

of paper. The dolls were identical representing perfection but two-dimensional and attached only at the arms. In an article she wrote about the show and her work, she says “I represent an India still in the process of assimilating urbanity into its culture, an India where the ‘body’ still longs for freedoms it doesn’t yet have.”



Shanti Sharma

Shanti Sharma (nee Vaidhyanathan) is one of the finest classical vocalists in India. She graduated from BITS in 1978 with a Masters in Chemistry. She learnt music under Pandit Amarnath in Bharatiya Kala Kendra, Delhi. She later went on to become his assistant. In an interview with *The Tribune*, she says “I am happy I have stuck to music and not given into the temptation of earning quick bucks by becoming a science teacher. Music, for me, is a vocation. God’s gift, which I humbly accept and nurture.” Shanti has won many awards and has been instrumental in the success of many artists who were her students. A deeply philosophical person, she says “my *manzil* is

to reach the heights of sublimity in singing”.

Engineering & Technology

In an article called “Can science be women-friendly?”, the noted journalist and Chief of the Mumbai Bureau/ Deputy Editor of The Hindu, Kalpana Sharma talked about how difficult it would be to comprehend and administer the larger issues of “gendered” science - the need to evolve a system of knowledge that integrates a gender perspective in its approach and direction. While there are laudable efforts in this direction like the special “Women’s Scientists Program” by Department of Science and Technology’s which pledges to make concerted effort to give women a strong foothold into the scientific profession, help them re-enter into the mainstream (post “break in their careers” arising out of motherhood and family responsibilities) and provide a launch pad for further forays into the field of science and technology, both from the point of view of pure science and its application to societal development, there is an urgent need to address the more immediate concerns plaguing the women in this arena . The most significant of it being the reluctance on part of the women to specialize exclusively in any of the organized and niche areas of science or engineering – areas considered beyond their realm of capability.

In fact, as recently as five years ago, when a well-known all-women’s college in the United States, Smith College, announced that it was offering a

degree in engineering, an electronics magazine ran an article with the title, “Is Female Engineer an Oxymoron?” The author claimed that in his 32 years as an engineer in power electronics, he had never worked with a woman engineer. He concluded that women did not have a love or aptitude for “real” technical work. These women defy any such hypotheses.

Shoumi Das (now Sen), (EEE, 1997-2001) is one of those lone rangers, who has focused on a career in the noticeably underrepresented area as far as the number of women working in it is concerned - the HVAC (Heating, ventilation and Air conditioning) industry. She works as a Project Engineer at Carrier, the famous air conditioning company and has, so far, not met a single engineer in her company who happens to be a woman. She was at the receiving end of incredulous looks from customers and colleagues alike initially. In fact, in her training programmes at work, her instructor keeps referring to the team as “gentlemen” and adds the word “lady” as an afterthought!! But of course, the men had no choice but to get used to having her around, especially she is so dedicated. The RF industry is no different story either, points out Sangeeta Iyer, who is working as in RF engineer at LCC International in North Carolina. More often than not, women have to deal with pre-conceived notions from their peers of the opposite sex that women will succumb to the relentless work pressures and long hours. But of course, over a course of time and due to tremendous perseverance by the women to prove themselves, the men have begun to have second thoughts about their notions. Maybe the

rest of womenfolk around can let Sangeeta and Shoumi show them the way.

It is a sobering truth that several sectors have continued to be male dominated even today, let alone a couple of decades back. Sangeeta Patni (EEE, Batch of 1981) reminisces on her managerial stint in the mining industry where there were just a couple of women working and mostly in a secretarial capacity, but none apart from her as a manager. "In this job, there were people who used to drive miles from the mines to see me, the chick that worked in the mines!" she says. Men apparently even stood behind curtains to sneak a peak or two at her! When speaking to some of these men on work-related matters, some men simply did not know where to look. Some refused to meet her eye and some stared steadfastly at the walls.... Professional meetings were a mixed bag- More often than not, she was not "heard", and in some, she was the ONLY person who was heard. When she went down to the mines, where she was working on getting a plant constructed, she had the infamous reputation of being the cause of accidents, because when mining men saw a woman walk past, they were so shocked that they dropped things they had in their hands!

