

one week GIAN course on

Artificial Neural Networks Modeling for Processing of Metals and Materials

Duration: 13-17 June, 2022

The Expert

Prof. N. Subba Reddy

is currently a Professor at the School of Materials Science and Engineering, Gyeongsang National University (GNU), Republic of Korea. He received his PhD and Masters degrees in Metallurgical and Materials Engineering from IIT Kharagpur. He completed A.M.I.E in Mechanical Engineering after the Polytechnic Diploma in Automobile Engineering from Govt. Polytechnic, Anantapur.

Prior to present position, he worked as Research Scientist at Pohang University of Science and Technology, Korea. His research interests are the Application of Computational Intelligence to various phenomena in materials science engineering. Prof. Reddy has several publications and delivered talks at various conferences and symposiums. He has visited several countries and have global exposure.



Course Contents

1. Introduction to Artificial Neural Networks (ANN)
2. Learning in neural networks, implementation procedure, prediction and comparison with actual results and extraction of knowledge from the database.
3. Modeling of the effect of alloy composition on the β -transus temperature in titanium alloys.
4. Hot deformation behaviour of Ti-6Al-4V alpha-beta alloy with different microstructure.
5. Modeling composition-heat treatment-mechanical properties relationship in medium carbon steels.
6. Estimation of compositional dependence of Martensite start temperature in steels
7. Machinability analysis of Inconel superalloys during electro-discharge machining by artificial neural networks models
8. Prediction of the relationships between electrospinning process parameters and nanofiber diameter
9. Modeling physical and mechanical properties metal matrix composites
10. Expected future of Artificial Neural Networks, resources available for modeling and open data sources

Who can attend

Students (at all levels: BTech /MSc/ MTech/ Ph.D.), researchers, faculty members from academic institutions, industry personals and personals from R&D laboratories, from chemistry, physics, chemical, materials science, metallurgical engineering, mechanical engineering, civil engineering, and computer science disciplines, and interdisciplinary areas.

Registration fee:

For students: Rs. 1000 (GST not applicable for students), for Faculty members from Academic institution and Govt. R&D Labs: Rs. 5000 + 18% GST, and for all others: Rs. 10000 +18% GST. The registration fee should be paid through either Cheque or DD in the name of "Registrar, IIT Hyderabad" (SBI, IIT Hyderabad, Kandi Branch, Branch Code: 14182, IFSC: SBIIN0014182).

Application procedure: Apply online through IIT Hyderabad website <https://iith.ac.in/> on or before 5th June, 2022

Accommodation: not available in campus, Participants to make own arrangement.

Venue: on campus, IIT Hyderabad (off-Line) and Online (Hybrid mode)

Course Coordinator:

Prof. Bharat B. Panigrahi

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