

13th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles **CAMS 2021**

September 22-24, 2021 – Online Event – www.cams-2021.com



General Chair

Prof. Dr.-Ing. Axel Hahn
OFFIS e. V. / DLR Institute of Systems
Engineering for Future Mobility
Escherweg 2, 26121 Oldenburg
E-mail: hahn@offis.de
Tel: +49 441 9722 294

General Co-Chair

Prof. Dr.-Ing. Torsten Jeansch
Institute of Automation
University of Rostock
Richard-Wagner-Straße 31, 18119 Rostock
E-mail: torsten.jeansch@uni-rostock.de
Tel: +49 381 498 7701

IPC Chair

Assoc. Prof. Dr. Roberto Galeazzi
Department of Electrical Engineering,
Technical University of Denmark
Elektrovej, Building 326
2800 Kgs. Lyngby, Denmark
E-mail: rg@elektro.dtu.dk
Tel: +45 4525 3549

International Programme Committee (IPC)

A. Hahn (DE), Chair • T. Jeansch (DE), Co-Chair
D. Jürgens (DE), NOC VC Ind. • R. Galeazzi (DK), IPC Chair • J. Kim (KR), IPC Co-Chair • J. Dzaack (DE), IPC VC Ind. • T. Acarman (TR) • A. Aguiar (PT)
J. van Amerongen (NL) • G. Antonelli (IT)
M. Arshad (MY) • E. de Barros (BR) • M. Blanke (DK)
M. Caccia (IT) • A. Caiti (IT) • M. Casado (ES)
A. Chemori (FR) • A. Chiuso (IT) • T. Cimen (TR)
S. Daley (GB) • E. Desa (IN) • T. Fossen (NO)
J. Giron-Sierra (ES) • M. Grimble (GB)
K. Hasegawa (JP) • J. Huh (KR) • J. Huh (KR)
G. Indeveri (IT) • J. Jouffroy (DK) • R. Katebi (GB)
H. Korte (DE) • Z. Kowalczyk (PL) • Y. Kuroda (JP)
J. Li (KR) • S. Longhi (IT) • T. Maki (JP)
S. Mandzuka (HR) • E. McGookin (GB)
W. Naeem (GB) • N. Nikolov (BG) • P. Oliveira (PT)
G. Oliver (ES) • E. Omerdic (IE) • A. Pascoal (PT)
T. Perez (AU) • I. Petrovic (HR) • P. Plöger (DE)
J. Ringwood (IE) • P. Rodriguez (ES) • A. Roskilly (GB)
T. Sawaragi (JP) • A. Sørensen (NO) • J. Sousa (PT)
J. Sousa (PT) • J. Sun (US) • D. Toal (IE)
R. Vásquez (CO) • Z. Vukic (HR) • C. Woolsey (US)
X. Xiang (CN) • I. Yamamoto (JP) • J. Zhang (NO)

National Organizing Committee (NOC)

A. Hahn (Chair) • T. Jeansch (Co-Chair)
D. Reiher (Local Org.) • M. Kurowski (Publications)

Editors

A. Hahn (DE) • T. Jeansch (DE) • J. Kim (KR)

The 13th IFAC Conference on Control Applications in Marine Systems, Robotics, and Vehicles will be held online from September 22 to 24, 2021. The conference is jointly organized by the German Institute for Information Technology OFFIS / DLR, the University of Rostock, and the International Federation of Automation Control (IFAC). The aim is to bring together leading scientists, researchers, students and industry representatives on relevant research topics that directly or indirectly deal with the broad field of maritime autonomy. In this way, the exchange of ideas and mutual cooperation will be promoted.

TOPICS include, but are not limited to:

- Marine Autonomics – By combining social sciences, humanities and human sciences with natural and engineering sciences, the new lead discipline called "Autonomics" is going to be established in the near future.
- Intelligent and autonomous marine systems
- Surface vehicles and floating platforms
- Underwater vehicles and manipulators
- Dynamic modeling, simulation and HIL testing
- Control system design and applications
- Vehicle guidance and navigation
- Trajectory planning and optimal control for marine systems
- Dynamic positioning and position mooring systems for ships and ocean platforms
- Distributed and cooperative systems
- Swarm intelligence, learning and control
- Machine learning and artificial intelligence
- Multi-modal sensor fusion
- Perception and cognition
- Propulsion systems and energy efficiency
- Emission reduction and decarbonization
- Fault diagnosis and fault tolerance
- Adaptive and robust control in marine systems
- Marine traffic systems and intelligent marine transportation systems
- Maritime safety and security for ports and ships and risk assessment
- Risk and life cycle assessment in marine systems
- Marine cyber-physical systems and maritime security
- Applications of autonomous and remotely operated (surface and underwater) marine vessels
- Applications of marine vessels and robotics in environmental monitoring, mapping and surveillance, search and rescuing operations, habitat mapping, marine biology and geology, hydrographic explorations
- Ocean renewable energy and applications

PAPER SUBMISSION Prospective authors are invited to submit draft papers of four (4) to six (6) pages for review. The maximum length for final papers is eight (8) pages including results, figures and references. All contributions must be submitted in a form appropriate to the IFAC style. Papers must be submitted using the PaperPlaza Conference Manuscript Management System at ifac.papercept.net. The PDF file must be limited to a size of 2 MB. Authors are advised to follow the IFAC Guidelines for Paper Formatting.

SPECIAL SESSIONS SUBMISSION The proposal for a special session must include a title, a rationale, a session outline, contact information for the session chairperson(s), a list of authors who have agreed to present a paper at the session, and an abstract (max. 1 page) of each paper. Papers submitted for the special session will be reviewed according to the same criteria as the papers in the main track (peer reviews). Final papers for special sessions should be submitted directly to the chair of the special session.

