



## A FIVE DAY NATIONAL SPARC WORKSHOP ON TRIBOLOGICAL RESPONSE OF ADVANCED (NANO) COMPOSITES

(24<sup>th</sup> – 28<sup>th</sup> February, 2020)

**Sponsored by:**

Scheme for Promotion of Academic and Research Collaboration (SPARC), MHRD, GOI.

**Organized by:**

Department of Mechanical Engineering, NIT Warangal, India.

**Collaboration with:**

National University of Singapore, Singapore.

**Preamble:**

Scheme for Promotion of Academic and Research Collaboration (SPARC) is a Ministry of Human Resource Development (MHRD), GOI initiative to improve research ecosystem in India. It supports national premier educational institutions by facilitating academic and research collaborations between Indian institutions and the best and selected institutions across the world's 28 nations. The collaborative educational networks will work on common issue of national or international relevance. It encourages international faculty, to visit Indian institutions to teach courses and conduct workshops for the benefit of Indian researchers and students in the selected research area. Also, it funds Indian students to visit and access the premier laboratories worldwide for training and experimentation. As an outcome patents, monographs, and world-class publications will be produced.

**About NIT Warangal and Department:**

NIT Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 32 post-graduate programs besides doctoral programs. About 5000 students across the country and about 500 international students study on the campus. The department of Mechanical Engineering offers an UG program, seven PG programs and a Ph.D. program as well. There are 48 qualified and experienced faculty in the department. The department has liaison with reputed industries and R&D organizations like NFTDC, BHEL, DMRL, DRDL, CMTI, etc. Presently the department is handling several R&D projects and consultancy works. The department has also been recognized as a QIP center for M. Tech and Ph.D. programs.

**Course Outline:**

- Introduction to Advanced metal matrix Nanocomposites
- Recent Developments in Metal Matrix Nanocomposites
- Future of Lightweight Metal Matrix Nanocomposites
- Manufacturing of Metal Matrix Nanocomposites
- Morphological studies on advanced nanocomposites
- Introduction to Tribology
- Friction and wear of dry and lubricated contacts
- Tribological Behavior of Machine Components
- Hands-on experience to fabricate nanocomposites and study of its friction and wear characteristics

**Course Level:** Postgraduate, Ph.D. scholars and Faculty of Mechanical Engineering and allied branches.

**Key Resource Person:** Dr. Manoj Gupta, Assoc. Professor, Department of Mechanical Engineering, National University of Singapore (NUS), and Faculty of NIT Warangal.

**Registration Fee Particulars:**

Faculty / Research Scholars	Rs. 1000 /- + 18% GST
PG Students	Rs. 500 + 18% GST
Industry Participants	Rs. 3000/- + 18% GST
Internal Faculty/PhD/PG Students	Rs. 500/- + 18% GST

**Note:** Registration fee includes Workshop kit, breakfast, working Lunch & Dinner.

**Payment Details:** The entire registration fee is to be collected in the form of online NEFT transfer using the following details:

**Account Name:** Director Research Account NITW

**Account No:** 62266262236, IFSC: SBIN0020149

**Bank & Branch Name:** State Bank of India, NITW Branch.

**Accommodation:** All the selected participants will be provided in the institute visitors/hostel block on twin sharing on payment basis of **Rs.200/-** per participant per day. No TA will be paid for the participants.

**Eligibility:** The program is open to the Faculty and Ph.D. scholars/PG students of Mechanical Engineering and allied disciplines. Industry personnel working in the concerned/allied discipline can also attend.

**How to apply:** A filled application form in the prescribed format duly signed and sponsored by appropriate authorities (along with payment details) **should send scanned application form & proof for Fee paid details through e-mail to [syedismail7@nitw.ac.in](mailto:syedismail7@nitw.ac.in)**. Also, the original hard copies of the application form & proof for Fee paid details must be submitted at registration desk on first day of reporting. The selection status will be intimated only through mail.

**Selection Criteria:** Selection will be done based on first-cum-first-serve basis and the confirmed candidates will be notified immediately. The maximum number of participants will be **40 (Forty)**. Additionally 10 participants from industry are allowed to participate. The list of selected participants will be sent to their personal e-mail address.

**Important Dates:**

**Last date for Application with fee: 20<sup>th</sup> February 2020**

**Coordinators:**

**Dr. Narasimha Rao R, Professor, PI**

**Dr. Syed Ismail, Assistant Professor, Co-PI**



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Singapore.

**REGISTRATION FORM**

1. Name :
2. Designation :
3. Institution :
4. E-mail :
5. Phone No. :
6. Payment Details :
- a) Transaction No. :
- b) Bank :
- c) Date :
- d) Amount :
7. Address :

**SPONSORSHIP CERTIFICATE**

Dr. /Mr. /Ms. ....is  
an employee/student of our Institute/Organization  
and is hereby sponsored to participate in the **FIVE  
day National SPARC- Workshop on  
“Tribological Response of Advanced (Nano)  
Composites”**, sponsored by Scheme for Promotion  
of Academic and Research Collaboration  
(SPARC), MHRD, GOI during 24<sup>th</sup> to 28<sup>th</sup>  
February 2020 at NIT Warangal.

8. Qualification :
9. Accommodation : Required /Not Required

Signature of Head of Institution  
(with seal )

**Declaration**

The information provided is true to the best of my  
knowledge. If selected, I agree to abide by the rules and  
regulations of the course and shall attend the course for  
the entire duration. I also undertake the responsibility to  
inform the coordinator in case, I am unable to attend the  
course.

**Address for correspondence:**

**Dr. Narasimha Rao R**  
Professor,  
Department of Mechanical Engineering,  
National Institute of Technology Warangal,  
WARANGAL - 506 004, Telangana State, India.

**Note:** E-mail the scanned copies of filled-in and duly  
signed application form along with proof for Fee Payment  
Details & date to [syedismail7@nitw.ac.in](mailto:syedismail7@nitw.ac.in)

Also, the original hard copies of the application form &  
proof for Fee paid details must be submitted at  
registration desk on first day of reporting

Signature of the Candidate with Date:

For any enquiries please contact:  
Mobile: **8332969373**

## Biography of Prof. Manoj Gupta



Dr. Manoj Gupta was a former Head of Materials Division of the Mechanical Engineering Department and Director designate of Materials Science and Engineering Initiative at NUS, Singapore. He did his Ph.D. from University of California, Irvine, USA (1992), and postdoctoral research at University of Alberta, Canada (1992).

In August 2017 he was highlighted among Top 1% Scientist of the World Position by The Universal Scientific Education and Research Network and among 2.5% among scientists as per Research Gate. To his credit are: (i) Disintegrated Melt Deposition technique and (ii) Hybrid Microwave Sintering technique, an energy efficient solid-state processing method to synthesize alloys/micro/nano- composites.

He has published over 545 peer reviewed journal papers and owns two US patents and one Trade Secret. His current h-index is 63, RG index is > 47 and citations are greater than 14000. He has also co-authored six books, published by John Wiley, Springer and MRF - USA. He is Editor-in-chief/Editor of twelve international peer reviewed journals.

In 2018 he was announced World Academy Championship Winner in the area of Biomedical Sciences by International Agency for Standards and Ratings. A multiple award winner, he actively collaborate/visit Japan, France, Saudi Arabia, Qatar, China, USA and India as a visiting researcher, professor and chair professor.