

Biography of
Dr. Anil Kumar Birru,
Course Coordinator

Dr. Anil Kumar Birru, Assistant Professor & Head, in Mechanical Engineering Department, at NIT Manipur, He is working in Hybrid Metal matrix composites materials, ceramics, sand casting, Die casting, Welding, nano composites preparation by High Energy Ball milling, Solgel method, Quality function deployment, Soft computing Technique and Knowledge management approach. He obtained Ph.D. degree from *Indian Institute of Technology, Roorkee, India*. Branch: Mechanical and Industrial Engineering with specialization in Manufacturing in the year 2013. Title of Ph.D. thesis: "Some studies on Fluidity and Hot Tearing of Aluminum Cast alloys" M.Tech obtained from Shri. G.S.I.T.S, Indore (M.P), India. Branch: Industrial and Production Engg. Dept., specialization in Industrial Engg., and Management. June 2008. B.Tech obtained from V.R. Siddharta Engg., Collage, from Vijayawada, A.P India. Branch: Production Engineering. June 2005. He has around 12 years of teaching and research experience He has serving as the Head, Department of Mechanical Engineering and prior he served as Associate Dean R&C at NIT Manipur. He has published more than 60 papers in peer reviewed International journals and conferences. He got Best Presentation Award from Abroad. He his supervised three PhD Scholars among them two defended the PhD Thesis and one scholars are waiting for defence the PhD Thesis. He has organized one International and one National conference, and many shorten course and one day work shop etc.



Course Information	Duration: 24 th December to 28 th December 2018	Registration Fee	<ul style="list-style-type: none"> The participation fees for taking the course is as follows:- Participants from abroad : US \$200 Industry/ Research Organizations: 5000/- Academic Institutions: <ul style="list-style-type: none"> UG & PG Students: Rs. 1000/- PhD Students: Rs. 1500/- Postdoctoral fellow/Research Associate/Faculty Members: Rs. 2000/- Industry Members: Rs. 3000/- Foreign SAAR Countries:Rs: 3000/- Foreign other than SAAR Countries: SD: 200/- The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility. The participants will be provided with accommodation in hostel on payment basis by sharing on first cum first serve.
	Place: Department of Mechanical Engineering, NIT Manipur		
Who can attend	<ul style="list-style-type: none"> Students at all levels (BTech/MSc/MTech/PhD). Executives, faculty from Material Science and Engineering engineers and researchers from manufacturing, service and government organizations including R&D laboratories. Faculty from academic and technical institutions. All those who are planning to have startups. Others who want to learn the basic and advanced concepts dealing with technology based enterprises and entrepreneurship related activities. 		

REGISTRATION FORM
A Five-day GIAN course
On

Fabrication and Characterization of Nano Hybrid Composites and Ceramic materials and its Impact on Mechanical, Tribology, and Electrical properties
Course Code: [171042B04]
24th December- 28th December 2018

Name: _____

Designation: _____

Organization: _____

Address: _____

E-mail Id: _____

Contact No: _____

Accommodation required or Not: _____
Signature of the Applicant _____

Sponsored by with Signature _____

ABOUT THE INSTITUTE

National Institute of Technology Manipur, a centrally funded institution is set up to impart quality technical education at various levels of higher learning. It is one of the ten new NITs established and developed as Institute of National Importance. The functioning of the institute was started at its temporary Campus at Takyelpat, Imphal under the mentorship of NIT, Agartala. The Institute has acquired 138.2 hectares of land in the lush green areas of Langol, Imphal. The Institute now has five branches of Engineering viz CSE, EEE, ECE, Civil, Mechanical and Basic Sciences and Humanities Department and opened courses on B. Tech., M. Tech., M. Sc. and Ph.D.

ABOUT DEPARTMENT

Mechanical Department, NIT Manipur was established in the year 2013, presently offering B.Tech, M.Tech and PhD programme. Our department has well experienced faculties and well equipped advanced laboratory facilities. Many R&D projects are ongoing in the department and we are on the onset to build partnership with the industries, research oriented organizations and other institutions. At present, Tata Technologies is in liaison with our department providing design software skills to the students.

ABOUT THE CITY

Imphal is the capital city of Manipur, one of the sister states of northeastern India. It is located between 24°49'N & 24°82'N latitude and 93°57'E & 93°95'E longitude. Situated at an average altitude of 786 m above the sea level, Imphal has moderate climate adorned with the beautiful landscapes. It is the centre of all cultural, commercial and political activities of the state.

WAY TO NIT MANIPUR

The campus is around 3.5 Km from the main market area of Imphal City. The nearest airport is located at a distance 7km from the campus. It is just 20 minutes ride from the campus. Imphal can be reached through National Highway Nos.2 and 37. The nearest railway station is Dimapur and it takes around 8 hrs by bus from Dimapur to reach Imphal.



