

機械工学セミナー Mechanical Engineering Seminar

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主催：慶應義塾大学理工学部機械工学科
Department of Mechanical Engineering, Keio University

日時 (Date):

2019年8月26日 ((月)) (Aug. 26, 2019 (Mon.)) 15:00~16:00

場所 (Venue):

ディスカッションルーム 3 (Discussion Room 3) (14-213)

講演題目 (Title):

Some Progresses in Theory and Application of Advanced NDT&E Technologies

講演者 (Speaker):

Zhenmao CHEN, Professor
Director of Shaanxi Research Center for NDT and
Structural Integrity
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He got his Bachelor and Master Degree from Xi'an Jiaotong University, Doctor Degree from the University of Tokyo. He worked as Associate Professor in Keio University and is Guest Professor in Tohoku University now.

Abstract:

Some recent progresses in the theory and applications of advanced Non-Destructive Testing and Evaluation (NDT&E) technologies are briefly introduced in this presentation. In view of the NDE of structures such as pipe and pressure vessel of nuclear power plants, fusion reactors, and NDE of new structures and materials such as the super-light porous material, recent developments on techniques for detection and sizing of macro defects, quantitative valuation of residual stress and material degradation with NDT&E method such as the advanced eddy current testing, natural magnetization method, electromagnetic acoustic transducer, integrated magnetic NDE, laser UT and laser spot infrared thermograph techniques are presented. The design and optimization of advanced probe, high efficient numerical simulation method, quantitative damage evaluation techniques, principle of new NDT&E methods, and the NDE of new material and new structures are introduced respectively. The presentation is mainly related to the research work and results of the NDE group of Xi'an Jiaotong university, in addition with some typical new theoretical and technical advances in the NDT&E technologies of the global NDT society.

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