

Resebrev Nr 111

30 oktober– 1 november 2012

# KANPUR



In 2012, I spent the period 20 October till 30 November in India, setting up a small SASNET office at our Sardar Sankar Rd residence in Kolkata, interacting with SASNET networking partners at the prime universities in Kolkata. I also made a contact journey to universities and other institutions in the north Indian cities of Varanasi, Kanpur and Delhi. **Second stop Kanpur**, arrived by taxi from Varanasi, in order to visit the Indian Institute of Technology (IIT), being invited by Ashok Kumar, an eminent researcher in Biotechnology, also based at Lund University.

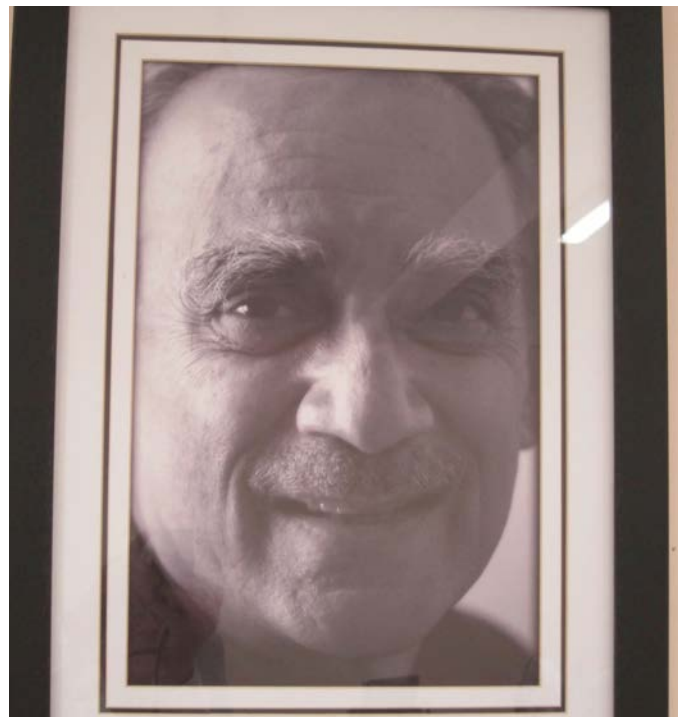








Haider Sami who defended his PhD thesis on "Design and Synthesis of Multifunctional Polymeric Material Application" In April 2012.



Mr. Arun Shourie, long time back known as India's leading investigative journalist working for Indian Express, but later becoming a politician working for the Hindu nationalist party BJP. Being a Member of Parliament (MP) representing Kanpur, he has had a possibility to decide upon spending INR 2 m a year for projects within his constituency according to the "Member of Parliament Local Area Development Scheme".

DEPARTMENT OF H.S.S.		
<b>ECONOMICS</b>		
B. RATH		
K. K. SAXENA	7155	651
SURAJIT SINHA	7129	605
PM PRASAD	7268	623
SK MATHUR	7893	608
SSAHA	6240	673
PK KULSHRESHTHA	7084	610
VIMAL KUMAR	6546	669
VIMAL KUMAR	7501	680
SOHINI SAHU	6701	607
A MUKHERJEE	6844	658
T CHAKRABORTY	6571	626
<b>ENGLISH</b>		
G NEELAKANTAN	7872	672
ACHLA MRINA	7894	324
MINI CHANDRAN	7191	604
SUCHITRA MATHUR	7836	606
T RAVI CHANDRAN	7871	652
CHAITHRA PUTTASWAMY	7931	625
<b>FINE ARTS</b>		
SATYAKI ROY	6817	303
K P PATIL	7670	153
ST ROY	7145	671
<b>PHILOSOPHY</b>		
A V RAVI SHANKAR SHARMA	8137	858
VINEETS SAHU	7633	881
PRASHANT BAGOD	6881	811
NIRMALYA GUHA	8138	803
<b>PSYCHOLOGY</b>		
L KRISHNAN	7287	333
A K SINHA	7186	620
SHIKHA DIXIT	7157	834
BRAJ BHUSHAN	7024	654
KUMAR RAVI PRIYA	7750	653
<b>SOCIOLOGY</b>		
AK SHARMA	7848	609
B K PATTNAIK	7325	678
MUN MUN JHA — HEAD	7615	855
ANINDITA CHAKRABARTI	7277	335
<b>VISITING FACULTY</b>		
	7038	610
HEAD	7510	615

Like the other Indian Institutes of Technology, IIT Kanpur focuses not only on Technology, but research is carried out within a wide spectrum of subjects, including Humanities and Social Science.



