



Announcement

International Conference

On

Recent Developments in Nonlinear Dynamics
and its Applications

(CRDNDA-18)

March 12-14, 2019

Sponsored by

DAE, CSIR & INSA

Organized by

The Department of Physics

Durgapur Govt. College

J. N. Avenue, Durgapur, Pin- 713214, WB, INDIA

(DST-FIST Sponsored & NAAC Accredited College with A Grade
in 2017 (2nd Cycle) with UGC 12 (B) and 2 (f) status)

About the Conference

The study of nonlinear dynamics has emerged as a major area of interdisciplinary research. The past two decades have seen an explosion of ideas in the general field of nonlinear dynamics including geology, mathematical sciences, biology, microbiology, computer science, engineering, economics, meteorology, philosophy, population dynamics, medical science, communications, sensors and laser. The study of nonlinear physics is one of the most exciting and fastest growing branches of mathematical sciences including the study of mathematical modelling, chaos, computation and analysis, turbulence behaviour of weather and climate and the analysis of biological and economical phenomena.

Nonlinear optics has been a rapidly growing field in recent decades. Physics of nonlinear optics describes various major nonlinear optical effects including physical principles, experimental techniques and up to date research achievements. Nonlinear optical phenomena have led to numerous scientific and technological advances not only in photonics but also in the wider fields of knowledge in physics, chemistry, biology, engineering and medicine. Many areas of research and innovation from laser technology to high energy physics, photo chemistry, and quantum information science have been made possible through the exploitation of nonlinear optical effects.

The biologists are not far behind in using the boon of solitons. Solitons may occur in protein and DNA. Solitons are related to the low-frequency collective motion in protein and DNA. In magnets, there also exist different types of solitons and other nonlinear waves. Solitons are also used in optical switching and optical logic.

The chaos theory has an immense impact in many scientific disciplines including biology, chemistry, microbiology, computer science and its applications, engineering, economics, meteorology, philosophy, population dynamics, medical science, communications, sensors, laser and even on the dynamics of satellite in the solar system. The chaos theory is currently being applied to medical studies of epilepsy. The nonlinear dynamics and chaos are applied for prediction of weather and climate changes. Turbulence, namely irregular fluctuations in space and time characterise fluid flows in general and atmospheric flows in particular which contribute to the unpredictable nature of both short term weather and long term climate. Techniques based on nonlinear dynamics are widely used in remote sensing to suggest that some ocean and atmospheric phenomena may be chaotic rather than random.

Nonlinear dynamics and stochastic dynamics can be applied to the variety of currently open questions in physics and biophysics including cell regulations at multiple scale, brain dynamics and laser dynamics.

This conference will give an opportunity to learn more about the recent developments from the experts in the concerned fields. The conference will be used as a platform to initiate the collaborative research programme among different people working in various academic institutions in India and abroad.

Subthemes

<ol style="list-style-type: none">1. Integrable Systems and Solitons2. Bifurcation Theory3. Nonlinear Optics4. Dynamics of Conservative Systems, Patterns, Complex Fluids5. Hamiltonian and Quantum Chaos6. Classical Deterministic Chaos7. Dynamics of Weather and Climate System8. Nonlinearity in Plasma and Magneto Hydrodynamics9. Chemical Dynamics and Kinetics10. Nonlinear phenomena in Engineering, Medical and Biological Sciences11. Fractals, Multi fractals, Order and Time-Series Analysis12. Synchronization and Coupled Systems	<ol style="list-style-type: none">13. Nonlinear phenomena in Social Science and Management14. Nonlinearity in Programming and Soft-Computing Techniques15. Bio-molecular phenomena for Cell and Tissue Engineering16. Biophysical and Micro Scale Analyses of Molecular and Cellular Function17. Metabolic Pathway Engineering18. Protein Engineering19. Nano-materials and Nano-composites20. Synthetic Biology21. Diversity and Dynamics of Plant Animal Interaction22. Eco System Biology23. Eco Monitoring24. Diversity and Dynamics in Plant, Water and Soil Systems25. Interface of Aero allergen, Bio pollution and Bio-Nanotechnology
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Call for Abstract

Organizing committee invites delegates/participants to submit abstract for presentation (oral or poster) in different technical sessions. Abstracts must be in English with the title of the paper, name of Author(s), Designation, and institutional affiliations and corresponding email address; in MS Word (150 words; Times New Roman; 12 size; 1.0 space). All abstracts must be sent as email attachment to: trinil2003@gmail.com addressing Convener. Only the presenter will be provided the certificate of presentation and the rest others will be issued the certificate of participation, provided they physically attend the conference.