Kangla



Loktak Lake



Govindaji Temple



Ima Market



A Short Term course
On

Fabrication and Characterization of Nano Hybrid Composites and Ceramic materials and its Impact on Mechanical, Tribology, and Electrical properties

Course Code: [171042B04]

24th December- 28th December 2018

COURSE COORDINATOR

Dr. Anil Kumar Birru,
Assistant Professor & Head,
Department of Mechanical Engineering,
NATIONAL INSTITUTE OF TECHNOLOGY

Organised by

MECHANICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY MANIPUR
LANGOL, PIN-795004, MANIPUR, IMPHAL-INDIA

CHIEF PATRON:

Mr. Ashishkumar Chauhan
Chairman NIT Manipur and MD & CEO, Bombay Stock Exchange Ltd.,

PATRON:

Prof. (Dr.) Prof. (Dr.) Goutam Sutradhar
Director, NIT Manipur

COURSE COORDINATOR:

Dr. Anil Kumar Birru
Head, Mechanical Engineering Dept., NIT Manipur

ORGANIZING SECTERARIES

Dr. S. Surendra Singh,
Miss. M. Bindya Devi

Mode of Payment	
Name of the beneficiary	: Director NIT Manipur
Name of the Bank	: Bank of Baroda
Branch Code	: NITMAN
A/C No.	: 10160100021096
MIRC	: 795012007
IFSC	: BARBONITMAN

GIAN registration Process

Step 1:

One Time Registration with the GIAN web portal of IIT Kharagpur using the following steps:

a) Create login and password at:

<http://www.gian.iitkgp.ac.in/courses/approvecourses3>

<http://www.gian.iitkgp.ac.in/GREGN/index>

b) Complete the personal details and pay **Rs. 500/- (non-refundable)** through the **online payment gateway**.

c) Select the Course(s):

Course Code: [171042B04]: Fabrication and Characterization of Nano Hybrid Composites and Ceramic materials and its Impact on Mechanical, Tribology, and Electrical properties

d) Confirm your application.

e) Download and print "pdf file" of your enrolment application form for your personal records and copy of the same to be sent to the Course Coordinator.

Step 2:

Course registration with the course coordinator.

Once the course coordinator shortlists the applicant in the GIAN web portal, an email will be sent to him/her. **He/she then may proceed for the course registration by filling out the course registration form**

1.0 Course over View

The role of product design and manufacturing in the country's economy and societal development has long been established through their wealth generating capabilities. In order to enhance and widen our knowledge of materials by increasing innovation and responsiveness to ever-expanding national and international needs, it is quintessentially important to impart and undertake in-depth studies and research. This course will be a premier forum for the presentation, exchange and sharing of new advancements, approaches and a research result which seeks to benefit the human society at large. The conference will focus on technical challenges, research updates and recent innovations in the field of Fabrication and Characterization of Nano Hybrid Composites and Ceramic materials and its Impact on Mechanical, Tribology, and Electrical properties across the country and particularly the North-Eastern states of India. The course will provide a unique platform for research family in the area Scope of advance research and Application of external fields to technology of composite and ceramic materials. This course will provide an opportunity for practical classes in manufacturing and characterization of hands on prepared samples by the participants of the course and with the renewed knowledge on advanced viable technologies, the forum hopes to conceive and formulate positive and sustainable measures to remove these constraints at the earliest in order to seek better lives for the people of North-East Indian.

2.0 Objectives

The primary objectives of the course are as follows:

1. Scope of research and Application of external fields to technology of composite and ceramic materials
2. Synthesis and characterization of all nanomaterials and composites. Structures, functions, applications and modeling of these materials.
3. Providing exposure to practical problems in composites and ceramic manufacturing and their solutions, through experimentation and phenomena of problems through characterization
4. Expletory study on mechanical, electrical, ferroelectric properties of ceramic materials. Study on transparent ceramics; lead-free piezoelectrics; ferromagnetics and solid oxide fuel cells etc. practical
5. Experiments' on Dielectrical Measurements, I/V Measurements systems, and Permeability measurements etc.
6. Recycling of multi-grain, melt processed bulk (RE)BCO superconductors', Characterization of nano-composite oxide ceramics and monitoring of oxide thin film growth by laser-induced breakdown spectroscopy.