ASHOK KUMAR



PhD candidates Deepak Raina, Apeksha Damania and Ankanshu Shulda In the lab.











Jugilal Kumlupet Singhania temple

IIT Kanpur History  
Department of Biological Sciences and Bioengineering  
Meeting Erasmus Mundus coordinator  
[Scan IIT Kanpur contacts / Newsletter](#)

Meeting Dean Research and Development  
Meeting Advisor International Relations  
Department of Humanities and Social Science  
[Meeting Dean Research and Development](#)

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By Lars Eklund

IIT Kanpur web page: <http://www.iitk.ac.in>

### IIT Kanpur History

Established in 1959 as one of the first Indian Institutes of Technology, IIT Kanpur was created with the assistance of a consortium of nine leading US research universities (namely M.I.T., University of California, Berkeley, California Institute



of Technology, Princeton University, Carnegie Institute of Technology, University of Michigan, Ohio State University, Case Institute of Technology and Purdue University) as part of the Kanpur Indo-American Programme (KIAP). Since its inception, IIT Kanpur has earned considerable reputation all over the world for its innovative academic programmes and for carrying out original research of significance and technology development at the cutting edge. The institute has around 5,400 students with 3,400 undergraduate students and 2000 postgraduate students.

In 1972 the KIAP program however ended, in part because of tensions due to the U.S. support of Pakistan. Government funding was also reduced as a reaction to the sentiment that the IIT's were contributing to the brain drain. Since then IIT Kanpur has increased collaboration with industry and has achieved a reasonable level of stability. One of the pride projects at IIT Kanpur is the SIDBI Innovation & Incubation Centre (SIIC), run in



collaboration with Small Industries development Bank of India (SIDBI). Its mission is to foster innovation, research, and entrepreneurial activities in technology-based areas. SIIC provides a platform to Start-ups prospective entrepreneurs and intrapreneurs to convert their innovative ideas into commercially viable products. [More information.](#) Like the other Indian Institutes of Technology, IIT Kanpur focuses not only on

Technology, but research is carried out within a wide spectrum of subjects, including Humanities and Social Science.



IIT Kanpur is located on the Asian Highway No 1 (the old Grand Trunk Road), 15 kilometres west of Kanpur City. I arrived there in the evening of 30 October, after a seven hours journey by taxi from Varanasi, and was accommodated in the comfortable IIT Kanpur guest house. My host during an intense two days visit was Professor Ashok Kumar (*photo*), leading researcher at the Department of Biological Sciences and Bioengineering, and he came to welcome me.

Ashok Kumar has a very strong connection to Sweden, having lived many years in Lund, affiliated to the [Department of Biotechnology](#) and other departments at Lund University. He regularly goes to visit his family still residing in Lund, and he is involved in a number of collaborative research projects with Swedish colleagues. [More information about Dr. Kumar and his research in Sweden.](#)

#### Meeting with Dr. Ajit K Chaturvedi, Dean Research and Development.

The first meeting was held early in the morning on 31<sup>st</sup> October with Dr. [Ajit Chaturvedi](#), who has been Dean for Research and Development for two years, and with one more year to go. He is otherwise working as Professor of Wireless Communication. As Dean R&D, Dr. Chaturvedi is in charge of all foreign collaboration projects and external funding from abroad. IIT Kanpur is involved in two kinds of external collaboration projects, one is industry specific – for example projects together with big international companies such as Chevron, Samsung and Boeing, and the second is university specific, for example the Erasmus Mundus collaboration with Lund University and many others.



Dr. Ajit Chaturvedi and PhD Candidate Kidhima Singh.

Currently IITK has a large number of MoUs signed with foreign universities, and we discussed the merits in these. Dr. Chaturvedi remarked that in order to make any MoU worthwhile there needs to be a relationship established in beforehand between partners willing to work for joint projects. Only after that the universities should sign a MoU.