Invited Session Proposal:	Mar 01, 2021
Draft Paper Submission:	May 05, 2021
Tutorial/Workshop Proposal:	Apr 30, 2021
Acceptance Notification:	Jun 25, 2021
Final Paper Submission:	Jul 15, 2021
Conference Dates:	Sep 22-24, 2021



General Chair

Prof. Dr.-Ing. Axel Hahn
OFFIS e. V. / DLR Institute of Systems
Engineering for Future Mobility
Escherweg 2, 26121 Oldenburg
E-mail: hahn@offis.de
Tel: +49 441 9722 294

General Co-Chair

Prof. Dr.-Ing. Torsten Jeansch
Institute of Automation
University of Rostock
Richard-Wagner-Straße 31, 18119 Rostock
E-mail: torsten.jeansch@uni-rostock.de
Tel: +49 381 498 7701

IPC Chair

Assoc. Prof. Dr. Roberto Galeazzi
Department of Electrical Engineering,
Technical University of Denmark
Elektrovej, Building 326
2800 Kgs. Lyngby, Denmark
E-mail: rg@elektro.dtu.dk
Tel: +45 4525 3549

International Programme Committee (IPC)

A. Hahn (DE), [Chair](#) • T. Jeansch (DE), [Co-Chair](#)
D. Jürgens (DE), [NOC VC Ind.](#) • R. Galeazzi (DK), [IPC Chair](#) • J. Kim (KR), [IPC Co-Chair](#) • J. Dzaack (DE), [IPC VC Ind.](#) • T. Acarman (TR) • A. Aguiar (PT)
E. van Amerongen (NL) • G. Antonelli (IT)
M. Arshad (MY) • E. de Barros (BR) • M. Blanke (DK)
M. Caccia (IT) • A. Caiti (IT) • M. Casado (ES)
A. Chemori (FR) • T. Cimen (TR) • S. Daley (GB)
E. Desa (IN) • T. Fossen (NO) • J. Giron-Sierra (ES)
M. Grimble (GB) • K. Hasegawa (JP) • J. Huh (KR)
J. Huh (KR) • G. Indeveri (IT) • J. Jouffroy (DK)
R. Katebi (GB) • H. Korte (DE) • Z. Kowalczyk (PL)
Y. Kuroda (JP) • V. Laurain (FR) • J. Li (KR)
S. Longhi (IT) • T. Maki (JP) • S. Mandzuka (HR)
E. McGookin (GB) • W. Naeem (GB) • N. Nikolov (BG)
P. Oliveira (PT) • G. Oliver (ES) • E. Omerdic (IE)
A. Pascoal (PT) • T. Perez (AU) • I. Petrovic (HR)
P. Plöger (DE) • J. Ringwood (IE) • P. Rodriguez (ES)
A. Roskilly (GB) • T. Sawaragi (JP) • A. Sørensen (NO)
J. Sousa (PT) • J. Sousa (PT) • J. Sun (US) • D. Toal (IE)
R. Vásquez (CO) • Z. Vukic (HR) • C. Woolsey (US)
X. Xiang (CN) • I. Yamamoto (JP) • J. Zhang (NO)

National Organizing Committee (NOC)

A. Hahn (Chair) • T. Jeansch (Co-Chair)
D. Reiher (Local Org.) • M. Kurowski (Publications)

Editors

A. Hahn (DE) • T. Jeansch (DE) • J. Kim (KR)

INFORMATION FOR AUTHORS Prospective authors are invited to submit draft papers of four (4) to six (6) pages for review. The maximum length for final papers is eight (8) pages including results, figures and references. All contributions must be submitted in a form appropriate to the IFAC style. (<https://www.ifac-control.org/events/author-guide>).

Papers must be submitted using the PaperPlaza Conference Manuscript Management System (<http://ifac.papercept.net/>). The PDF file must be limited to a size of 2MB. Authors are advised to follow IFAC Guidelines for Paper Formatting.

Submitted papers must be submitted in the original and can therefore neither already be published nor otherwise reviewed. Prospective authors are expected to present their papers at the conference. For each accepted paper at least one of the authors should register (full registration) before the final version of the paper is uploaded.

SPECIAL SESSIONS PROPOSAL The proposal for a special session must include a title, a rationale, a session outline, contact information for the session chairperson(s), a list of authors who have agreed to present a paper at the session, and an abstract (max. 1 page) of each paper. Papers submitted for the special session will be reviewed according to the same criteria as the papers in the main track (peer reviews). The final papers for special sessions should be submitted directly to the chair of the special session.

COPYRIGHT CONDITIONS All publication material submitted for presentation at an IFAC-sponsored meeting (Congress, Symposium, Conference, Workshop) must be original and hence cannot be already published, nor can it be under review elsewhere. The authors take responsibility for the material that has been submitted. IFAC-sponsored conferences will abide by the highest standard of ethical behavior in the review process as explained on the Elsevier webpage, and the authors will abide by the IFAC publication ethics guidelines.

Accepted papers that have been presented at an IFAC meeting will be published in the proceedings of the event using the open-access IFAC-PapersOnLine series hosted on ScienceDirect. To this end, the author(s) must grant exclusive publishing rights to IFAC under a Creative Commons license when they submit the final version of the paper. The copyright belongs to the authors, who have the right to share the paper in the same terms allowed by the end user license, and retain all patent, trademark and other intellectual property rights (including research data).

<https://www.ifac-control.org/publications/copyright-conditions>