



# Jawaharlal Nehru University

# R&D e-newsletter

Quarterly Publication

## Distinguished Person's Interview



Interview with  
**Prof. M. Jagadesh Kumar**  
Vice Chancellor, JNU



For more details, please follow the full interview  
<https://jnu.ac.in/research-e-newsletter>



**R&D e-news:** Before joining JNU as the Vice Chancellor, you had been an active researcher at IIT Delhi. Please tell us about your research at the IIT Delhi laboratory.

**Prof. M. Jagadesh Kumar:** First of all, I would like to thank you for giving me this opportunity to have a brief

discussion about R&D activities in the university. If you want to be a good teacher, you also have to be a good researcher and that is what motivates me to focus both on teaching as well as research. The advantage of doing cutting-edge research is that, when you go to the classroom for discussion with the students, as part of your teaching, you can introduce some of these novel ideas to them. And often I found that the students get excited and motivated. And when they ask some questions, often I found that those questions lead to further good research. So, therefore, you can see that good teaching feeds good research, and good research feeds good teaching. I work in the area of Nano-electronics, wherein I focus on designing device architectures for realizing low power integrated circuits work. And I have been very lucky to have good and motivated students and most of the work that I have been doing and publishing is primarily because of the hard work put by my students.

**R&D e-news:** Any incidence that you remember.....

**Prof. M. Jagadesh Kumar:** You know in nano-scale devices, fringe capacitance is a serious problem. But we know that from everyday experience, when you get into a lift, which has metal walls all around, the mobile signal goes down. You won't be able to speak? So when one of the students asked a question about this problem, then we had a long discussion in the class itself. And we thought, why not we use this real-life experience. We, then, designed a nano-scale device where this fringe field effects could be minimized. And in fact, we used the same idea, and covered the gate region of a nano-scale measure with a metal sheet. We found that the fringe field can be minimized effectively.

So, sometimes taking our real life experiences to practical utilization is very interesting. The experiences in one area could be useful in another, for example, if I am working in electrical engineering and if both of us have some discussions about the problem on which I am working, perhaps some of those

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leads can be used in your research, although you are working in biology. And the same is true for me as well. A discussion with you may enrich my research. Therefore, it is important that in the classroom, in addition to teaching, we need to have dialogues, critical dialogues with the students, and especially if the discussions are spanning across the areas of research that can bring in near awareness, it can help us in doing good research.

**R&D e-news:** How do you manage your teaching, laboratory and administrative duties?

**Prof. M. Jagadesh Kumar:** Well, I still teach at IIT, one full course. And on Saturdays and Sundays, I sit with my PhD students. It's all because of the geographical advantage that we have. JNU and IIT-Delhi are separated by just a road and it's only few minutes of walk across the campuses. So on Saturday and Sunday I go and visit IIT, and I sit with my students. When it comes to managing your time across different kinds of activities, it is important that we do it parallelly, several activities. You know, I remember one day I was taking my cycle out of the cycle stand at IIT-Delhi and I met one young faculty and he said, "Sir, in another two months the summer vacation is going to come, and then I will complete writing my research paper." Then, I told him, "You should never wait for a good moment to write your research paper. Everyday keep writing little bit, so that by the time summer comes, perhaps you would have completed your research paper." What has worked for me, is to do little of each activity that I am involved in and I don't do things sequentially. So what happens is if you do sequentially and if you get stuck in one activity, then all the other things get piled up that can lead to stress and may actually demoralize you. Whereas if you spend little time in each activity and everything is moving forward, you'll be motivated to complete and work efficiently. That is how I manage my time.

**R&D e-news:** How do you think, in current scenario, we can improve quality and excellence of research and development in the university? What are your plans for augmenting research facilities in the campus?