While Sangeeta's anecdotes seem to paint a hilarious picture of the situation, in retrospect it was anything but. The lack of more than a handful of women in areas of engineering such as mining, HVAC, cement plants, construction, manufacturing and process industries is an indicator that the steepest challenge faced by women is not handling the tougher and sometimes physically challenging

conditions at work, but rather the stereotypical thinking of the social milieu surrounding them, due to which women tend to garner fear that they might not be taken seriously if they opt for a career in science, engineering and technology. Often, women have to go farther, work harder, and accomplish more in order to be recognized. Sangeeta adds on a more heartening note that it got better with time, and by the time she quit, after 4 years, people had acknowledged that women could meld in and work in all kinds of situations. Due to her sustained efforts in hiring and recommending women to be recruited in roles such as hers, there were eight women in about 2000 men, when left the mining company. These days, when she has a chance to visit Udaipur, she sometimes meets with the women she hired, and is filled with a sense of pride to hear about the increasing trend in the number of women engineers and accountants now working in the company.

Of course, over the decades, remarkable progress has been made in analyzing this concern of gender inequality in science, engineering and technology. Despite the roadblocks, women have responded by making significant headway, if unevenly into these arenas. Women are being bestowed with greater opportunity in these fields in terms of both wages and responsibilities. It appears that improving women's opportunities in science has benefited both the sciences and the cause of women in general. Just as Marie Curie's achievements excited the imaginations of women around the world in early last century, the escalating percentage of women entering these areas has

become the thrust for breaking traditional thought processes and taking all due credit for the growing social justice and for providing an example of what is possible far beyond the borders of scientific and technological institutions themselves.

A few of our very own kind have contributed immeasurably to this changing paradigm.



Kanchana Natarajan
Mendes

Mitra Priya, Technical Director at CSL Tech, is a B.Tech from BITS Pilani and Postgraduate from the IIT, Bombay and a Certified Quality Assurer. Mitra has a rich experience of over 13 years in the Software Industry. Mitra has handled several large scale projects for clients in Europe, USA and India. She held Middle and Senior Management positions at TCS, Citicorp Overseas Software and MBT. Her experience includes execution of a Large and Middle scale applications Development, Deployment and Production Support in areas such as e-Business, Mainframe Systems as well as Client Server based solutions in Verticals such as Manufacturing, Banking and Securities. Mitra was instrumental in steering COSL to attain SEI-CMM level 5 in

October 1999. Mitra was heading the e-Business initiatives of MBT for IBM platforms before joining CSLTECH as its Technical Director.

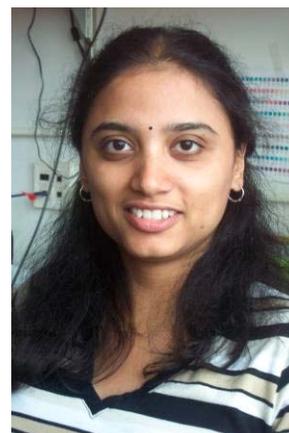
Archana Bandari (1980-1984, Chemical Engineering), presently the Principal Engineer, Mitretek Systems, Inc was the recipient of the 2004 National Women of Color Technology Special Recognition Award. She holds a US patent for “*A computer program product and a method for using natural language for the description, search and retrieval of multi-media objects*”. A key contributor to Mitretek’s corporate objective of applying leading-edge technologies in the public interest. She successfully worked on projects in the area of health care, criminal justice, national security, unemployment insurance, and transportation, related to Knowledge Management and Representation, Customer Response Systems, Natural Language Processing, Information Extraction, Information Retrieval and Visualization.

