Institute of Thermomechanics Seminar
http://www.it.cas.cz/en/it_seminar

Lecture No. 71

Czech Society for Mechanics
and Institute of Thermomechanics, CAS

invite you to a lecture and discussion within
the lecture series **Institute of Thermomechanics Seminar**

Recent Advances in Wave Propagation and Large-Step Transient Analysis Procedures

given by

Prof. K. C. Park

Ann & H.J. Smead Aerospace Engineering Sciences,
University of Colorado, Boulder, Colorado, USA

In collaboration with
Dr. Sangsoon Cho, Korea Atomic Energy Research Institute, Daejeon, Republic of Korea.
Prof. José González, Escuela Téchica Superior de Ingeniería, Universidad de Sevilla, Spain
Dr. Radek Kolman, Dr. Ján Kopačka, Institute of Thermomechanics, CAS, Prague, CZ
Dr. Jingyun Kim, Kyung Hee University, Seoul, Korea

In recent years, there have been several notable advances both in wave propagation and explicit transient structural dynamic analysis procedures. These include: (1) accurate wave-front tracking algorithms that can handle material heterogeneities; (2) accurate explicit algorithm employing improved non-diagonal inverse mass matrices; (3) large-step explicit integration of low and medium-frequency response analysis by filtering out mesh frequencies, among others. These advances offer structural dynamicists several options in wave propagation and transient analysis for capturing the predominant physics of the problems at hand, with drastically increased computational efficiency and robustness. In this talk, we will go over some salient features of these advances, and offer potential topics for further research.

The lecture will be held on Monday, September 23, 2019 at 13:00 in the building of the Institute of Thermomechanics (lecture room B), Dolejškova 5, 182 00 Prague 8

Contact persons: Radek Kolman, Hanuš Seiner