**Prof. M. Jagadesh Kumar:** Well, when we say how we improve the good research, first of all, we need to understand what good research is, right? I see it in two ways. One, you generate knowledge for the sake of generating knowledge, which is valued by peers in your area. But then there is also another aspect where you generate knowledge so that it can be used effectively to find solutions to the challenges that we face as human societies. Because researchers are of different kinds. It is better that we leave it to the choice of the researcher to choose what they want to do. However, in today's circumstances, it has become necessary for us to see that our research input is of good use. Therefore, in JNU, what we are trying to do is to motivate our faculty members to get funding from outside sponsoring agencies and do research, so that basic research can be converted into a prototype. That prototype can be used by an industry to produce a product which will be useful to the society. I think we need to complete this cycle from basic research to its utilization by the society. But, here, there are two actors involved: one is the teacher, the mentor and second, the student. So, it is important that when you select the students, you select the right kind of students who have that motivation and aptitude for doing research. As I said, each individual is different. Not everybody is made to do research. Not everybody is made to do certain tasks. So when we select the students it is important to identify that spark in the students and then select. And second, as far as the mentoring is concerned, I think we need to be internally motivated to do something new always. We need to be curious about the work that we are doing, and unless we have this internal motivation, it is very difficult for any external force to force the students and also the faculty to do outstanding research. We need to be internally motivated. But the administration also plays a significant role here in creating an ecosystem, where both the faculty members and students feel motivated to do outstanding research. In this context, recently, we have formed a research and development office and this office is trying to simplify the administrative procedures so that our researchers, both teachers and students can spend more time in doing their research rather than chasing the funds. And we are also providing the motivation and awareness to our younger faculty, especially, to apply for sponsored research funds.

**R&D e-news:** What are the ways by which University administration can facilitate the faculty and the students to achieve research excellence? How should JNU respond to challenges posed by lack of research funding? Any suggestions for independent funding and resource generation for faculties and students?

**Prof. M. Jagadesh Kumar:** Well, this is an important question for any university; how do you raise the internal resources. One, of course, is the government funding agencies that we have, DST, DBT, CSIR and so on. But time has come for us to also approach industries. There are many industries who would be interested in funding good research in the university. However, we cannot remain in ivory towers and expect somebody to come and fund us. We need to go out, we need to present to them and tell us what is the kind of expertise we have and we need to motivate them so that they join hands with us. You see, if industry has to fund us, they also have to understand the kind of benefits they derive by collaborating with us. And it is our responsibility to tell them how our expertise can further enhance their interest as it has to be a win-win situation for both the university and the industry, right? Thus, industry is what JNU is now looking at as an alternative source for funding our research.

**R&D e-news:** What are your views about the faculty improvement program?

**Prof. M. Jagadesh Kumar:** You know teaching is an important activity that a faculty member undertakes. But what I have observed is that when new faculty members join a university, we actually fail in providing good mentorship to them. We expect that a faculty member will somehow become a great teacher but that's not possible. The senior faculty need to mentor them about the various ways of interacting with the students, motivating the students and creating an atmosphere where the students will become good learners. We have the Human Resource Development Center (HRDC), where we have taken up several programs to mentor the teachers. Recently, UGC has also made it mandatory for all new faculty who have joined any higher educational institute to go through a mentorship program. Hence, we are in the process of designing such a program. UGC, has also given a framework on what we should include in this mentorship program for the new faculty. I think we need to focus on this very seriously.

**R&D e-news:** What contributions JNU need to make now in order to promote innovation, utilization of science and technology for society, and enrichment of people's lives?

**Prof. M. Jagadesh Kumar:** Well, in the last couple of years, JNU has put enormous efforts in creating an ecosystem where the innovations done by our faculty and students are encouraged. And we are also in the process of encouraging our faculty and students to begin startup companies. So the university is very seriously looking into it. We have recently also revised our IPR policy, and we are in the process of registering a section 8 company to facilitate these kind of activities. It has two advantages; the first, of course, is that our basic research will ultimately turn out to be something useful to the society, and secondly, it will provide an opportunity for our students to have hands on experience in how basic in-house research can actually be converted into application oriented research. And if you have startup companies on the campus itself for a couple of years, then students can establish themselves before they take off. The students can work with the innovators and learn the tricks of innovating. Therefore, having startup companies on the campus where young innovators are innovating and working on new ideas, I think, will be a win-win situation, both for the faculty and the students on the campus.

