



Office of International Relations
Indian Institute of Technology
Kharagpur – 721 302



REF: 2285/2024/OIR

Dated: 06.08.2024

NOTE

Sub: Approval for the visit of Prof. D. Chanda from USA during 21st Aug – 02nd Sept, 2024.

Prof. Debashis Chanda from the University of Central Florida, USA is scheduled to visit IIT Kharagpur from 21st Aug – 02nd Sept, 2024 to deliver a talk at a workshop on 2D Materials as a collaborator of SPARC-III project No. P3566 (SRIC Project code: DUM).

The faculty coordinator of his visit is Prof. Prashanta Kumar Datta from the department of Physics (Flag-i). According to the document submitted, all expenses will be sponsored by the SPARC Project No. P3566 (Flag-ii).

The supporting documents of the visit are enclosed.

This is placed for your kind consideration and approval of the said visit.

Encl.Flag: (i) Filled-up Ministry Clearance Form
(ii) SPARC Sanction letter copy
(iii) Passport & OCI copy

Arup K. Ray
06.08.24
Junior IR- Executive

~~IR-Executive~~
06/08/24

Dean, International Relations *Roberto Mukherjee*
06.08.2024

Director
J. K. Ray
07.08.2024

INVITATION LETTER

Date: 07.08.2024

To:
Prof. Debashis Chanda
1238 Calypso Way, Oviedo,
Florida, 32765, USA.

Subject: Invitation to visit the Indian Institute of Technology Kharagpur during 21st Aug – 02nd Sept, 2024.

Prof. Debashis Chanda,

IIT Kharagpur is pleased to invite you during 21st Aug – 02nd Sept, 2024 to deliver a talk at a workshop on 2D Materials as a collaborator of SPARC-III project.

We have noted your passport details as follows:

Name: Debashis Chanda

Nationality: USA

Country of present domicile: USA

Passport number: 566510200

Place of Issue of passport: USA

Issue date of passport: 05.04.2019

Expiry date of passport: 04.04.2029

Date of birth: 06.11.1974

We understand that all expenses related to your visit will be sponsored by the SPARC project no. P3566 (SRIC project Code: DUM). Prof. Prasanta Kumar Datta (pkdatta@phy.iitkgp.ac.in) of our Institute will be the coordinator for your visit. We would be delighted if you accept our invitation and provide your travel plans to Prof. Datta.

I look forward to your positive response. Please feel free to discuss all matters pertaining to your visit with Prof. Datta.

With warm regards,

Sincerely,

Rabibrata Mukherjee
08-08-2024

Dean, International Relations

दौ. रबिरता मुखर्जी
Dr. Rabibrata Mukherjee
संस्कारणालय, अंतर्राष्ट्रीय संबंध
Dean, International Relation
भारतीय प्रौद्योगिकी संस्थान खड़गपुर
Indian Institute of Technology Kharagpur

CC:
(1) Office of Registrar, IIT Kharagpur
(2) Prof. Ajay Kumar Singh – HoD, Physics
(3) Prof. Prasanta Kumar Datta, Physics-IITKGP

DEPARTMENT OF PHYSICS

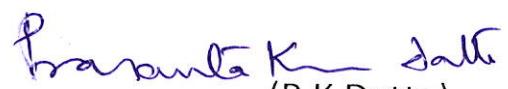
Date: 05. 08 2024

Sub: Request the approval of the Director for the visit of SPARC Collaborator

Prof. Debasish Chanda, Univ. of Central Florida, USA will be visiting IIT Kharagpur during 21st August to 02nd Sept 2024 as a collaborator of SPARC-III project No.P3566 (SRIC Project Code: DUM). Prof. Chanda is coming with some heterojunction samples of Photodetectors for Ultrafast measurements apart from delivering a talk in a Workshop on 2D Materials being organized during his visit here.

