

## CALL FOR PAPERS SPECIAL SESSION ON

# "Advances in Vibration Controls of Flexible Systems" for CODIT'20

June 29 - July 2, 2020 • Prague, Czech Republic

#### **Session Co-Chairs:**

Prof. Kazuhiko Terashima, *Toyohashi University of Technology, Japan* (email: *terasima@me.tut.ac.jp*)
Prof. Naoki Uchiyama, *Toyohashi University of Technology, Japan* (email: *uchiyama@tut.jp*)
Assoc. Prof. Ryosuke Tasaki, *Aoyama Gakuin University, Japan* (email: *tasaki@me.aoyama.ac.jp*)
M. Eng. Ho Duc Tho, *Toyohashi University of Technology, Japan* (email: *ho\_duc\_tho@syscon.me.tut.ac.jp*)

#### **Session description**

This special session provides a forum to discuss the latest achievements and future developments of the vibration control for flexible systems. Reducing the system's weight/mass is a trend of the modern machinery design to save materials, to add extra flexibilities/dexterities, and to enable higher speed motions with lower energy consumption, etc; thus, it leads to significant economic advantages. As the flexibility of the designed system increases, the vibration induced from motions/disturbances will be more likely generated with a higher amplitude. Vibrations might be undesirable for some systems but favourable for others, hence, the vibration control could be understood in a sense of vibration suppression control or in a view of vibration excitation control. This session aims to bring together groups of researchers and practitioners to discuss new results and exchange perspectives on future developments of the vibration control field. Innovative ideas and applications relevant to the control of vibratory systems, ranging from microscopic devices (e.g. MEMS) to macroscopic machines (e.g. cranes, satellites) are highly welcome.

The topics of interest include, but are not limited to:

- Feedforward vibration controls.
- Applications of feedback control theories to vibratory processes.
- PDE modelling and boundary controls of flexible systems.
- Control of multi-mode systems (boundary element and finite element models).
- Vibration analysis and identification.
- Passive vibration controls (dynamic vibration absorber/attenuator/neutralizer).
- Active vibration controls.
- Designs and controls of vibration isolators.
- Application of vibration controls to transportation and manufacturing systems such as airplanes, trains, ships, cars, cranes, semi-conductor transfers, etc.

#### **SUBMISSION**

Papers must be submitted electronically for peer review through PaperCept by January 24, 2020: <a href="http://controls.papercept.net/conferences/scripts/start.pl">http://controls.papercept.net/conferences/scripts/start.pl</a>. In PaperCept, click on the CoDIT 2020 link "Submit a Contribution to CoDIT 2020" and follow the steps.

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

### **DEADLINES** CONFIDENTIAL. Limited circulation. For review only.

January 24, 2020: deadline for paper submission April 10, 2020: notification of acceptance/reject

May 7, 2020: deadline for final paper and registration