
Refresher Course on Tensors and their Applications in Engineering Sciences

Department of Mechanical Engineering, Indian Institute of Science, Bangalore
December 11-23, 2006

sponsored by Indian Academy of Sciences, Bangalore
in collaboration with Indian Institute of Science, Bangalore

Applications are invited from University/College teachers, Research Fellows and BTech/MTech (Mechanical/Applied Mathematics) degree holders for participation. About 40 persons will be selected to attend.

Outline of the Course:

1. Tensors as linear transformations, properties of tensors, components of tensors with respect to a basis, indicial notation, special tensors such as orthogonal, skew-symmetric, symmetric etc.
2. Differentiation of tensors: gradient, divergence, curl, etc.
3. Applications of tensors in elasticity, fluid dynamics, etc.

There will be formal lectures, problem sessions and discussions. The first two topics will be based partly on the book *Foundations and Applications of Mechanics*, Vol. I: *Continuum Mechanics*, while the third topic will be based partly on Vol. II: *Fluid Mechanics*, Narosa Publishing House, 2002. (Author: Prof C S Jog)

Pre-requisites: Knowledge of elementary solid and fluid mechanics.

Selected participants will be provided local hospitality and round trip train fare (first class or three-tier A/C) to and fro by the shortest route between their place of stay and Bangalore. Those who wish to participate may send by email, their brief curriculum vitae containing name, date of birth, postal and email address, qualifications, teaching experience, courses taught, positions held, and a brief write up on your academic activities etc. to: Prof C S Jog, Coordinator, Refresher Course on Tensors, Department of Mechanical Engineering, Bangalore-560012, Email: jogc@mecheng.iisc.ernet.in

Research Fellows who wish to participate should also submit a letter of recommendation from their supervisors.

Last date for receipt of applications: August 31, 2006.