All abstracts must be sent by email attachment to: The Convener, by **10th February, 2019**. Only those abstracts will be published in the souvenir, whose registration amounts are received. Abstract, without registration fee, will not be entertained. On spot, papers will not be accepted in any case. For further details contact E-mail: trinil2003@gmail.com or visit web site: www.durgapurgovtcollege.org

Publication of Proceedings: Conference Proceedings will be published in any International/National Journal as a special issue if fund permits.

Important Dates

Important Events	Closing dates
Abstract Submission	10 th February, 2019
Acceptance Notification	12 th February, 2019
Early Bird Registration	15 th February, 2019
Full Paper Submission	20 th February, 2019

About Durgapur Govt. College



DURGAPUR GOVT. COLLEGE

Government of West Bengal established Durgapur Government College during the time of the genesis of Durgapur itself, an industrial town that was being built around a host of large and medium scale industries in the public and private sector and the ancillaries thereof. With the settlement of many thousands of industrial workers of all ranks in Durgapur, the need was felt for an institution offering higher education that would nurture prospective students a quality education and it was to meet this demand that the college was established on the 22nd day of January, 1969. As being the oldest institution of its kind to come up in the steel city of Durgapur, Durgapur Government College has moved from its initial modest intake capacity of 150 students to that of about 2500 students out of which fifty percent are girl students. The college offers 3-year undergraduate courses in Arts, Science and Commerce, as well as Post Graduate courses in Geology, Chemistry and Conservation Biology, along with M.Phil course in Geology and M.Sc. course in Zoology under the Netaji Subhash Open University (NSOU).

Durgapur Government College as it stands today since in 1969, has traversed a long way in serving the community. Durgapur is very fortunate to have a government college of this stature and potentiality. It has already earned fame for encouraging academic intercourse through organizing national and international seminars and workshops on specific disciplines and interdisciplinary subjects. Research projects sponsored by UGC, DST and other funding bodies are being carried out at the Doctoral levels. The college aims to become an affiliate of many other similar projects and has a vision to upgrade this institution to Zenith. The full-time Government College teachers are appointed by the Government under the West Bengal Education Service (W.B.E.S.) on the basis of the recommendation of the Public Service Commission, West Bengal, following the eligibility criteria framed by the University Grants Commission (UGC). The college is a full-fledged Government college and is totally under the administrative control of the Higher Education Department (headed by the Principal Secretary, Government of West Bengal) that frames all the policies and modalities regarding the functioning of the college for the Principal to execute. The college was affiliated to University of Burdwan till academic session 2014-15. From the academic session 2015-16, it is affiliated to Kazi Nazrul University. CBCS curriculum for undergraduate programmes has been introduced from the academic session 2016-2017. The institution was accredited by NAAC (National Assessment and Accreditation Council), Bangalore in September 2017 and obtained the grade A (83.5 points out of 100).

The Department of Physics:

Durgapur Government College was established in 1969. Just four years after the college was established, in 1973, the Department of Physics starts its journey to fulfil the growing demands of the students of surrounding locality to learn physics. For almost a four decade, the Department has distinguished itself as the best place to study Physics in Asansol-Durgapur industrial belt. Over the years, the Department has produced successful outstanding graduates who held the positions of leadership in various professions. The Department hopes that students will develop a keen interest in the subject and contribute to the educational life of the nation.

Students after passing out generally pursue higher education in different IITs, Research Institutes, Central Universities and State Universities. Students, those who have passed from this department, are doing job in research institutes in India as well as in abroad, Government sectors, Colleges, Schools, Banks, IT industries, private industries etc.

Our vision is to impart a thorough knowledge of the fundamental principles of the several branches of physics through mathematical and experimental demonstration and to conduct the more strictly practical instruction under the guidance of these primary truths.