It is therefore requested to approve the following expenditures for the visit of Prof. Chanda from SPARC-III project No. P3566 (SRIC Project Code: DUM):

- (i) Business Class Air-ticket as per the attached quotation of Balmer Lawrie
- (ii) Local Transport, Accommodation, lodging and honorarium


(P K Datta)
Professor (00050)

To
The Dean (IR)



Office of Alumni Affairs & International Relations
Indian Institute of Technology
Kharagpur-721302

**FORM FOR MINISTRY CLEARANCE
GOVERNMENT OF INDIA
FOR VISIT OF FOREIGN NATIONALS TO
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, INDIA**

1	Name :	Dr. Debasnis Chanda
2	Nationality :	USA
3	Date of birth :	11/06/1974
4	Place of birth :	Kolkata, India
5	Number, Date & Place of Issue of Passport :	No. 566520200, Date of Issue: April 5, 2019, Place: USA
6	Visa Number (if available)	OCI No. A 169 280 1
7	Current residential address :	1238 Calypso Way, Oviedo, Florida, 32765, USA.
8	Permanent residential address :	1238 Calypso Way, Oviedo, Florida, 32765, USA.
9.	Profession :	Professor
10.	Place of Employment:	University of Central Florida, USA.
11.	Academic Credentials:	PhD.
12.	Purpose of visit:	Research Collaboration.
13.	Period of visit:	Aug 21 to Sept 2, 2024
14.	Email:	Debasnis.Chanda@ucf.edu
15.	Day time Phone:	+1 407 484 4384
16.	Address of Indian Embassy where you will be applying for your visa:	NA.
17.	Coordinator of your visit at IITKGP/Dept :	Prof. Prashanta Kumar Datta, Physics Dept.



Continuing Education Programme

Indian Institute of Technology, Kharagpur - 721302

APPROVAL OF WORKSHOP (ZERO BUDGET)

Date: 28-05-2024

The following has been approved by the Competent Authority

1. Program ID : IIT/CEP/WOR/WOR/2024-2025/PH/24

2. Title of the Program : SPARC Workshop on 2D Materials

ROLE	NAME	EC	DEPARTMENT
Convenor	Prasanta Kumar Datta	00090	Physics
Co-Convenor	Prasanta Kumar Sahoo	19028	Materials Science Centre

4. Department / Centre / School : Physics

5. Duration of Program : From 24-08-2024 to 25-08-2024

6. No of CEUs : 2

7. Expected number of participants : 50

8. Venue : IIT KHARAGPUR, S N Bose Auditorium2

9. Source of Funds : Apex Committee of SPARC, MHRD, New Delhi

10. Brief Program Outline : Growth and Characterization of 2D materials; Application of 2D materials.

11. Application / Processing Fee : Not Applicable

12. For out station program :
Not Applicable

13. Estimated Budget

(All numbers will be adjusted at the end of the course approximately on proportionate basis to match the gross receipts)

Receipts	Amount (Rs.)	Expenditure	Amount (Rs.)
Total	0.00	Total	0.00

Dean (Outreach)/Asso.Dean (Outreach)

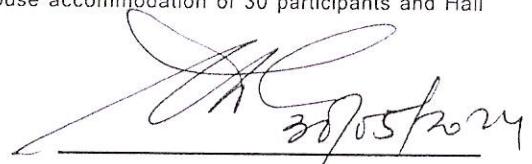
Continuing Education Programme

Indian Institute of Technology, Kharagpur - 721302

APPROVAL OF WORKSHOP (ZERO BUDGET)

14. A minimum no. of 20 (twenty) participants is required to run the program.
15. For AICTE QIP and TEQIP-III courses the eligible participants are teachers of AICTE and TEQIP-III approved degree level colleges only. For all AICTE QIP such participants TA is limited to maximum of AC-3 tier railway fare on shortest route only or as per rules wherever applicable.
16. Collaborating Institutions/Organizations