**R&D e-news:** What is your vision about the introduction of new professional courses in JNU?

**Prof. M. Jagadesh Kumar:** If you are referring to the establishment of School of Engineering and School of Management and Entrepreneurship, then, JNU is well-known for its research contributions in sciences and

also social sciences. In sciences, we have been focusing for too long on basic research. And it is very good; it is well recognized across the world. But, then, should we stop only doing basic research? Can we take it further? And that is where upright research comes into our focus. The School of Engineering is precisely established to make sure that there is collaboration between School of Engineering and the Science schools, so that basic research is converted into upright research. But then, you also require the skills to establish companies and industries, and that is where you require management and entrepreneurship. Thus, with the establishment of School of Engineering and School of Management and Entrepreneurship, the complete cycle is over. You have basic sciences; you have social scientists who analyze how this technology is impacting the society, and then you have the engineering divisions and the School of Management and Entrepreneurship, who can work together and make JNU a university which is multi-dimensional. For too long, we have remained, I think, focused only on few aspects of this entire gamut of science and technology.

**R&D e-news:** How would you like to build the success of JNU in this Golden Jubilee year of its history? What is your vision of research at JNU?

**Prof. M. Jagadesh Kumar:** You see, Golden Jubilee is just a milestone. We have a long way to go ahead. And it is not enough to pat ourselves and say we are a good university. We need to look ahead down the line, and ask, after 10 years where will we stand? Even in the higher education area, there is a huge competition now: a huge competition for securing funding, a huge competition for getting best faculty and best students, and that is possible only if we brainstorm on creating a vision for our university and work together, and that is what we have been doing in the last 2-3 years. We have brought several reforms in the functioning of university, both in the academic research and teaching, and also in administrative procedures. Thus there is always a work in progress and we can realize the vision of the university only if we work together. That is what we are doing in the university. JNU, of course, is known, rather well known, for its culture of openness where we discuss and debate on various issues. We would like to continue this culture. After all, as a researcher, our primary objective is to question. Only when you question, and while trying to find answers to those questions, that you create new knowledge. And we are in the process of creating new knowledge. Therefore, we would like to preserve that intrinsic nature of this university, of questioning, debating and discussing.

**R&D e-news:** How do you propose JNU as “go-forward” research institution in the coming years?

**Prof. M. Jagadesh Kumar:** Our students are the pillars of this university. We, of course, remain mentors, but ultimately it is our students who represent the university. It is important to make them realize that they should never underestimate themselves. They have enormous potential. So, as mentors, it is our responsibility to make them understand that they have enormous potential. And our job is to make sure that their potential is put to good use and innovative research can be done for creation of new knowledge. And there is no alternative, no substitute for hard work. You need to be creative, but in order to put that creative thinking for better use, you need to work hard. Therefore, creativity and hard work, they go together. Let us resolve that as teachers, we will strive to create that ecosystem where our students will become outstanding innovators and committed scientists to do something useful for the society.





**Professor Deepak Gaur** of the School of Biotechnology, Jawaharlal Nehru University was recently presented the 2017 **Shanti Swarup Bhatnagar Prize** in Medical Sciences by the **Honourable Prime Minister, Shri Narendra Modi** in a glittering function organised by the Council of Scientific and Industrial Research on February 28, 2019 at Vigyan Bhawan, New Delhi.



**Dr. Md. Qutbuddin**, Associate Professor, Centre of Arabic and African Studies, School of Language, Literature and Culture Studies, Jawaharlal Nehru University, New Delhi, received the **Presidential award "Maharshi Badrayan Vyas Samman"** (2016) in recognition of his substantial contribution in the field of Arabic language and literature, by Hon'ble Vice President of India Shri. M. Venkaiah Naidu on 04.04.2019 at Hotel Ashoka, New Delhi,



**Dr. Mukesh Jain**, SCIS has been conferred with prestigious **Tata Innovation Fellowship** for the year 2018-19 by the Department of Biotechnology, Government of India, for his significant contributions in the area of Plant Functional and Applied Genomics.