Kanchana Natarajan Mendes ('88, Biological Sciences, MMS) is an Instructor at the M. D. Andersen Cancer Center. She is an Institutional Training Grant Fellow, University of Rochester Medical Center, Rochester, New York. She was awarded the National Eye Institute Award at the Annual Meeting of Association for Research in Vision and Ophthalmology in 2001, and the Research Fellow Award by the Annual Meeting of American Society for Virology in 2000. Kanchana has also been invited to speak at the Annual Meeting of American Society for Microbiology and

was a nominated member of Sigma Xi, Scientific Research Honors Society in 1998. Kanchana has completed her PhD in Microbiology and Molecular Genetics. As an exceptional student, Kanchana was awarded the ASM Student Award, the Edward A. Grula Distinguished Graduate Fellowship, Oklahoma State University and the Cora Downs Award for Outstanding Presentation by a Junior Graduate Student. Of course, she has to her credit publications and reviews in several peer-reviewed journals.

Soumya Krishnamoorthy (94B3A3) works for the Maryland center for Integrated Nano Science and Engineering, a multidisciplinary group at the University of Maryland working towards applying nano science towards changing the world profoundly, from electronic devices and medical care to fundamental understanding in the physical sciences, life sciences and engineered systems. Broadly speaking, her work involves developing CMOS compatible biosensors and specifically, her PhD is on developing high frequency resonators that serve as electrical fingerprints that detect the presence of antigens. While her focus is on the device and integrated circuit development, she interacts closely with biochemists at NIH to develop the protein attachment chemistry. She is also part of a group, which are involved in a ground breaking the use of the high frequency resonators as pressure sensors in prosthetic legs. This sensor is to be embedded in the prosthetic leg and any applied pressure can be transmitted as electrical pulses to excite the brain. This research is still in its nascent stages and

will be included in parts as part of Sowmya’s thesis. Sowmya and her team’s work has garnered many acknowledgements from the academic community with publications in leading journals including the Journal of applied physics, IEEE Electron device letters, Applied physics letters, Biosensors and bioelectronics etc. and has been showcased in an article in Washington Post.



Kavitha Venkatesan

Another young star is **Kavitha Venkatesan** who graduated from BITS in 1998 after completing a B1A7 dual. She is currently Research Fellow at the Center for Cancer Systems Biology, Dana-Farber Cancer Institute and Harvard Medical School. She completed her PhD in Bioinformatics in 2004 and has published an article in Nature, one of the most widely read/reputed journals in the scientific community (2005). Kavitha has diverse interests. She helped to set up the Boston Chapter for CRY (Child Relief and You) and was actively involved in fund-raising initiatives (1999-2001). Even at BITS, where she co-founded and co-organized the first SANGAMAM, an annual classical music/dance festival in BITS in 1997, she has been a

pioneer. She believes that a big key to success is to 'do and dare.'

Shilpa Sambashivan (1997 Msc. (Hons.) Biological Sciences – BITS Pilani and Phd – Biological Sciences at UCLA) was awarded the 2005 Amgen Dissertation of the Year Award from the Molecular Biology Institute of UCLA. She has also won the Pauling poster-prize at the American Crystallographic Associations' annual conference in 2004. Her most notable research publication was in the prestigious journal, Nature (Sep 8, 2005 issue) where she wrote about Amyloid research, presenting the new and important insights into neuro-degenerative diseases such as Alzheimer's and Parkinson's. Shilpa has been actively furthering her passion for

Bharatanatyam and has performed at several locations in Los Angeles.



Shilpa Sambashivan

And the list continues... Vardhini Kirthivas (Bpharm, Batch of 1995) works as Scientist –Regulatory Affairs in the Generics Sector of the

Pharma Business at Sandoz. Dr. Monica Valluri (MSc. Physics – Graduated in 1987) is a Senior Research Associate at the Department of Astronomy & Astrophysics in The University of Chicago. She also happens to be is the Assistant Director of Kavli Institute for Cosmological Physics. Padma Reddy (Computer Science, 1981-1985), Head -India Development Center, webMethods Inc, Bangalore. These women have not only done commendable and meritorious work in their own spheres of specialization, they have definitely set an example for the generations to come, to follow their dreams and aspire to achieve their goals.