17. For Accommodation : Prior to submission of the proposal, Coordinator/convenor is requested to book accommodation/Classrooms/Community Centre in the Visveswarya Guest House/ Technology Guest House/Sir Ashutosh Mukherjee Guest House/hostels if needed. For this purpose please contact Prof-in-Charge, Institute Guest Houses/Chairman, Hall Management Centre/Prof-in-charge Nalanda & Ramanujan Complex.
18. Security clearance of the foreign delegates have to be obtained from MHA, Govt. of India by the convenor/Principle Coordinator.
19. All fees are to be received through online bank payment gateway for applying online. Subsequently getting shortlisted,shortlisted applicants are automatically redirected to the payment gateway for making payments.
20. For Industry applicants unable to pay online;fees are to be received in the form of Demand Draft/NEFT in favour of "CEP-STC",IIT Kharagpur,Bank A/C No. 95562200002955,Canara Bank,SRIC,IIT Kharagpur,IFSC:CNRB0019556 SWIFT:CNRBINBBFD
21. No Separate account is to be opened by the coordinator/convenor.
22. A brief report, a copy of the program notes, the final statement of accounts and the examination grade sheet, list of participants (name and address) are required to be submitted to CEP office within two months of completion of the workshop/conference/symposium/short term course.
23. Certificates may be sent to Dean (CE) for his signature only after putting the signature of course coordinator/convenor. Please enclose a list of participants along with the certificates to be signed.
24. All taxable expenditure should be made through CE Office only.
25. All expenditure including payment of TA/DA has to be made according to Institute rules. Travellers must mention ticket numbers in TA claims.
26. GST applicable as per Govt of India rules.
27. Permission of competent authority is needed for payment of remuneration to any Faculty/ Staff members of the Institute.
28. The following special requests of the coordinator/convenor is acceded to :Guest House accommodation of 30 participants and Hall accommodation of 20 students



Dean (Outreach)/Asso.Dean (Outreach)

Dr. Debashis Chanda

E-mail: debashis.chanda@ucf.com

EDUCATION

2009-12 University of Illinois at Urbana-Champaign, USA

Post-doctoral fellow, Beckman Institute, Material Research Laboratory.

2004-08 University of Toronto, Canada.

PhD from Photonics Group, Electrical and Computer Engineering dept.

Distinctions: GPA of 4.0/4.0.

2002-04 University of Calgary, Canada.

MS from Electrical and Computer Engineering Dept.

Distinctions: GPA of 3.9/4.0.

1994-98 Jadavpur University, India.

BE from Electrical Engineering dept.

Distinctions: GPA of 3.8/4.0. First class honors with distinction.

ACADEMIC/INDUSTRIAL RESEARCH EXPERIENCE

2021- Professor, Dept. of Physics, NanoScience Technology Center, CREOL

2017-21 Associate Professor, Dept. of Physics, NanoScience Technology Center, CREOL

2012-17 Assistant Professor, NanoScience Technology Center, Dept. of Physics,

College of Optics and Photonics (CREOL), University of Central Florida

2009-12 Post-Doctoral Research Associate, Beckman Institute, Material Research Laboratory, University Illinois at Urbana-Champaign, USA. Specialization: Light-Matter interactions in nanoscale.

Advisor: **Professor John A. Rogers, Fellow NAS and NAE**

2004-08 Graduate Researcher, Photonics Group, University of Toronto, Canada.

Doctoral dissertation: *Laser Fabrication of 3-Dimensional Nanostructures* Specialization: Optoelectronics/Photonics, Laser nano-fabrication 3D nanostructures, three-dimensional optofluidic sensors.

Advisor: **Professor Peter R. Herman, Fellow OSA, Fellow SPIE**

2002-04 Graduate Researcher, University of Calgary, Canada, Specialization: Radio-over-fiber

Advisor: **Professor Abu Sesay**

2000-02 Sr. Research Engineer, Philips Semiconductors, Philips Ltd., Bangalore. Specialization: Semiconductor devices for speech signal processing

1998-00 Research Engineer, ABB R&D, ABB Ltd., Bangalore.

Specialization: Semiconductor power electronic devices and signal processing

Research Support: Dr. Debashis Chanda

Samsung Electronics, Debashis Chanda (Single PI)

Title: Bio-Inspired Infrared Detection

Duration: 03/01/2023 – 02/28/2026

Amount: **\$450,000** (Role: PI)

DARPA SBIR DIRECT Phase-II, Debashis Chanda (PI) with E-Skin Displays Inc. (a Dr. Chanda Startup), Title: Graphene based Dynamically Tunable LWIR Detection and Imaging at Room

Duration: 10/01/2021 – 09/30/2024

Amount: **\$1.5M** (Role: PI, 50% goes to UCF and 50% goes to

Chanda Startup E-Skin Displays Inc.)