#### Visit to Department of Biological Sciences and Bioengineering (BSBE)

Web page: <http://www.iitk.ac.in/bsbe/>

This is the department where Dr. Ashok Kumar is working himself. It is a well-equipped, modern institution with high standard laboratories, established in 2001, and since 2003 located in its present premises. It is one of the flagships of IIT Kanpur.



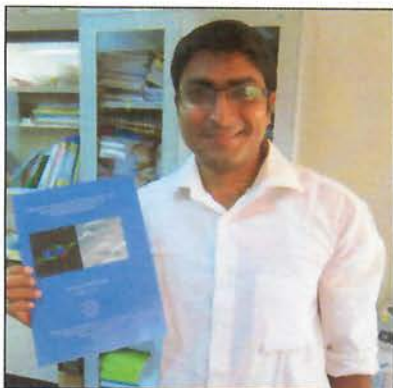
PhD candidates Deepak Raina, Apeksha Damania and Ankanshu Shukla in the lab.



BSBE could be realised because of generous funding

from Mr. Arun Shourie, long time back known as India's leading investigative journalist working for Indian Express, but later becoming a politician working for the Hindu nationalist party BJP, and being Minister of Disinvestment, Communication and Information Technology in the Vajpayee government 1998-2004. Being a Member of Parliament (MP) representing Kanpur, he has had a possibility to decide upon spending INR 2 m a year for projects within his constituency according to the "Member of Parliament Local Area Development Scheme", introduced by the Ministry of Rural Development in 1993. For one six year period in parliament, Shourie decided to fund the

new BSBE, and when he was re-elected for a new period he decided to give his funds to another new impressive department at IITK, namely the Center for Environmental Sciences and Engineering (CESE).



Haider Sami who defended his PhD thesis on "Design and Synthesis of Multifunctional Polymeric Materials for Potential Bioimaging and Drug Delivery Application" in April 2012.

Ashok Kumar successfully works with a research programme on Bioprocess Engineering and Biomaterials, focusing on design and development of new smart polymeric biomaterials and supermacroporous matrices for applications in biology and biotechnology. He modestly displays a copy of the peer reviewed Nature Protocols journal from 2010, publishing his and his colleagues research results. This is a field with a large potential to make new useful devices in Medicine, and Ashok has established contacts with several researchers at Lund University, Sweden, for example Dr. Harald Kirsebom at the Dept. of Biotechnology, Dr. Linda Elovsson at the Unit of Muscle Biology, Dept. of Experimental Medical Science, and Professor Lars Lidgren, Department of Orthopaedics. One post-doc researcher from IIT Kanpur, Dr. Ruchi Mishra, will go to Lund in January 2013 as part of this new collaboration.

Of course Ashok also keeps contact with his former colleagues at Lund University's Department of Biotechnology. Professors Bo Mattiasson and Rajni Hatti Kaul have both visited IIT Kanpur in recent years, as has also Dr. Igor Galaev and Dr. Martin Hedström. Linda Önnby, now PhD candidate at the department in Lund spent three months on a Minor Field Studies (MFS) scholarship at IIT Kanpur when she was working on her MSc thesis a few years ago. [More information about Linda's research.](#)

Before leaving the department, where PhD candidates were busy working in the labs, a meeting was organised with Dr. R Sankararamakrishnan (short form Dr. Sankar), Head of the department, in his office room decorated with a portrait of Arun Shourie on the wall. A Tamilian by birth, hailing from a village near Kodaikanal, he informed about the strong research environment that BSBE is. With only a limited number of faculty members, 11 people all in all, they supervise no less than 70 PhD candidates. Besides, the department has 150 BTech students and 30 MTech students.



Dr. Sankar and Prof. Kumar.

### Visit to Center for Environmental Sciences and Engineering (CESE)

Web page: <http://www.iitk.ac.in/cese/>

After completing the visit to BSBE, Dr. Kumar took me to a beautifully designed building on campus that houses the Centre for Environmental Science & Engineering (CESE), the second flagship institution of IIT Kanpur, and another initiative that has been generously funded from the MPLAD scheme pledged by Mr. Arun Shourie, Member of the Rajya Sabha. Dr. Kumar has one more laboratory on Health Biosystems in this facility. The Centre, inaugurated in 2006, has been conceptualized, designed and constructed as a "building in the garden", sustainable and environment friendly and conceived with the specific objective of creating an interdisciplinary research facility integrating the fields of engineering, science and medicine to address environmental issues.

