them be independent, go-getters, problem solvers, etc. Make them self-respecting, self-confident, open-minded, etc. At a personal level, IISc Alumnae/Alumni may provide financial assistance to students who need it there or for travel, or provide accommodation. Engage them in discussions when you visit IISc and inform them about the work ethics. By the way, IIScAANA is actively involved in providing all of the above to the IISc students and faculty.

“I had the fortune of having excellent (perhaps outstanding) teachers. They gave me their knowledge and the ability to think - not their belief. The best way to pay them back is to give this knowledge and the ability to think to the next generations. Thank You!”

-Murthy Gudipati

ANNOUNCEMENTS

You are invited to Indian Institute of Science Founder's Day Celebration

Organized by IISc AANA on March 5th
ICC 525 Los Coches Street, Milpitas, CA 95035

Program:

- 3:00 - 4:00 Registration and snacks
 4:00 - 4:15 “Significance of Founder’s day” Yash Bhatnagar
 4:15 - 5:00 “Personal Growth and Professional Journey over five decades”
 Dr. DV Giri: Consultant R&D Nuclear Electromagnetic Pulse, High-Power
 Microwaves, Lightning, and Ultra-Wideband. U.S. Government and Industry.
 5:00 - 6:00 “Startup success: Can it be taught?” Panel discussion

Panelists:

Satya Ramaswamy: VP & Global Head of TCS Digital Enterprise at Tata Consultancy Services
Bipul Sinha: Co-Founder & CEO Rubrik
Geetha Vallabhaneni: CEO, Founder Luminix Inc.

Moderator: Sujata Tibrewala, Network Software & Design Consultant, Founder Teevra Gaming

6:00 - 7:00 One on One discussion with the speakers

6:00 - 8:00 Dinner

For more info, please contact: P.R. Draupadi; prdraupadi@gmail.com

Indian Dance and Music Festival in San Diego- March 14th thru March 20th 2016

Indian Fine Arts Academy of San Diego's is having their 9th annual Music and Dance Festival from March 14th through March 20th, 2016, at the Jewish Community Center in La Jolla, California. The festival has a fantastic line-up of world-renowned **vocal** and **instrumental** artists of both the **Hindustani** and the **Carnatic** genres of Indian music from India. Dance productions during the festival promise to be marvelous aural and visual treats. These classical dance productions have been choreographed by India's most talented and experienced dancers in Bharathanatyam, Odissi, and Kathak. The festival will also celebrate the centenary of Bharat Rathna M.S. Subbulakshmi and 96th birthday of Bharat Rathna Ravi Shankar, and will honor the prolific contributions of some of the greatest musicians, artists, and scholars of India. The festival will also feature music and dance concerts performed by over 100 children from all over Southern California.

IISc AANA SoCal Chapter will have a get together for its members during this music festival on Saturday March 19th at 4PM at the Jewish Community Center in La Jolla. IISc AANA members can get a 10 percent discount for the concerts, if more than 10 people show up. For more information and the meeting place, please contact Kasturi at 7606963377. Information on the festival concerts can be obtained from <http://www.indianfinearts.org>.

IISc Wins Solar panel R&D Contract

The Indian Institute of Science has won a U.S. military contract for research and development on a solar powered micro-grid. The federal contract, worth \$52,900, has been awarded for the U.S. Pacific Air Forces at the Yakoto Air Base in Japan to develop a solar powered micro grid with battery and supercapacitor energy storage system. The announcement of the contract came on the eve of the meeting between Defense Minister Manohar Parrikar and U.S. Defense Secretary Ashton Carter at the Pentagon on December 10.

- INDIA-WEST January 15,2016