ARO/NSF MIST Center Grant, Debashis Chanda (PI), Title: Room-T ultrafast LWIR detectors using patterned graphene absorbers on MCT

Duration: 09/01/2021 – 08/31/2024

Amount: **\$150, 000** (Role: PI, co-PI: Prof. Avik Ghosh from UVA)

NGA/DoD

Debashis Chanda (Single PI), Title: *Adaptive Infrared Thermal Signature Management*.

Duration: 04/01/2020 - 03/31/2025

Amount: **\$2, 500, 000** (Role: PI with 100% share)

SELECTED PUBLICATIONS

- [1] Tianyi Guo, Sayan Chandra, Arindam Dasgupta, Muhammad Waqas Shabbir, **Debashis Chanda**, "Spectrally Tunable Ultrafast Long Wave Infrared Detection at Room Temperature", **Science Advances** (In-Press), 2024.
- [2] Aritra Biswas, Pablo Cencillo-Abad, Muhammad W. Shabbir, Manobina Karmakar, **Debashis Chanda**, "Tunable Plasmonic Superchiral Light for Ultrasensitive Detection of Chiral Molecules", **Science Advances** (In-Press), 2024.
- [3] Tianyi Guo, Arindam Dasgupta, Sayan Chandra, Swastik Ballav, Pablo Cencillo-Abad, Souptik Mukherjee, Aritra Biswas, Muhammad Waqas Shabbir, and **Debashis Chanda***, "Frequency Modulation Based Long-Wave Infrared Detection and Imaging at Room Temperature", **Advanced Functional Materials**, 2309298, 2023.

[4] Alberto Moscatelli, “Plasmonic structural colour paint gets commercial attention”, **Nature Nanotechnology**, <https://doi.org/10.1038/s41565-023-01469-1>, 2023.

[5] [5] Pablo Cencillo-Abad, Sean McCormack, Tianyi Guo, Aritra Biswas, and **Debashis Chanda**, “Angle and Polarization-Independent Structural Color Based on Controlled Phase and Gain Margins in Ultrathin Transparent Dielectrics”, **ACS Photonics**, <https://doi.org/10.1021/acsphotonics.3c00632>, 2023.

[6] Pablo Cencillo-Abad, Pamela Mastranzo-Ortega, Divambal Appavoo, Tianyi Guo, Lei Zhai, Javier Sanchez-Mondragon and **Debashis Chanda**, “Reusable Structural Colored Nanostructure for Self-Powered Temperature and Humidity Sensing”, **Advanced Optical Materials**, 2300300, 2023.

[7] Pablo Cencillo-Abad, Daniel Franklin, Pamela Mastranzo-Ortega, J. Sanchez-Mondragon and **Debashis Chanda**, “Ultralight Plasmonic Structural Color Paint”, **Science Advances**, vol. 9, issue 10, DOI: 10.1126/sciadv.adf7207, 2023.

[8] Manobina Karmakar, Partha Kumbhakar, Tara Singha, Chandra Sekhar Tiwary, **Debashis Chanda***, and Prasanta Kumar Datta*, “Anomalous Indirect Carrier Relaxation in Direct Bandgap Atomically Thin Gallium Telluride”, **Physical Review B**, vol. 107, 075429, 2023. *Corresponding Author.

[9] Vázquez-Guardado, Abraham, Mehta, Freya, Jimenez, Beatriz, Biswas, Aritra, Ray, Keval, Baksh, Aliyah, Lee, Sang, Saraf, Nilesi, Seal, Sudipta and **Debashis Chanda**, “Genetically Modified Plasmonic Sensor for Direct Detection of Virus Biomarkers from the Blood”, **Nano Letters**, doi.org/10.1021/acs.nanolett.1c01609, 2021.

[10] Joong Hoon Lee, Yeong Jae Kim, Young Jin Yoo, Sehui Chang, Gil Ju Lee, Joo Hwan Ko, Kyung Muk Kang, **Debashis Chanda**, and Young Min Song, “Colored, Covert Infrared Display through Hybrid Planar- Plasmonic Cavities”, **Advanced Optical Materials**, 2100429, 2021.