## ■ IPM Cell Activity

**Preamble:** It is necessary that the knowledge generated through research, teaching, and collaborative endeavours gets encouragement and facilitation to be translated easily into Intellectual Property Rights of the stake holders. Encouragement, promotion and safeguarding the innovations generated by the faculty, students, research scientists and staff members of the University is of concern. IPM cell of the University continued to play its role of the custodian of all IPs generated in the University by proactively engaging with the stakeholders. This unit functions in close collaboration with the Advisory Committee attached to it where all policy decisions are formulated, discussed and adopted.

In the last financial year 2018-2019, following new patents were filed by faculty members of JNU through IPM Cell.

S.No	Faculty Name	Patent Title	Patent No.	Filing Date
1	Dr. Jaydeep Bhattacharya, SBT	Gold Nanoparticle-Based Detection of Low Molecular Weight AGEs from In Vitro Glycated Haemoglobin A0 Samples	201811014098	12 April 2018
2	Dr. Jaydeep Bhattacharya, SBT	Bio-Engineered Mesoporous Dialysis Nano -Beads for the specific removal of excess body toxins, water & ions from kidney failure.	201711020373	18 May 2018
3	Dr. Jaydeep Bhattacharya, SBT	Antibiotic Delivery System	201811019105	22 May 2018
4	Prof. D.K. Lobiya, SCSS	On-Chip nuclear magnetic resonance probe	201811028297	27 July 2018

## ■ IPM Cell Activity

The advisory committee meetings were held during 2018-2019. Some important decisions were taken during these meetings such as -

1. 8 Patent Attorneys were empanelled to facilitate IPR related activities and help the inventor faculty to file patents both at national, PCT and country specific levels. Further it was decided to file the RFE at the time of filing patent to expedite the grant process.
  - a) M/S Sanshadow Consultants private limited, New Delhi
  - b) M/S Anushri Gupta & Associates, New Delhi
  - c) M/S Subramaniam& Associates, Delhi
  - d) M/S Khurana&Khurana Advocates & IP Attorneys, Greater Noida(UP)
  - e) M/S K & S Partners, Gurgaon
  - f) M/S Lakshmikumaran&Sridharan Attorneys, New Delhi
  - g) M/S Krishna &Saurastri Associates LLP, New Delhi
  - h) M/S Aadastra IP Private Limited, New Delhi
2. SOP guidelines for patent filing were finalized and uploaded on the website <https://jnu.ac.in/sites/default/files/ipmcell/SOP%20for%20filing%20IP.pdf>
3. In addition, JNU will financially support basic patent filing fees upto a max of Rs. 30,000 with a maximum of 2 patents per faculty per year. The government patent maintenance fees shall be paid by JNU. However, attorney's fees should be paid by the inventor. Marketability of a patent shall be a joint responsibility of JNU and the inventor.
4. Approx. Rs. 1637408/- was spent to meet the expenses related to pending patent files during FY2018-2019.

JNU has established the **Institution's Innovation Council (IIC-JNU)** as per guidelines of the MHRD Innovation Cell (MIC). IIC-JNU has been established to promote innovation in the University through multitudinous modes leading to a vibrant local innovation ecosystem, to create start-up supporting mechanism, establish function ecosystem for scouting ideas and pre-incubation of ideas and develop better cognitive ability for technology students.

## Composition of IIC-JNU

### Internal Members:

President - Prof. Rana P. Singh (SLS, JNU)

Convener - Dr. Mukesh Jain (SC&IS, JNU)

Member - Dr. Hemant Kushwaha (SBT, JNU)

Student and Social Media Coordinator - Ms. Monika Yadav

Student Members - Dr. Aakansha Bhawsar, Mr. Anuj K Dwivedi, Ms. Jyoti Gupta, Mr. Vikas Mittal, and Dr. Nikunj Makwana

### External Members:

Representative from nearby Incubation Centre - Dr. Anil Wali, MD, FITT, IIT-D

Bank/Investor - Dr. Vishal Gandhi, BioRx Venture

Technical Expert from nearby Industry - Dr. Gagan Deep, CEO, Vproteomics,

Alumni Entrepreneurs from the Host institute - Dr. Anupama Singh, MD and CEO, Sequoia Insilico and Dr. Dheeraj Singh, GRC Foundation

Patent Expert - Mr. Nalini Kant Pandey, Mitakshara IP Services

**IIC-JNUE-mail:** Email: [iic@jnu.ac.in](mailto:iic@jnu.ac.in)

**Social Media :** Facebook: <https://fb.me/iic2018jnu>,

Twitter: <https://twitter.com/IICJNU> ,

Instagram: <https://www.instagram.com/iic2019jnu/>

School-Level Innovation Clubs (SLICs) have been established with Faculty Members from different Schools/Special Centres as Coordinators to ensure better outreach and maximum participation of Faculty and Students from JNU in Innovation related activities.

