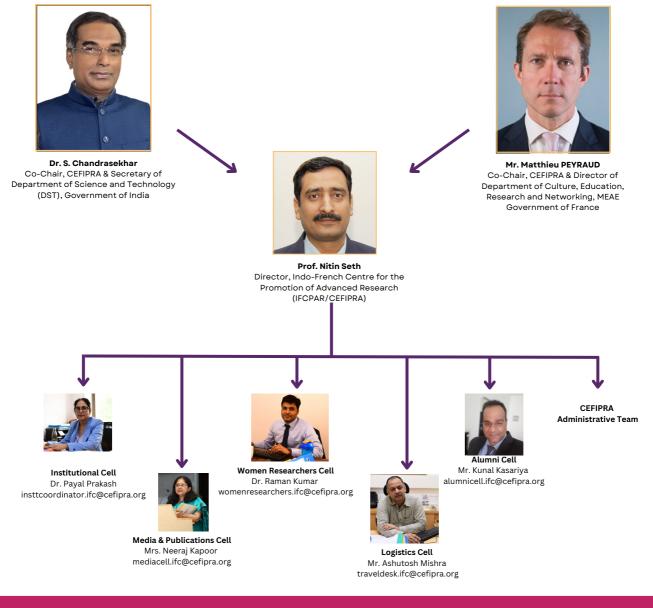
# ALUMNI CONNECT Indo French Science in the Spotlight



## CEFIPRA Alumni Cell 2023

# ORGANISATIONAL STRUCTURE OF CEFIPRA



### **CEFIPRA Programme Portfolio**

- Collaborative Scientific Research
   Programme (CSRP)
- Industry Academia Research & Development Programme (IARDP)
- Indo-French Postdoctoral Research Programme for Women in Science (PROWIS-I)
- Indo-French Visiting/Mobility Programme for Women in Science (PROWIS-II)
- Scientific Seminars/Workshop/Training/Lecture

- DST-Inria/DST-CNRS Targeted Programme
- High Impact Scientific Research Network
   Programme
- Raman Charpak- Fellowship Programme
- Water Research Programme-Call for Project Proposals
- Water Research Programme-Call for Seminar/Workshops/Training school Programme

#### From Director's Desk

Dear Alumni,

Greetings from CEFIPRA!

First of all I wish all Alumni and your family members seasons greetings! Wishing a happy healthy and prosperous year ahead.

CEFIPRA has always strived to maintain a deep association with the PIs/scientists/researchers/students of its projects/programmes, even after completion of their projects/programmes. We take immense pride in welcoming you as privileged members of the alumni community of CEFIPRA.

As you are aware that, CEFIPRA has completed the journey of 35 years and has always move forward to establish new and improved standards. In our journey to learn, grow and contribute continuously in deepening and strengthening the Indo–French ST&I relations and we believe that you are an inseparable part of the success.

You are an important part of CEFIPRA. We want to strengthen the Indo-French S&T associations by involving and recognizing your contributions & accomplishments. CEFIPRA is proud and wants to recognize, reward and focus more on alumni network for the meaningful S&T collaborations. In this light we started formal "Alumni Cell & Connect" programme.

I am happy to share the first newsletter "ALUMNI CONNECT" for our significant Alumnus of CEFIPRA. Hope that in future, we have a deeper connect for dedicated conferences, workshops, mentorships and projects etc.

"Connect and relive those enriching memories......Again"

#### -Prof. Nitin Seth Director CEFIPRA

#### Dear Alumini,

CEFIPRA in a span of 35+ years have been able to support & connect scientists/researchers/students in more than 700 joint projects. which are across various scientific domains. In addition, eminent scientists have been part of the several Evaluations Committees under various programme of CEFIPRA.

A new initiative has been envisaged by CEFIPRA to create its Alumni Cell & connect our beneficiaries who have made a huge contribution for Indo–French Science and Technology cooperation.

This newsletter is dedicated to our eminent Alumni's of CEFIPRA who have been part of CEFIPRA and their achievements have been highlighted in era of social media. The undersigned has been assigned as the Head of Alumni Cell of CEFIPRA

CEFIPRA is keen to further strengthen the Indo-French relations in Science, Technology & Innovation through this newly constituted Alumni Cell. Through this first newsletter of Alumni Cell, I hereby approach our prestigious alumni to write to us any ideas/suggestions for strengthening the Alumni Cell & Indo-French S&T cooperation.