Our mission is to provide the students with a broad understanding of the physical principles of the universe, to help them develop critical thinking and quantitative reasoning skills, to empower them to think creatively and critically about scientific problems and experiments and to provide training for students planning careers in physics. Our goal is to be recognized as a leading institute of national standard for study of physics.

The college is offering both Honours and General courses at undergraduate level. It is equally making efforts by communicating to begin Post Graduate Course in Physics. The present composition of the faculty members includes five Assistant Professors and four non-teaching staffs. The Department provides ample Laboratory facilities. Students also enjoy an additional facility of using the extremely rich departmental library.

Durgapur at a Glance:

Durgapur is a city in the Burdwan District, in the state of West Bengal, India. It was the dream child of Dr. Bidhan Chandra Roy, the second chief minister of West Bengal. It is the third largest city in West Bengal in terms of both area and population. Durgapur is the second planned city of India after Chandigarh. Distance from Kolkata: By road 170 km via NH-2 by Rail 158 km and by Flight 163 km. The nearest airport is Kazi Nazrul Islam International Airport. The airport is roughly 15 km from Durgapur's City Centre. It is India's first private-sector Greenfield airport.

Climate and Clothing in March:

Durgapur has a moderate climate with all distinct seasons in a year. Weather condition in March in Durgapur is mild, dry weather and temperature fluctuates between 20° and 36°C, however it occasionally may be colder. So, participants are advised to bring warm cloths.

How to reach Durgapur:

Durgapur is the second planned city of India after Chandigarh. Distance from Kolkata: By Road 170 km via NH-2 by Rail 158 km and by Flight 163 km. The nearest airport is Kazi Nazrul Islam International Airport. The airport is roughly 15 km from Durgapur's City Centre. It is India's first private-sector Greenfield airport. The airport is connected to important cities of India through domestic airlines. There are regular buses including Rocket and Volvo services from Kolkata (Calcutta) to Durgapur.

Registration

Scan copy of the signed filled in registration form in the given format must be sent to the Organizing Committee through email: ID trinil2003@gmail.com on and before **18th February, 2019**. **Registration will be considered only after receipt of the registration fees, which will include admission to all sessions, abstract book, conference kit, daily lunch, tea/coffee/snacks, and shuttle service between Durgapur Govt. College, selected hotels and conference venue and a special dinner on March 12, 2019.**

Registration Category	Dates of Registration	
	Early bird Registration (within 15 th February 2019)	After 15 th February 2019)
Faculty members	INR 2000/- (Without Accommodation) INR 4000/- (With Accommodation)	INR 3000/- (Without Accommodation) Accommodation will be provided if available on payment basis
Research students (Non- fellowships)*	1000 (Without Accommodation) INR 2000/- (With Accommodation)	INR 2000/- (Without Accommodation) Accommodation will be provided if available on payment basis
Research students (With fellowships)*	INR 1500/- (Without Accommodation) INR 3000/- (With Accommodation)	INR 2500/- (Without Accommodation) Accommodation will be provided if available on payment basis
PG / UG Students*	800 (Without Accommodation) INR 1500/- (With Accommodation)	INR 1500/- (Without Accommodation) Accommodation will be provided if available on payment basis
Others	INR 2000/- (Without Accommodation) INR 4000/- (With Accommodation)	INR 3000/- (Without Accommodation) Accommodation will be provided if available on payment basis

*Research scholars (both categories) and the students have to produce a certificate from the Head of the concerned department without which they will be asked to pay full Registration fee (equal to faculty members).

Mode of Payment of Registration Fee:

Registration fee may be paid either by Demand Draft drawn from any Nationalised bank of India in favour of **CRDNDA-18, DURGAPUR GOVERNMENT COLLEGE payable at United Bank of India, Amaravati Defence Colony Branch, Durgapur (branch code ADCF48)** OR by Money Transfer OR through Net Banking in the United Bank of India (**A/C Name: CRDNDA-18, DURGAPUR GOVERNMENT COLLEGE A/C No.: 1490010157087 (IFSC Code UTBI0ADCF48)**). Delegates/Participants are requested to send the Scan copy of the Demand Draft with name and address of the delegate written on the back side of the demand draft /Money Transfer Receipt to the Organizing Committee through email: ID trinil2003@gmail.com on and **before 18th February, 2019**

Accommodation & TA/DA:

Free shared accommodation will be available for the **Early Bird registered** out-stationed participants from the afternoon of **11th March till morning of 14th, March 2019** Three days). Accommodation, before and after these dates, will be the responsibility of the participants themselves. Participants/Speakers can also book their own accommodation in any Hotels in Durgapur.

