

## INNOVATIVE METHODS FOR FLUID-STRUCTURE INTERACTION

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HARALD VAN BRUMMELEN<sup>\*</sup>, TROND KVAMSDAL<sup>†</sup>, YURI BAZILEVS<sup>‡</sup>,  
JORIS DEGROOTE<sup>§</sup> AND ROGER OHAYON<sup>¶</sup>

<sup>\*</sup> Eindhoven University of Technology  
PO Box 513 – 5600 MB Eindhoven – Netherlands  
[e.h.v.brummelen@tue.nl](mailto:e.h.v.brummelen@tue.nl)

<sup>†</sup> NTNU Trondheim  
Hogskoleringen 1 – 7491 Trondheim – Norway  
[trond.kvamsdal@ntnu.no](mailto:trond.kvamsdal@ntnu.no)

<sup>‡</sup> Brown University  
69 Brown Street – Providence RI 02912 – United States  
[yuri\\_bazilevs@brown.edu](mailto:yuri_bazilevs@brown.edu)

<sup>§</sup> Ghent University  
Sint-Pietersnieuwstraat 41 – B-9000 Gent – Belgium  
[joris.degroote@ugent.be](mailto:joris.degroote@ugent.be)

<sup>¶</sup> Conservatoire National des Arts et Métiers (CNAM)  
2, rue Conte – 75003 Paris – France  
[roger.ohayon@lecnam.net](mailto:roger.ohayon@lecnam.net)

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### ABSTRACT

The objective of this Mini Symposium is to discuss progress and recent advancements in the numerical computation of fluid-structure-interaction problems, with an emphasis on new innovative formulations, methods and algorithms leading to faster, more accurate predictions and improved software design. The envisaged range of applications spans (but is not limited to) aero-elasticity, hydro-elasticity, biomechanical FSI and noise/structural acoustics. In particular, we welcome contributions in the vanguard of:

- error estimation;
- adaptive methods;
- immersed and unfitted methods;
- multiscale models;
- reduced order models and methods;
- artificial intelligence and machine learning;
- novel iterative solution techniques;

- shape optimization and inverse methods;
- software engineering.

In addition, this Mini Symposium is intended as a platform for other state-of-the-art developments in FSI, such as those pertaining to FSI with auxiliary-field interactions, e.g. FSI problems with (massive) self contact, FSI problems with fracture (e.g. hydraulic fracturing, blast-induced FSI, etc.), and elasto-capillary FSI.