Thank you very much! Merci Beaucoup!

-Mr. Kunal Kasariya Head of Alumni Cell <u>Contact:</u> Kunal@cefipra.org/alumnicell.ifc@cefipra.org



# **Our Prestigious PI's**



In April, 2022, **Padma Shri Prof. Ajay Kumar Sood** was appointed as the Principal Scientific Advisor (PSA) to the Government of India. He is also the Chairperson of the Prime Minister's Science, Technology & Innovation Advisory Council (PM–STIAC). Prof. Sood is also a Distinguished Year of Science Professor at the Indian Institute of Science (IISc) Bangalore. He was a member of the Prime Minister's Science, Technology, and Innovation Advisory Council (PMSTIAC) from 2018 to March 2022 and from 2009 to 2014, he had also served as a Member of the Scientific Advisory Council (SAC) to the Prime Minister of India.

Prof. Sood has a doctorate in Physics from IISc Bangalore. His research interests include the physics of nanosystems and soft matter. He has published more than 450 papers in peer-reviewed journals and holds several patents.

His work has been recognised by many awards, including the Padma Shri, the fourth highest civilian award in India. He was President of the Indian National Science Academy (2017–19), President of the Indian Academy of Sciences (2010–12), and Secretary–General, The World Academy of Sciences (TWAS), Trieste, Italy (2013–2018). He was elected to the Fellowship of the Royal Society, UK (FRS) in 2015.

He has also received the Shanti Swarup Bhatnagar Prize, the G. D. Birla Award for Scientific Research, the TWAS Prize in Physics, the Millennium Gold Medal of the Indian Science Congress Association, the Sir C. V. Raman Award of the UGC, the Homi Bhabha Medal of the Indian National Science Academy and the G. M. Modi Award for Science and Technology, among others.

Prof. Sood served as the Chairperson of the Governing Council, Raman Research Institute (2016–2022), Member of the Vision Group on Nanotechnology, Government of Karnataka (2014– present), Chairperson of the Board of Governors, Indian Institute of Science Education and Research– Bhopal (2020–present), Chairperson of the Board of Governors, Indian Institute of Science Education and Research– Mohali (2021–present) and Chairperson of the DST Committee of VAJRA (2020–present)

Prof. Sood has been twice associated with CEFIPRA as former Principal Investigator (PI) of Collaborative Scientific Research Programme (CSRP) Project from 1992 to 1995 & from 2004 to 2008.



**Prof. Sanghamitra Bandyopadhyay** is an Indian computer scientist specializing in computational biology. She is Director, Indian Statistical Institute.She is a Shanti Swarup Bhatnagar Prize winner in Engineering Science for 2010, IInfosys Prize 2017 laureate in the Engineering and Computer Science category and TWAS Prize winner for Engineering Sciences in 2018. Her research is mainly in the areas of evolutionary computation, pattern recognition, machine learning and bioinformatics. She is the first woman Director of the Indian Statistical Institute. In 2022 she is conferred with Padma Shri for Science and Engineering, by Government of India.

She was the project investigator of Indo-French Collaborative project under DST-Inria-CNRS Targetted Programme of CEFIPRA from 2015 to 2018. In 2022, she also been recipient of project under Collaborative Scientific Research Programme (CSRP). CEIFPRA had the privilege host her 6 Lectures under Annual Lecture Series on 15 Oct., 2019 at Sorbonne Université, Paris (title: Optimizing Multiple Objectives for Clustering) and Université Paris-Est Crétail, Paris (title: Advances in Multiobjective Optimization and Applications in Clustering and Computational Biology). She delivered lecture on 15 & 16 Oct., 2019 at Sorbonne Université, Paris, Université Paris-Est Crétail, Paris and Laboratoire d'Informatique de Grenoble, France.