What You Can Do to Help

We would encourage all BITSian Women to share their stories and successes with us. Your adoption of and active engagement in the BITSAA Women's Council is vital to the success of this networking community and will go a long way in replicating your successes among future women leaders from all campuses of BITS Pilani.

You can email your comments etc. to bitsaa.woc@gmail.com.

To subscribe to BITSAA WoC, please visit: <http://groups.yahoo.com/group/bitsaa-woc>

About the Authors

Deeptha Ganapathy (95B5A8) was part of the BITS basketball team and captain of the basketball team in 1997. She holds an MS degree in Computer Science from Northeastern University, Boston. She loves to travel (defined as to take a solo backpacking trip) and is always planning her next vacation. Deeptha now lives and works in New York city.

Krithika Kalyan ('00) currently based out of Bombay, works in the area of product development of retail insurance products in Reliance General Insurance. At BITS, she was a member of the Department of Controlz and was the Co-ordinator the Engineering Technology Association for Apogee 2003. She has also been a cultural secretary of Meera Bhawan. She has also tried her hands at managing a couple of bands in the Mumbai/Pune rock circuit and writing for local music magazines/webzines. These days, she is busy collecting long lost vinyl records in between reading, traveling and experimental cooking/cocktail mixing!

Aditi Pany ('00) works for a social enterprise in Delhi and is trying to figure if it is indeed possible to balance social objectives and business principles. She graduated from BITS in 2005 with MSc. Economics and B.E. E&E. She loves the sea, has an interest in handlooms and handicrafts and enjoys driving. Aditi aspires to contribute to Orissa's development as a social entrepreneur.

Bharati Balakrishnan graduated in Chemical Engineering from BITS in 2004. At Pilani, she was an active member of DOPY and was its coordinator for Apogee 2003. Enthusiastic about writing and debating, she was also lead vocalist at the Music Club for four years and part of six English Drama crew teams while dabbling in acting in street plays. She followed this up with an MBA from IIM Ahmedabad from where she graduated this April. She is now all set to join Bain and Company as Associate Consultant, in June 2006.

Himabindu Chitta ('02 Chemistry-Computer Science) is a laid-back Hyderabad! Himabindu is a member of the Dept of Controlz and the Cactus Flower editorial team on campus. She likes to read classics and has a new-found interest in poetry. Photography is a hobby.

Dileepan Narayanan ('00) He's currently doing his Masters in Industrial Engineering at the University of Minnesota, Minneapolis. He joined BITS in 2000 for an MSc in Physics but transferred to a BE in Mechanical Engineering after a year. At BITS he was the captain of the BITS Cricket team and won the Best Player award in BOSM 2k2. He was also the Sports Secretary of BITS and organized BOSM 2003, the Joint Secretary of ELAS in 2002 and organized Wordstock in OASIS 2002 and 2003. He wrote and directed a play for the English Drama Club, which was staged in OASIS 2003, a member of the Poetry Club for a brief while. He continues to engage in quite a bit of reading and writing. Wilde, Saki, R.K Narayan, Hardy, and Tennyson are among his favourite authors. His brother, Sriram, is currently pursuing an MSc in Information Systems also at BITS.

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Disclaimer

This article and the list of *Most Prominent BITSian Women* (see next page) was created by the BITSAA Women's Council. Both sets of data are not meant to be comprehensive in that they do not include the accomplishments of many exemplary BITSian Women. Rather, they provide a snapshot based on the information to us at the time of writing the article.



Around the BITSian World Wide Web

Bees Saal Baad: Return to Pilani. An account of a trip back to BITS-Pilani after 20 years by **Rahul Simha** and **Sridhar Rajan**.

Link: <http://www.seas.gwu.edu/~simhaweb/misc/pilani/>

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