[11] Rinku Saran, David Fox, Lei Zhai and **Debashis Chanda**, “Organic Non-wettable Fullerite Films”, (Cover Article) **Advanced Materials**, article. 2102108, 2021.

[12] Sayan Chandra, Jared Cozart, Sang Lee and **Debashis Chanda**, “Magnetoplasmons for Ultra-Sensitive Label-Free Bio-Sensing”, **ACS Photonics**, vol.8, pp.1316–1323, 2021.

[13] Manobina Karmakar, Sayantan Bhattacharya, Subhrajit Mukherjee, Barun Ghosh, Rup Kumar Chowdhury, Amit Agarwal, Samit Kumar Ray, **Debashis Chanda***, Prasanta Kumar Datta*, “Observation of Dynamic Screening in the Excited Exciton States in Multi-Layered MoS₂”, **Physical Review B**, vol. 103, pp. 075437, 2021. (*Corresponding Authors)

[14] H. Zhang, H. Zhao, X. Zhao, C. Xu, D. Franklin, A. VázquezGuardado, W. Bai, J. Zhao, K. Li, G. Monti, W. Lu, A. Kobeissi, L. Tian, X. Ning, X. Yu, S. Mehta, D. Chanda, Y. Huang, S. Xu, B. E. Perez White, J. A. Rogers, “Biocompatible Light Guide-Assisted Wearable Devices for Enhanced UV Light Delivery in Deep Skin”, **Advanced Functional Materials**, March 2021 (in press).

[15] Alireza Safaei, Sayan Chandra, Muhammad Waqas Shabbir, Michael N. Leuenberger, and **Debashis Chanda**, “Dynamically Tunable Graphene based Uncooled Long Wave Infrared Detection and Imaging”, **Nature Communications**, DOI:10:3498, 2019.

[16] H. Zhao, K. Li, M. Han, F. Zhu, A. Vázquez-Guardado, P. Guo, Z. Xie, Y. Park, L. Chen, X. Wang, H. Luan, Y. Yang, H. Wang, C. Liang, Y. Xue, R. D. Schaller, **Debashis Chanda**, Y. Huang, Y. Zhang, and J. A. Rogers, “Buckling and Twisting of Advanced Materials into Morphable 3D Mesostructures”, **Proceedings of the National Academy of Sciences (PNAS)**, vol. 116, pp. 13239-13248, 2019.

PATENT

- **D. Chanda**, D. Franklin, Liquid Crystal Tunable Plasmonic Color Generation Device, Method and Applications, **US Patent: US 11,061,286 B2, Issued: July 13, 2021**.
- **D. Chanda**, S. Modak, A. Safaei, J. Lee, Optical Frequency-Selective Absorber based Infrared Detector, Methods, and Applications, **US Patent: US 11,320,306 B2, Issued: May 3, 2022**.
- **D. Chanda**, A. Safaei, Optical Detector Device with Patterned Graphene Layer and Related Methods **US Patent: US 10,312,389 B2 (Device), Issued: June 4, 2019**.
- **D. Chanda**, A. Safaei, Optical Detector Device with Patterned Graphene Layer and Related Methods **US Patent: US10,784,387 B2 (Methods), Issued: Sept 22, 2020**.



SPARC Workshop on 2D Materials

24 – 25 August, 2024 IIT Kharagpur

Venue: S.N. Bose Auditorium



A two-day SPARC Workshop on 2D Materials will be held at the Indian Institute of Technology Kharagpur during 24–25 August, 2024. Join us for an insightful and engaging workshop focused on the cutting-edge developments in 2D materials and their applications in optoelectronics, quantum materials, spintronics and many more. This workshop will provide a platform for researchers, academics, and industry professionals to discuss recent advancements, share knowledge, and explore future directions in the field of 2D materials. We encourage attendance from both senior & junior researchers and UG/PG students. All contributory participants are encouraged to present their work in poster session.