## Activities Organized by IIC-JNU

1. Webinar on "Innovation" by Shri Anand Mahindra, Chairman, Mahindra Group, as the 1st Episode of first leadership talk series organized by MIC (January 8, 2019)



Webinar by Shri Anand Mahindra, Chairman, Mahindra Group (SLS auditorium)

2. One-day Workshop on Intellectual Property Rights (IPR) in association with IPM Cell, JNU on January 10, 2019 (first session by local expert, Dr. MalathiLakshmikumaran, Director, Lakshmikumaran& Sridharan Attorney and second Facebook live session by Ms. Shwetasree Majumdar, Principal, Fidus Law Chamber).



Workshop on Intellectual Property Rights (SLS auditorium)

3. Webinar on “Planning for Career” by Dr. Anand Deshpande, MD, Persistent Systems, as the 2<sup>nd</sup> Episode of first leadership talk series organized by MIC (January 24, 2019).



Webinar by Dr. Anand Deshpande, MD, Persistent Systems (SLS auditorium)

4. Participated in Smart India Hackathon (SIH) 2019 in both Software and Hardware Editions (a total of 18 teams of 6 student members each participated from JNU).

5. Organized Idea Competition on “Popularization of Science” in association with Department of Science & Technology, Government of India to celebrate the National Science Day on February 28, 2019.

6. Webinar on “Art of Decision Making” by Shri AjitDoval, National Security Advisor, Government of India, as the 3<sup>rd</sup> Episode of first leadership talk series organized by MIC (March 19, 2019).



Webinar by Shri Ajit Doval, National Security Advisor, Government of India (SC&SS auditorium)

School	Funding Agency	No. of Projects	Amount (Rupees)
AIRF	DBT	1	45829653.00
SSS	ICSSR/WVI/UNFPA/ONGC/THDC/IDS	9	9913100.00
LEC	ONGC	1	1971200.00
SAA	ICSSSR	1	4955750.00
SBT	DBT/SERB/UGC/DST/BRNS	9	32208128.00
SC&IS	CSIR/DBT/DST/SERB	11	52602776.00
SC&SS	DST	1	1000000.00
SCMM	DBT/ICAR/NIH/SRB	5	38083741.00
SCNS	IUAC/SERB	2	4388650.00
SES	PRPL/DST/DBT/IC Net	4	10784637.00
SIS	IOC/EC	3	5722981.00
SLL&CS	UGC/OAF	3	1997452.00
SLS	DBT/SERB	8	54622905.00
SPS	SERB/ISRO/DST	4	5457400.00
		<b>62</b>	<b>269538373.00</b>

## Recent Major Publications of JNU

- 1) Influence of Structure on Electronic Charge Transport in 3D Ge Nanowire Networks in an Alumina Matrix.  
 Authors: Nirat Ray, Nikita Gupta, Meghadeepa Adhikary, Nikolina Nekić, Lovro Basioli, Goran Dražić, Sigrid Bernstorff & Maja Mičetić  
 Journal: Nature Scientific Reports. 2019
- 2) A Comprehensive Biophysical Analysis of the Effect of DNA Binding Drugs on Protamine-induced DNA Condensation.  
 Authors: Sakshi Gupta, Neha Tiwari & Manoj Munde  
 Journal: Nature Scientific Reports. 2019
- 3) ASYMMETRIC LEAVES1 and REVOLUTA are the key regulatory genes associated with pitcher development in *Nepenthes khasiana*.  
 Authors: Jeremy Dkhar & Ashwani Pareek  
 Journal: Nature Scientific Reports. 2019
- 4) Origin of ferromagnetism in Cu-doped ZnO.  
 Authors: Nasir Ali, Budhi Singh, Zaheer Ahmed Khan, Vijaya A. R., Kartick Tarafder & Subhasis Ghosh  
 Journal: Nature Scientific Reports. 2019
- 5) Gold-graphene oxide nanocomposites for enzyme-less glucose monitoring.  
 Authors: Chetna Tyagi, G B V S Lakshmi, Veeru Jaiswal, D K Avasthi and Ambuj Tripathi  
 Journal: Biomedical Physics & Engineering Express (IOP Science)
- 6) Neuro-protective role of nanocapsulated curcumin against cerebral ischemia-reperfusion induced oxidative injury.  
 Authors: Abhishek Mukherjee, Sibani Sarkar, Sayantan Jana, Snehasikta Swarnakar, Nirmalendu Das  
 Journal: Brain Research (Elsevier)

