S13 Shells and plates

Organizers:

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The topics of the session include (but are not limited to):

- Classical and non-classical kinematical models: Kirchhoff-Love, Reissner-Mindlin, Cosserat , layer-wise theories and others.
- Constitutive equations for shells and plates: elastic, elastic-plastic, composites (multilayered, with microstructure), effective (homogenized, surrogate) material properties, damage of composites (delamination, Progressive Failure Analysis, etc.).
- Constitutive equations for thin micro- and nano-films, biological membranes, and other thin-walled structures.
- Methods of mechanics of plates and shells in modeling of surface-related phenomena in solids and fluids.
- Finite elements for shells: with rotational dofs, solid-shells, 3D. Various formulations and techniques improving element's performance; mixed, enhanced, stabilized, isogeometric, etc.
- Advanced numerical analyses of shell structures (dynamics, stability, optimization, etc.).

If you have any queries about the session, please write to kwisn@ippt.pan.pl