**Prof. Rohini Godbole** from the Centre for High Energy Physics (CHEP) at IISC Bangalore on being awarded the "Ordre National du Mérite", one of the highest distinctions bestowed by France to honour eminent persons. She has been recognised for her contributions to collaboration between India and France and her commitment to promote enrolment of women in science. Prof. Godbole has been associated with CEFIPRA as former

principal investigator (PI) and Scientific Council (SC) member. She was actively involved in organizing Indo–French seminars on "Women in Science" in India (2015) and France (2018) as member of SC.



**Prof. Françoise Combes,** Sorbonne University on received the CNRS 2020 gold medal, one of the highest French scientific distinctions.

Prof. Francoise Combes is an Astrophysicist, she studies the formation and evolution of galaxies, and is a specialist in dark matter and energy. She was associated with CEFIPRA as Principal Investigator in our Collaborative Scientific Research Programme from 2018 to 2021.

### **CEFIPRA Alumni Interactions - Hyderabad and Bangalore**



Prof. Nitin Seth, Director CEFIPRA with Prof. A.K. Sahoo at University of Hyderabad on 2nd August, 2022



With Prof. C.V. Jawahar at IIIT Hyderabad on 3rd August, 2022

#### **CEFIPRA Alumni Interactions - Bangalore (August, 2022)**



With Ms. Ashwini Ravi (student) at IISc Bangalore on 4th August, 2022



With Prof. S.K. Nandy at IISc Bangalore on 5th August, 2022

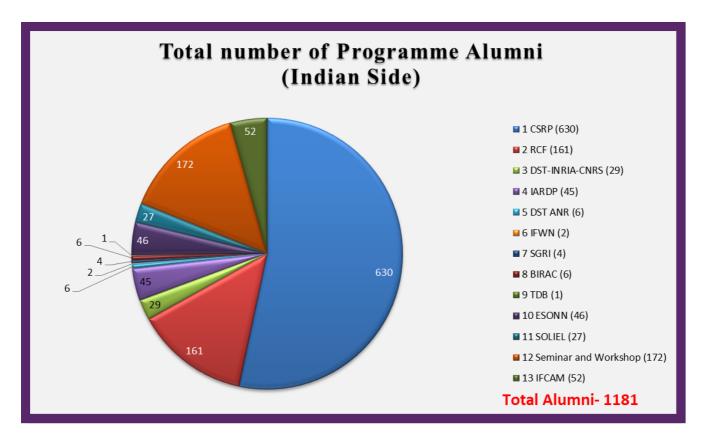


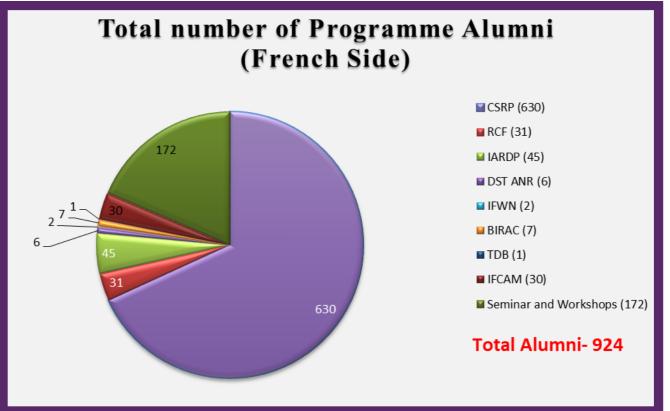
With Prof. Mahesh Kakde at IISc Bangalore on 5th August, 2022

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Alumni Connect| 1st Edition

# **CEFIPRA Alumni at a Glance**





\*Also, further there are around 750 Co-Pi's from Indian and French side, around 3390 HR Trained including 1100 PhDs and Post Docs and along with 4000+ Mobility of scientists and students. *There are more than 6,000+ CEFIPRA's alumni from France and India.* 

#### Student's Corner

In the present era, the thrust of developing technologies, knowledge building and an acquaintance of enrolment remains a matter of prime concern. CEFIPRA supports high quality research through collaborative projects in advanced areas of basic and applied sciences to nurture scientific competency. The Centre is associated with bridging of students/scientists of two countries in collaborative mode. A rich plethora of scientists and scientific groups are well networked. In this section, we are honored to disseminate experiences of our motivated fellows!