Foreign Faculty

Dr Hari Babu Nadendla Professor, BCAST, Institute of Materials and Manufacturing, Brunel University London, UK and Manufacturing, Brunel University London, UK

Biography of Dr Hari Babu Nadendla, Foreigner Faculty

Dr Hari Babu Nadendla, Professor in Brunel University, London, he joined in the Institution in the year 2006. His research Interest is on Nano-structured materials, High temperature ceramics, Metal matrix and cermaic matrix composites, Solidification process, grain refinement & crystal growth, High temperature superconducting materials, Magnetic properties of superconductors, Electrolytes for solid oxide fuel cells. Prior to that he was a Research Fellow (1999-2002), then a Senior Research Fellow (2002-2003) and, ultimately, Advanced Research Fellow (2003-2006) at the University of Cambridge. He has published over 200 papers in international peer reviewed journals and holds 4 international patents. He was awarded the PASREG award of excellence in 2007 for his outstanding contribution to the development and characterization of bulk high temperatures superconductors. During his post-doctoral career, he received best poster presentation awards. Since joining BCAST, his research has expanded from processing of superconducting materials to understanding the heterogeneous nucleation process during solidification, developing chemical grain refiners for Al and Mg alloys, processing of high performance MMCs using intensive melt shearing, and twin roll casting Al-alloys from a recycled source for automotive application.



Academic qualifications:

- Ph. D (Superconducting materials) Defense Metallurgical Research Laboratory, University of Hyderabad, India (1998).
- M. Sc (Physics & Advanced Electronics), University of Hyderabad, India (1992).
- B. Sc (Maths, Phys. & Electronics), Nagarjuna University, India (1990).

Previous positions:

- EPSRC Advanced Research Fellow (Dec'06-Oct'08); BCAST, Brunel University London
- EPSRC Advanced Research Fellow (Oct'03-Nov'06): Department of Engineering, University of Cambridge
- The Sackler Fellow (Dec 2004-Dec 2006): Magdalene College, University of Cambridge, UK.
- Senior Research Associate (Nov'02-Sep'03), Department of Engineering, University of Cambridge, UK
- Leverhulme Special Research Fellow (Dec'00-Nov'02), Department of Engineering, University of Cambridge
- Research Associate (May'98-Nov'00), IRC in Superconductivity, University of Cambridge, UK.

Teaching & Supervision:

- MSc (Structural Integrity - Metallurgy and Materials module), Mechanical Engineering, Brunel University London, 2014 onwards
- MSc (Adv. Manufac. Methods : Metals, Electro-ceramics, Superconductors, Composites, Nanotechnology, (Nano-devices), School of Engineering, Brunel University London, 2007 - 2010

- Teaching (Theory): Ist and IInd year undergraduate Engineering Materials, Cambridge, 2002 - 2006
- IVth year B.Eng student project work
- Summer research project studentships- 2002 - 2003, 2003 - 2004, 2004- 2005 (~100h per annum)
- International visiting Ph.D students and students at IRC in collaboration with other academic staff
- Teaching (Experiments): Materials lab, Part I At and IB undergraduate at Eng. Dept. (1999-2004) (~ 80 hours per year)
- Supervised junior post-docs, several Ph. D students and a technician at IRC in Superconductivity for the past 8 years as a senior researcher in the melt processing group headed by Professor D. A. Cardwell.
- Experimental techniques in winter school program conducted yearly (2001-2006) at IRC in Superconductivity.

Awards:

- Awarded "Innovation and Entrepreneurship" (2017) for the impact on industry based on my work.
- Charles Hatchett Award (2016) Institute of Materials, Minerals and Mining (IOM3).
- Innovation Award (Nov 2015) from Cast Metals Federation.
- PASREG award of Excellence (Sept 2007) by the International PASERG Board.

Distinctions:

- Fellow of the Institute of Materials, Minerals and Mining
- Fellow of the Institute of Physics
- Fellow of the Institute of Cast Metals Engineers
- Fellow of the UK Higher Education Academy

Please follow the link of his research webpage @

<http://www.brunel.ac.uk/people/hari-babu>

Faculty from, IIT Guwahati Biography of Prof. P.S. Robi, Indian Faculty

Prof. P.S. Robi is Professor in Mechanical Engineering Department at IIT Guwahati, His research working area is Aluminum alloy development, Composites, Hot deformation Mechanism Maps, High entropy alloys, Creep deformation of High temperature Materials. He has completed his PhD in the year 1995 from Indian Institute of Technology, Bombay, India. He has around 25 years of teaching and research. Presently his is a Professor in the department of Mechanical Engineering at IIT Guwahati. He has served as the Head, Department of Mechanical Engineering and later as Dean R&D at IIT Guwahati. Prof. Robi has published more than 80 papers in peer reviewed International journals. He has guided many PhD Students, His lectures on Engineering drawing is a basic course for all undergraduate Engineering program at NPTL has inspiring young engineering students to foundation in Engineering.