### Meeting with Prof. Sandeep Verma, Advisor International Relations

Next stop was the office of Professor Sandeep Verma (*photo*) at the International Relations division. He is in charge of all international activities at IIT Kanpur, and a very energetic person strongly advocating more formalised collaboration between IIT Kanpur and Swedish universities. IIT today already has well functioning collaboration agreements with several universities in Germany, Switzerland and France, and he urged Dr. Ashok Kumar to work on similar



collaboration to be realised with Sweden.

Apparently, Prof. Verma had no clue about a workshop on introducing the Bologna academic process that representatives of Lund University organised at IIT Kanpur sometimes in 2011. No wonder, since no report has been published from this workshop afterwards.



Instead, Prof. Verma enthusiastically talked about a meeting he had had with Ms. Saloni Zaveri from the Swedish Embassy in Delhi recently. Saloni had informed him about a possibility to apply for funding from the Swedish government through the embassy specifically for Indo-Swedish joint research within the field of public health. Since this is an area of research in which Ashok Kumar is so much involved, it may be possible to get hold of such funding. Verma also mentioned that he is going to suggest the Swedish embassy to launch Sweden Days at IIT Kanpur, along the lines of the Nobel Week, from 2013.

#### Lunch meeting with Prof. P. M. Prasad, Erasmus Mundus programme coordinator



Over lunch I met with P Murali Prasad, Professor of Economics at the Department of Humanities and Social Science (HSS), and at the same time local coordinator for the European Commission funded Erasmus Mundus Action 2 mobility programme EMEA, an Asia Regional lot coordinated by Lund University. [More information about EMEA.](#)

Professor Prasad has been to Lund to attend EMEA meetings and is very positive towards collaborating with Lund University. IIT Kanpur was also a member of the Lund University coordinated consortium that ran the Erasmus Mundus Action 2 India lots launched in 2008 and 2009 (the latter still partly functioning till 2013), which contradicts

Professor Verma's statement that formal collaboration agreements with Sweden are lacking.

Prasad informed that 12 students, researchers and academic staff from IIT Kanpur were selected for the mobility programme currently running to different European universities.

#### Meeting with faculty, Department of Humanities and Social Science (HSS)

Web page: <http://www.iitk.ac.in/hss/>

After lunch, we proceeded to Professor Murali Prasad's home department, HSS. As previously mentioned, the idea to integrate humanities and social sciences at a technical university is a unique feature for Indian IITs, which is not there at European technical universities. (It should be mentioned that the same interdisciplinary effort characterizes the Indian Institutes of Management, the IIMs).



The HSS department covers the entire top floor of the main IIT building, and includes the following subjects: Economics, English, Fine Arts, Philosophy, Psychology, and Sociology. The staff has impressive CVs, most of the professors have PhD degrees from leading Indian universities such as JNU, Hyderabad and Vishwabharati (Shantiniketan), or from top universities in UK and USA. The faculty consists of 34 persons.

With short notice, Prof. Prasad had invited his colleagues for a meeting, and the following were able to participate:

– Dr. G Neelakantan, professor in English, focusing on Communicative Language Teaching, and World Fiction in English.



– Dr. [Munmun Jha](#), professor in Sociology, focusing on Human Rights and Social Movements.



– Dr. [Binay K Pattnaik](#), professor in Sociology, focusing on Sociology of Science and Technology, Environmental Sociology, and Sociology of Development. Dr. Pattnaik attended the [17th World Sociology Conference](#) held in Gothenburg in 2010.

– Dr. [A K Sharma](#), professor in Sociology, focusing on Social Demography, Rural Development, and Health and Environment.

– Dr. [Murali Prasad](#), professor in Economics, focusing on Microeconomics, Environmental Economics, and Development Banking.

Our meeting was introduced by Murali Prasad, who immediately came out with an interesting proposition to Swedish researchers working within the field of humanities and social sciences. Anyone interested to come to IIT Kanpur for one to two years is welcome to apply for this. The precondition is that the researcher candidate must also take part in the teaching activities. The salary would be approximately 1 lakh (= 100,000) rupees per month, plus other benefits.