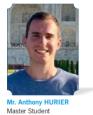
PhD Student Indian Institute of Technology (ISM) Dhanbad

Host Institution/University: Université de Lille Institut d'Electronique, de Microélectronique et de Nanotechnologie (IEMN-UMR CNRS 8520), Université de Lille – Sciences et Technologies, VILLENEUVE D'ASCQ Cedex Duration : 6 months (Mar'2019 to Sept'2019)

The Raman Charpak Fellowship (RCF) has strengthened several skills necessary for being a part of important research group; working in team, communication skills, conceiving and establishing a research idea. The RCF also enabled me to significantly expand my international network of contacts in the field of energy storage materials.

The research outcomes of this project in the form of scientific publications will be highly valuable in

building the foundation for my future career prospective. I am confident that, together with the reputation of the host, the skills that I comply with this project will enable me to attain a competency to receive nice opportunities for post-doctoral research in future. Being placed in an international research group I hope for substantial strengthening of the ties with the European scientific community and establishment of a network with strong potential for fruitful collaborations in near future. This RCF project enriched my doctoral thesis with a new field of expertise i.e., MOFs. The detailed study done in understating the electrochemical phenomenon exhibited by MOFs (both in pristine or in other forms) would help me understand better the basic underlying aspects of the other electrode materials and key features requisite for any electrode material to show excellent electrochemical performance. The host encouraged me to participate in several seminars and also help other/discuss work with PhD students who are also working in similar field. I also got opportunity to participate in instrument training including FTIR, SEM, RAMAN, and TGA.



Master Student Université Pierre et Marie Curie Paris

#### Host Institution/University : Indian Institute of Science, Bangalore

Duration : 2 months (Jun'2019 to Aug'2019)

I have been lucky to learn the existence of the Raman-Charpak Fellowship thanks to one of my professors at University Paris-Sud (France), one year ago. I am grateful for this because my successful application to the Raman-Charpak fellowship, for a two months Master internship, gave me the chance to work during summer 2019 in the Indian Institute of Science (IISC) of Bangalore. My welcoming department was the Centre for High Energy Physics, where I worked under the supervision of Prof. B. Ananthanarayan and several of his PhD students. Working with them was very fruitful, I consider my

self very fortunate to have been part of this team during two months. The research work I have done in the Centre for High Energy Physics was focused of some mathematical aspects of Quantum Field Theory. More speci88cally, we studied hypergeometric functions of several variables and, among others, obtained a new analytic continuation formula for the Appell series F4 which appears when one is interested in the calculation of some speci88c Feynman diagrams in particle physics. This analytic continuation is not yet available in the literature, and we will therefore soon submit a publication on this subject. I also learned how to apply a recent method for computing Feynman integrals: the method of brackets. The RCF is a great opportunity for French students. Coming in India is very interesting; it allowed me to open my mind and to discover a new culture. It was a great experience where I learned how to adjust myself in a foreign country. Besides, this stay improves my professional experience. I hope to come again in this fabulous country.

#### HIGHLIGHTS OF CEFIPRA INTERACTIONS WITH ALUMNI Now available on CEFIPRA's YouTube channel





**Principal Investigator:** Prof. M S Ramachandra Rao, Indian Institute of Technology Madras & Prof. Werner Paulus, University of Montpellier

**Project Title:** Correlated Quantum Materials: exploring spin transport properties in non-stoichiometric Iridium oxide thin films and single crystals.

YouTube Link: https://www.youtube.com/watch?v=PY7S5T4miEE&t=513s





Principal Investigator: Dr. Himanshu Sinha, Indian Institute of Technology-Madras & Dr. Gianni Liti, Institute for Research on Cancer and Ageing of Nice (IRCAN), Nice
Project Title: The Genomic and Evolutionary Landscape of Azole Resistance in Budding Yeast
YouTube Link: https://www.youtube.com/watch?v=m-ZbQoqygJY&t=5s





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**Principal Investigator:** Prof. S. K. Nandy, IISc Bangalore & Dr. Dumitru Potop-Butucaru, Inria Paris **Project Title:** Reactive programming and compilation for the REDEFINE manycore **YouTube Link:** https://www.youtube.com/watch?v=bbQzU8yVX54&t=260s