- 7) Effective Utilization of Waste Red Mud for High Performance Supercapacitor Electrodes.  
 Authors: Gourav Bhattacharya Sam Jeffery Fishlock, Joy Sankar Roy, Anurag Pritam, Debosmita Banerjee, Sujit Deshmukh, Subhasis Ghosh, James A. McLaughlin, Susanta Sinha Roy.  
 Journal: Global Challenges.
- 8) Effects of chronic unpredictable mild stress induced prenatal stress on neurodevelopment of neonates: Role of GSK-3 $\beta$ .  
 Authors: Mahino Fatima, Saurabh Srivastav, Mir Hilal Ahmad & Amal Chandra Mondal  
 Journal: Nature Scientific Reports. 2019
- 9) Surface modification of CdS quantum dots: an effective approach for improving biocompatibility.  
 Authors: Nath Yadav, Rahul Kumar, Rishi K Jaiswal, Ashwani Kumar Singh, P Kumar and Kedar Singh.  
 Journal: Materials Research Express (IOP Science).
- 10) Extricating New Physics Scenarios at DUNE with Higher Energy Beams.  
 Authors: Mehedi Masud, Mary Bishai & Poonam Mehta.  
 Journal: Nature Scientific Reports. 2019
- 11) Buchwald-Hartwig Coupling at the Naphthalenediimide Core: Access to Dendritic, Panchromatic NIR Absorbers with Exceptionally Low Band Gap.  
 Authors: Jyoti ShuklaM. R. Ajayakumar, Pritam Mukhopadhyay.  
 Journal: ACS Publications

## Seminar & Conferences

Number of seminar and conferences were organized by various schools from Oct 2018-March 2019

School	Number
SLL&CS	9
SIS	18
SSS	9
CSLG	1
LIB	1
SAA	1
SBT	6
SC&IS	3
SCDR	1
SCMM	3
SCSNEI	2
SLS	5
SPS	3
SS&IS	1
USIC	3
SC&SS	2
SES	4
<b>Total</b>	<b>72</b>

## 1. Har-Gobind Khorana 'Innovative Young Biotechnologist Award'

The award consists of Research Grant for a proposed innovative. The Har-Gobind Khorana Innovative Young Biotechnologist Award (IYBA), instituted by the Department of Biotechnology, Ministry of Science & Technology, Government of India is an attractive Research Award to identify and nurture outstanding young scientists with innovative ideas and desirous of pursuing research in frontier areas of Biotechnology. Young scientists up to the age.

## 2. Competitive Research Grant in the area of Biological Sciences

One award with an upper limit of Rs 3 Crores. The Sree Padmavathi Venkateswara Foundation (SreePVF), Vijayawada, Andhra Pradesh, incorporated under Section 7(2) and Rule 8 of the Government of India Companies Rule 2014, is a private Foundation which has been supporting excellence in medical education and care through a variety of methods. It has also been offering awards, donations ...

## 3. DST Women Science & Technology Proposals Invited

Science & Technology for Women Scheme was launched in the Nineteen Eighties for enabling women through inputs of S&T to fortify their position in the society. To encourage research, development and knowledge generation with respect to several stages of the life cycle of women. Proposals are invited online in the prescribed format at the portal <http://onlinedst.gov.in> from the State S&T Councils, R&D Organizations, Central & State Universities, their attached institutions and other S&T based NGOs according to the guidelines.

