

Advances in fast BEM

Yijun Liu, *University of Cincinnati*

Naoshi Nishimura, *Kyoto University*

Attilio Frangi, *Politecnico di Milano*

Ernie Pan, *The University of Akron*

Xiaolin Chen, *Washington State University – Vancouver*

Martin Schanz, *Graz University of Technology*

This symposium will bring together researchers from academia, government research laboratories, and industries around the world to discuss the recent progresses in the development of the boundary integral equation and boundary element methods (BIE/BEM) accelerated by various fast solution techniques. Researchers from all countries are cordially invited to participate in this minisymposium. Presentations dealing with all aspects of the fast BIE/BEM formulations and applications are welcome. Topics will include, but are not limited to:

- Fast BEM (e.g., BEM with fast multipole methods, wavelet methods, ACA, and others);
- Large-scale, multi-scale and multi-physics analyses using the BEM;
- Modeling of acoustics, elastodynamics and electromagnetics using the fast BEM;
- Modeling of materials (e.g., MEMS, composites, functionally graded materials, and others);
- Fracture mechanics and biomedical/bioengineering applications;
- Multiscale Green's functions and applications;
- Integration of the fast BEM with other techniques such as imaging and rapid prototyping;
- Software development and industrial applications.