After this announcement and my presentation of SASNET and Swedish South Asia related research, the participants at the meeting presented their respective research interests. Dr. Prasad himself mentioned that he is interested to find collaborative partners to do research on Health Economics, and I promised to explore this since Lund University has carried out research of high international standard in this specific field since the 1970s from premises adjacent to SASNET's office.

#### Scandinavian contacts with Fine Arts Division

HSS already has Nordic connections in the field of Design. Dr. [Satyaki Roy](#), working in the Fine Arts division has established collaboration with Alvar Aalto University in Espoo, Finland, and the Royal Institute of Technology (KTH) in Stockholm, Sweden. Unfortunately, Dr. Roy was not in Kanpur on this day of my visit, but he later responded on e-mail giving details what this collaboration is all about. His Nordic partners in interaction are Professor Kalevi Ekman, heading the Aalto Design Factory at the Aalto University's [Department of Engineering Design and Production](#); and Professor Carl Michael Johannesson at the [Division of System and Component Design \(SKD\)](#) at KTH. A number of KTH students have worked for Dr. Satyaki in Kanpur for their internships and other projects.

Dr. Roy is also strongly involved in organising Gurukul Workshops, as they are called, within the framework of the USID (Universal Sustainable Innovative Design) India Foundation, a non-profit forum initiated in 2006 to bring together Design and Technology community including professionals, students, and academician to engage, and spread the knowledge, research, and practice in these domains to help making the technology usable and accessible by the end user irrespective of their abilities, education, socio-economic conditions. USID regularly organises Gurukul workshops at different locations in India, and in December 2012 the HSS department and the Design Programme at IIT Kanpur will organise the USID Gurukul 2012. [More information.](#)

The experience of previous workshops has been very good for the students and mentors so far. In January 2011, the USID Gurukul 2011 conference was also held in Kanpur. Three students each from Aalto University and KTH participated along with two from China Tongji University and several students from different universities in India. All the participants were divided in teams and every team had two gurus (=teachers). Matti Hämäläinen from Aalto University was one of the visiting gurus. The participants spent a week in India working in teams with challenging projects. [Read a report written by two of the Finnish students, Jouni and Charlotta.](#)

Dr. Satyaki Roy warmly welcomes more students from Sweden to take part in the Gurukul workshops. The travel to and from Sweden has to be supported by the home university or individually, but accommodation, food and local hospitality are offered free.

#### Meeting with Prof. Manindra Agrawal, Dean of Resource and Planning

The final meeting of this extremely hectic day was held with Mahindra Agrawal, Professor of Computer Science and Engineering, besides being



Dean, Resource and Planning at IIT. It was a good chance to summarize the day with a person with a broad overview of what is happening at the university. Prof. Agrawal kindly informed about the different MoUs that IIT Kanpur has signed, and that currently 15 foreign students are based at the university through different exchange programmes. I informed him about the possibility for individual departments to get in touch with Swedish departments and apply for Linnaeus Palme exchange programme grants, for a period up to 8 years. [More information.](#)



### Kanpur round trip



My official IIT Kanpur tour was over, but the following day Dr Ashok Kumar arranged for a private round trip in Kanpur, with one of his PhD candidates, Mr. Ankur Gupta (*photo*) as guide. It was an interesting tour to travel around in this predominantly industrial city – neighbouring the much more historically interesting city of Lucknow.



We passed the Kakadeo neighbourhood, a part of Kanpur totally dominated by tutorial classes. Everywhere signboards advertising educational private companies in the tuition business are displayed. This is an extremely profitable business since every family in Kanpur, and elsewhere in India, likes their children to get good results in the final 12 year school exams in order to join the best universities.

We also went to the modern Jugilal Kumlupet Singhania temple (*photo*), built in 1998 by the widow of industrial magnate J K Singhania, and the Sudanshuji Maharaj Ashram in Bithaor – a place otherwise most known for connections with Rani Lakshmi Bai, the famous Rani of Jhansi fighting in the 1857 War of Liberation against the British.

In the afternoon, I took the flight from Kanpur's tiny airport to Delhi, an hour away, for more SASNET obligations there.

### Lars Eklund



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