## 4. Fulbright-Nehru Postdoctoral Research Fellowships (2020-2021)

These fellowships are designed for Indian faculty and researchers who are in the early stages of their research careers in India. The Postdoctoral Research Fellowships will provide opportunities to talented faculty and researchers to strengthen their research capacities. Postdoctoral fellows will have access to some of the finest resources in their areas of interest and will help build long-term collaborative relationships with U.S. faculty and institutions. These fellowships are for eight to 24 months.

## 5. INDO- POLAND JOINT RESEARCH PROGRAMME

The Department of Science & Technology (DST), Govt. of India and Polish National Agency for Academic Exchange – NAWA (Poland), invite proposals for Joint Research projects in bilateral mode involving scientists & technologists from India and Poland.

## 6. DST-DFG Joint Call inviting joint research proposals

Pursuant to the Memorandum of Understanding (MoU) between the Department of Science and Technology, India (DST) and the Deutsche Forschungsgemeinschaft (German Research Foundation, DFG), DST and DFG are opening the possibility for joint Indo-German research project funding in the fields of Chemistry,

Mathematics, Physics (DFG review boards 301 to 312). Indo-German teams of researchers are invited to submit joint proposals describing integrated research projects with a duration of up to three years.

## 7. The German Research Foundation (DFG) Joint Call

The German Research Foundation (DFG) Office India is pleased to inform you about a Joint Call announced under the bilateral agreement between the Department of Science and Technology and DFG. Effective immediately the two agencies invite research proposals in the broad area of "CHEMISTRY, PHYSICS AND MATHEMATICS".

The web-link of this announcement by the DST is:

<http://www.dst.gov.in/callforproposals/dst-dfg-joint-call-2019-chemistry-mathematics-physics>

The web-link of this announcement by the DFG is:

[https://www.dfg.de/foerderung/info\\_wissenschaft/info\\_wissenschaft\\_19\\_42/index.html](https://www.dfg.de/foerderung/info_wissenschaft/info_wissenschaft_19_42/index.html)

## 8. Announcement of Programmes for the year 2019-20: Shastri Indo-Canadian Institute

Shastri Indo-Canadian Institute is pleased to announce following programmes for the year 2019-20 administered by its offices in India and Canada. The programmes seeking applications in this round are:

Shastri Institutional Collaborative Research Grant (SICRG)

Shastri Mobility Programme (SMP)

Shastri Research Student Fellowship (SRSF)

Shastri Programme Development Grant (SPDG)

Shastri Publication Grant (SPG)

Shastri Membership Development Grant (SMDG)

Faculty Development Programme For Vocational Education (FDPVE)

Shastri Scholar Travel Subsidy Grant (SSTSG)

SICI Membership Development Fund (SMDF)

The details of the programmes are available at our web portal <https://www.shastriinstitute.org> and can be accessed through the link: <https://www.shastriinstitute.org/grants-awards-and-opportunities-for-indian-canadian-scholars>.

## 9. Germany-India Funding Opportunities for Indo-German Fundamental Research Projects in the Life Sciences

It is possible for teams of Indian and German researchers to seek synchronised funding for integrated Indo-German cutting-edge fundamental research projects proposing innovative approaches in the academic disciplines covered by the Department of Biotechnology (DBT), Ministry of Science and Technology, Government of India & DFG. As the projects must be fully integrated Indo-German research projects, it is expected that the proposals contain detailed information about the mode and essentiality of collaboration between the Indian and the German side. Funding: will be granted for only those proposals where both DBT and DFG recommend funding. Duration: up to 3 years.

## “Requirement of two students-editors for ‘Research, News and Communication’, JNU”

The JNU office of Research and Development is seeking two student editors to help its ‘Research, news and communication’ wing. The responsibilities of student-editors will include help in designing and content/script writing for editorial section of the research e-newsletters of JNU. The student-editors will be given the experience certificate by the University. However, it should be noted that no monetary support will be given from the university.

**Eligibility: M.Phil./Ph.D. student from JNU**

*Note: One position is for humanity and one position is for science stream*

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