# **MOSES Workshop**

Modelling and Optimization of Ship Energy Systems October 23 - 25, 2017. EPFL Sion, Switzerland





### **MEET EXPERTS IN THE FIELD**

The workshop focuses on the potential and challenges of the use of mathematical modeling and optimization techniques for improving energy efficiency in shipping. Designing and operating ships more efficiently will allow reducing their cost, environmental impact and use of non-renewable resources.

The program of the workshop is a combination of scientific presentations and chances to discuss and develop the network within this field.

### **CHOOSE YOUR PRESENTATION**

Two types of presentations will be accepted:

- Full presentation: 10-15 minutes Classic conference-style presentation
- Short presentation:
  For introducing your research to your peers

### REGISTRATION

- Register online (deadline for registration: 12th of October 2017) at: <u>http://registration.epfl.ch/?form=MOSES\_2017</u>
- Submit an abstract of your presentation online at: <u>https://easychair.org/conferences/?conf=moses2017</u>

The registration fee for the workshops includes lunch and coffee for the three days plus a gala dinner.

- 150 CHF for regular participants.
- 50 CHF for PhD students

### **INVITED SPEAKERS**

Gerasimos Theotokatos
 Strathclyde University

• Selma Brynolf Chalmers University of technology

- Jing Sun University of Michigan
- George Dimopoulos
  DNV-GL
- Andrea Coraddu
  Strathclyde University
- Christos Frangopoulos
  National Technical University of
  Athens
- Kari Tammi Aalto University
- Edward Sciberras Damen Shipyards

## WORKSHOP PROGRAM

Updated information on the program and speakers is available HERE >>

#### Day 1 - 23.10.2017 09:00 - 10:00 Registration 10:00 - 10:30 Workshop opening 10:30 - 11:15Christos Frangopoulos, NTUA Invited speaker Static and Dynamic Optimization of Synthesis, Design and Operation of Total Energy Systems of Ships 11:15 - 11:45 Coffee break 11:45 - 12:30 Invited speaker Kari Tammi, Aalto University Ship energy efficiency in simulations and system analysis 12:30 - 14:00 Lunch break Presentations 14:00 - 15:30 15:30 - 16:30 Coffee break 16:30 - 17:15 Invited speaker George Dimopoulos, DNV-GL Complex ship energy systems modelling, simulation and optimization: applications experience in various ship types Presentations 17:15 - 18:00Day 2 – 24.10.2017 09:00 - 09:45Invited speaker Jing Sun, University of Michigan Integrated Power Systems for Electrified Ships: Control and Optimization 09:45 - 10:30Edward Sciberras, Damen Shipyards Invited speaker Modelling for energy management 10:30 - 11:00 Coffee break Presentations 11:00 - 12:30 Visit to the GEM Fuel Cell laboratory at EPFL with Jan van Herle 12:30 - 13:00Lunch break 13:00 - 14:30 14:30 - 15:15 Introduction to IPESE: a general perspective and work in shipping 15:15 - 16:30 Coffee break Presentations 16:30 - 17:15 17:15 - 18:00 Invited speaker Gerasimos Theotokatos, University of Strathclyde Towards the development of a systematic method for ship propulsion system energy management Workshop Dinner 19:00 - 22:30

### Day 3 - 25.10.2017

09:00 - 09:45	Invited speaker	Selma Brynolf, Chalmers University
	Cost-effective choices of marine fuels in a carbon-constrained world: in- sights from the Global Energy Transition (GET) model	
09:45 - 10:30	Invited speaker	Andrea Coraddu, University of Strathclyde
Ship energy systems modelling: a gray-box approach		
10:30 - 11:00	Coffee break	
11:00 – 12:30	Presentations	
12:30 - 13:00	Closure of the workshop	
13:00 - 14:00	Lunch break	



### SION IN THE HEART OF THE ALPS

Sion is located in the South of Switzerland, in the Rhône valley, hidden between the Swiss-Italian Alps and the Bernese Oberland. Its location earns Sion a favorable climate, warm, sunny and dry for most of the year. This makes the Rhône valley particularly favorable for vineyards, and wines from Valais are renowned all around Europe.

With its town center and its three castles, Sion conserves a charming medieval feeling.

### HOT TO GET HERE:

- **By plane**, via **Geneva**. Trains from Geneva airport leave hourly to Sion station (2h train)
- **By plane,** via **Zurich.** A train ride from Zurich to Sion takes roughly 2h30, with change in Visp and Bern.
- By train
  Sion is well connected to many European cities in