TA/DA: Early Bird Registered participants will be provided with travelling allowance (sleeper class train fare by shortest route) if fund permits.

The organising Committee

Patron:

Dr. Purushottam Pramanik

Principal, Durgapur Govt. College

Convener:

Dr. Swapan Kr. Ghosh

Organising Secretary:

Mr. Kripasindhu Kumar

Co-Organising Secretaries:

Mr. Hrishikesh Mondal & Mr. Sudeep Das

Treasurer

Miss. Nupur Bhakta

International Organising Committee (IOC)	Local Organising Committee (LOC)
1. Prof. A Khare (IISER, Pune)	1. Prof. P. Mandal (Math, DGC, Durgapur)
2. Prof. M Lakshmanan (Physics, Bharathidasan Univ. Tiruchirapally)	2. Prof. N. Acharjee (Chemistry, DGC, Durgapur)
3. Prof. B K Talukdar (Physics, VB, Santiniketan)	3. Prof. P. Dasgupta (Geology, DGC, Durgapur)
4. Prof. Fredrick Cooper (Physics, Santa Fe Institute, Baston, USA)	4. Prof. S. Pal (Geology, DGC, Durgapur)
5. Prof. Katsuhiko Nakamura, Emeritus Professor of Osaka city University, Japan	5. Prof. D. Palit (Botany, DGC, Durgapur)
6. Prof. Deepak Prasad Subedi (Kathmandu Univ. Nepal)	6. Dr. M. Chakraborty (Conservation Biology, DGC, Durgapur)
7. Prof. Soumitra Banerjee, IISER, Kolkata	7. Prof. D. Maitra (Commerce, DGC, Durgapur)
8. Prof. S. Mandal (Botany, Visva-Bharati)	8. Dr. D. Ghosh (Physics, MMMC, Durgapur)
9. Prof. B. Maity (Physics, DGC, Darjeeling)	9. Dr. P K Pal (Agriculture, UBKV, , Coochbihar)
10. Prof. S Mandal (Physics, VB, Santiniketan)	10. Dr. A. Koley (Women's College, Durgapur)
11. Prof. P Chatterjee (Math, VB, Santiniketan)	11. Prof. Sk. Golam Ali (Physics, KNU, Assansol)
12. Prof. S K Bhadra (IACS, Kolkata)	12. Dr. S. Das (Zoology, DGC, Durgapur)
13. Prof. A Apte (TIFR, Bangalor)	
14. Prof. J. N Roy (Physics, KNU, Assansol)	
15. Prof. M. K. Mondal (Physics, NIT, Durgapur)	
16. Prof. S. Mukhapadhyay (Physics, BU)	
17. Prof. B. Dey (Physics, University of Pune, Pune)	
18. Prof. A. Banerjee (Biotechnology, TIFR, Mumbai)	

CONTACT FOR FURTHER DETAILS

Dr. Swapan Kr. Ghosh, Convener

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Mr Kripasindhu Kumar, Organising Secretary

E-mail: kripasindhu.kumar@gmail.com (09775388987)



Registration Form for Authors / Participants

International Conference on Recent Developments in Nonlinear Dynamics and its Applications (CRDNDA-18)

March 12-14, 2019

**Organised by the
Department of Physics, Durgapur Govt. College Durgapur, 713214, India**

1. Name :
2. Male/Female :
3. Designation :
4. Affiliation (Organization) :
5. Corresponding Address :
6. E-mail ID & Mob No :
7. Accompanying spouse/guests :
[Number and relation with the Delegate]
8. Demand Draft/Money Receipt :
No :
9. Amount in Rupees only: :
10. I wish to attend the :
symposium and to present a
paper in Theme :
11. Title of the Paper: :
12. Mode of presentation :
[Oral or Poster]
13. Preferred accommodation: :
Required/Not Required

Date:

Signature