Awardee of Raman Charpak Fellowship 2015: Ms. Jincy Joy YouTube Link: https://www.youtube.com/watch? v=8QUtujy4ugU



Awardee of Raman Charpak Fellowship 2018: Ms. Ashwini Ravi YouTube Link: https://www.youtube.com/watch? v=ykhAKJtr-g0&t=128s

More videos are available on our CEFIPRA YouTube channel. https://www.youtube.com/channel/UCyJ\_r07EXcXXjOaFkQBsxHQ/videos

### **CEFIPRA PROJECTS IN DIGITAL MEDIA**



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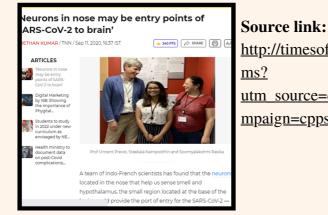
https://timesofindia.indiatimes.com/india/indo-frenchteams-technique-improves-way-of-imaging-throughfog/articleshow/83553582.cms

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### **CEFIPRA PROJECTS IN DIGITAL MEDIA**



### http://timesofindia.indiatimes.com/articleshow/78058397.c utm source=contentofinterest&utm medium=text&utm ca mpaign=cppst

Large sample of giant radio galaxie: discovered

R ecently a team of astronomers from india have reported discovery of a lar extremely rare kind of galaxies called "giant radio galaxies" (BCRGs), usin radio survey. GRGs are the largest galaxies known in the Universe, which radio telescopes. These extremely active form of galaxies harbor a super massive bi

Italiu terscopes. These extremely acute onto in gradows harbor a super massive to engine' at the nucleus, which ejects a pair of high energy particle jets nearly at the set terminate into two giant radio lobes. These behemoths span nearly three million ligh more sometimes. This size corresponds to stacking nearly 33 Milky Way like galaxie Pratik Dabhade said, "The huge size of GRGs has defied any theoretical explan help in understanding how these galaxies grow to be so large. We are studying whe regions of very sparse galaxy density, or they have extremely powerful, well-collimat

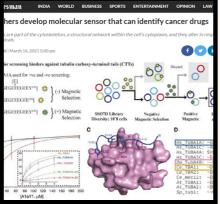
essor Joydeep Bagchi added, "understanding the life-cycle of the black hole which falls into it, and the

iets which allow them to expand to very huge distances.

BY PRATIK DARHADE

radio teles

#### Source link: https://blog.oup.com/2017/07/giant-radio-galaxiesdiscovered/



Source link: https://www.thestatesman.com/features/researchersdevelop-molecular-sensor-that-can-identify-cancer-drugs-1502957651.html

INDIATV VIDEOS INDIA ELECTIONS 2022 MCD 2022 ENTERTAINMENT SPORTS WORLD TECH PHOTOS HEALTH ASTRO LIVE TV Extreme UV light from galaxy detected by AstroSat can give important clue on Dark Ages: DST AstroSat, India's first multi-wavelength satellite has detected extreme-UV (EUV) light from a galaxy 9.3 billion light-years away from Earth, uncovering an important clue on how the Dark Ages of the universe ended and how the first extreme-UV light appeared, the Department of Science & Technology (DST) said on Thursday.



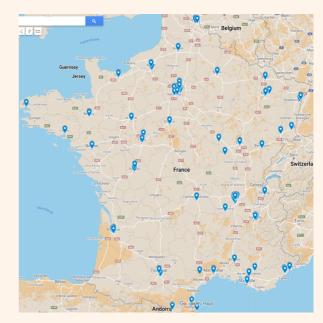
Source link: https://www.indiatvnews.com/science/isro-astrosat-galaxy-euv-light-detected-darkages-important-clue-says-dst-653687

## **PRESENCE OF CEFIPRA PROJECTS**

INDIA

FRANCE





### **Upcoming /Future Events Planned\***



Upcoming meeting with CEFIRPA alumni's at Hyderabad & Pune (March - April 2023)



Upcoming meeting with CEFIRPA alumni's at France (May 2023)



Upcoming Alumni Conferences/ Workshops/ Brainstorming sessions (mid - 2023)

\* Subject to approval of CEFIPRA's Governing Body

# ACKNOWLEDGEMENT





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Liberte Égalité Fraternité



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