



For more information please see the conference website: www.bms2021.ugent.be

For information on travelling, visa, sponsorship, please contact: bms2021@ugent.be

IFAC Main Sponsoring Technical Committee

TC 8.2 – Biological and Medical Systems

IFAC Co-Sponsoring Technical Committees

TC 1.1 – Modelling, Identification and Signal Processing

TC 1.2 – Adaptive and Learning Systems

TC 2.1 – Control Design

TC 4.3 – Robotics

TC 8.4 – Biosystems and Bioprocesses

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NOC Industry Vice Chairs: Ljiljana Platisa, IMEC-UGent and Dimitar Prodanov IMEC-KULeuven, Belgium

Important Dates:

Submission site opens:	01 October 2020
Open Invited Track Proposals:	01 November 2020
Draft Paper Submission:	24 January 2021
Paper Review Decision:	01 March 2021
Final Paper:	01 May 2021

Flat Registration Fee for Hybrid Event:

300 EUR (one paper upload)

Registration Deadline: 10 May 2021

Papercept:

<http://ifac.papercept.net/conferences/scripts/start.pl>

Scope: We are living in challenging, yet sensational and inspiring times of pandemic outbreak context. No doubt the year ahead is going to change the view we have on our lives and that on our environment.

More than ever medical and biological systems stay at the core of our societal and economical challenges. No longer these can progress without the interdisciplinarity among them, and progress itself cannot be enabled without the inter-modularity with engineering and computing. Healthcare systems, biological systems, pharmaceutical systems and everything stemming from these are welcomed topics to our **hybrid event** 11th IFAC Symposium on Biological and Medical Systems (BMS2021), organized in Ghent, Belgium, through 19-22 September 2021.

Experimental, clinical and feasibility studies are particularly welcome contributions. The symposium covers all aspects of biomedicine, physiology, biology, pharmaceutical and epidemiological problems interconnected through multidisciplinary with systems engineering.

The technical program will comprise several types of presentations in regular and invited sessions, tutorial sessions, and special sessions along with workshops and exhibits. An important goal of the conference is to emphasize the enabling role of engineering and control in the emerging Pharma 4.0 context and listen to the challenges from both industry and academia.

Plenary Lectures: see website updates

Special Issues: two calls in two specialized journals (clinical and technical); see conference website for information upon conditions, deadlines and reduced fees of modified conference papers.

Benchmark Challenge Competition

A competition for control of anesthetic and hemodynamic states in patient will be released in September 2020.

The symposium will address the latest **progress and challenges** posed in all themes of technical committees:

- model formulation, experiment design, identification and validation, biosignal analysis and interpretation,
- advances in sensing and signal processing,
- tracer kinetic modelling from imaging systems,
- biomedical system approximations
- decision support systems and feedback control
- robotics, devices and sensors
- biological systems and controls
- pharmaceutical processes
- vaccine/drug manufacturing and quality control
- artificial intelligence methods for healthcare
- bionic engineering and biomaterials

Application areas may include, but not limited to:

- cellular, metabolic, cardiovascular, neurosystems,
- healthcare and drug delivery management, disease control, critical care, pandemic response
- fractal pharmacokinetics
- decision support systems for the control of physiological and clinical variables,
- biomedical imaging systems,
- medical information systems
- surgical robotics and medical nano-robotics
- control of voluntary movements, respiration, locomotion
- rehabilitation engineering and robotics,
- kinetic modelling and control of biological systems, artificial organs and biomechanical systems,
- continuous production optimization in pharmaceutical industry, vaccine/drug on demand production
- targeted molecular therapies
- artificial intelligence applied to healthcare

IFAC Young Author Award

In order to stimulate the involvement of young scientists and engineers in IFAC, as well as to recognize top-level contributions of the younger generation in our field and to support their careers, IFAC presents the Young Author Award. Eligibility criteria is to have the PhD-student status of the first and presenting author, at the time of paper submission.

IPC Member List

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