Invited Speakers

- ❖ Debashis Chanda – University of Central Florida, USA
- ❖ Avik Ghosh – University of Virginia, USA
- ❖ Hirendra Nath Ghosh – Director, NISER Bhubaneswar
- ❖ Pravat K. Giri – IIT Guwahati
- ❖ Venu Gopal Achanta – Director, NPL, New Delhi
- ❖ Subhadeep Datta – IACS Kolkata
- ❖ Govind Gupta – CSIR-NPL, New Delhi
- ❖ Rahul Mishra – IIT Delhi
- ❖ Bipin Kumar Gupta – CSIR-NPL, New Delhi
- ❖ Achintya Singha – Bose Institute, Kolkata
- ❖ Atindra Nath Pal – SNBNCBS, Kolkata
- ❖ Akshay Singh – IISC, Bengaluru
- ❖ Saurabh Lodha – IIT Bombay
- ❖ Subhabrata Dhar – IIT Bombay
- ❖ Samit K. Ray – IIT Kharagpur
- ❖ Prasana Kumar Sahoo – IIT Kharagpur
- ❖ Chandra Sekhar Tiwary – IIT Kharagpur
- ❖ Manobina Karmakar – University of Central Florida, USA

Contact: Debkanta Ghosh

Mobile: 9932121866

Registration fee:

For Student: 1000/- Rs.
For Faculty: 2000/- Rs.

Payment Details

Bank Name-Canara Bank

Branch Name & Address-SRIC, IIT KHARAGPUR

Name of The Account-IIT CONSULTATIVE PRACTICE A/C

Account Number- 95562010000805

IFSC Code- CNRB0019556

Convener: P K Datta (pkdatta@phy.iitkgp.ac.in)

Patron: A K Singh, Head, Dept. Of. Physics

Scan QR Code
for Registration

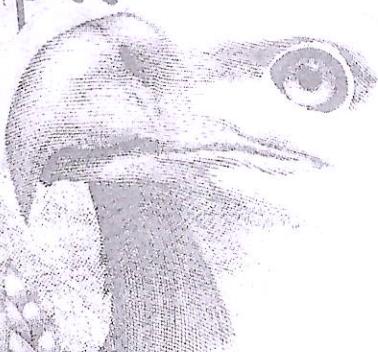


Organized by Department of Physics, IIT Kharagpur,

For further details about the workshop, please visit <https://sites.google.com/view/iitkgp-sparc-workshop2024>

We the People

Of the United States,
in Order to form a more perfect Union,
establish Justice, insure domestic Tranquility,
provide for the common defense,
promote the general Welfare, and secure
the Blessings of Liberty to ourselves and
our Posterity, do ordain and establish this
Constitution for the United States of America.



Debashis Chanda

3

SIGNATURE OF BEARER / SIGNATURE DU TITULAIRE / FIRMA DEL TITULAR

PASSPORT
PASSEPORT
PASAPORTE

UNITED STATES OF AMERICA

Type / Type / Tipo Code / Code / Código Passport No. / No. du Passeport / No. de Pasaporte

P USA

566510200

Surname / Nom / Apellidos

CHANDA

Given Names / Prénoms / Nombres

DEBASHIS

Nationality / Nationalité / Nacionalidad

UNITED STATES OF AMERICA

Date of birth / Date de naissance / Fecha de nacimiento

06 Nov 1974

Place of birth / Lieu de naissance / Lugar de nacimiento

INDIA

Date of issue / Date de délivrance / Fecha de expedición

05 Apr 2019

Date of expiration / Date d'expiration / Fecha de caducidad

04 Apr 2029

Endorsements / Mentions Spéciales / Anotaciones

SEE PAGE 51

Sex / Sexe / Sexo
M

Authority / Autorité / Autoridad

United States

Department of State

USA

<<USACHANDA<<DEBASHIS<<<<<<<<<<<<<<<<

5665102001USA7411065M2904043296501868<806566



पंजीयन प्रमाणपत्र CERTIFICATE OF REGISTRATION
पंजेही भारतीय नागरिक Overseas Citizen of India

CHANDA
SHELDON / *et al.*

卷 / 司 / 號 A 1692801

Debashis / Green Name(s)

CANADA'S NATIONALITY

Copy Right / Place of Birth
KOLKATA IND

प्राक्तिक / Occupation
TEACHER प्राक्तिक का प्राक्तिक / प्राक्तिक
ATLANTA

Albany Club

प्राप्ति करने की तिथि / Date of issue

14 / 11 / 2014