Learning objectives:
During this workshop, groups of 5 participants will follow a single track consisting of 4 successive ultrasound workstations, that cover the following learning objectives:

- **Workstation 1. Haemodynamic monitoring:** To quantify systolic function of right- and left ventricle. To assess diastolic function. To calculate cardiac output. To evaluate preload and fluid responsiveness.
- **Workstation 2. Identify cardiac pathology (simulator):** To recognize and evaluate significant pathology including valve stenosis/insufficiency, pericardial effusion, pleural effusion, ventricular dysfunction and intracardiac masses.
- **Workstation 3. Abdominal and gastric US:** To evaluate stomach content, to perform a FAST exam.
- **Workstation 4. New and emerging ultrasound modalities:** evaluate renal perfusion, hepatic/portal vein flow, transcranial Doppler, assessment of airway patency and access.

The specific sequence of ultrasound stations will vary among groups as they rotate from one station to another. Workstations 1, 3 and 4 will use human models, whereas workstation 2 will use an advanced echo simulator.

**Target audience:** Physicians in anaesthesia or critical care who use basic ultrasound in daily clinical settings and are eager to step up to more advanced applications, such as quantitative haemodynamic monitoring, and to explore new fields where the use of ultrasound can improve patient care, e.g. the evaluation of target organ perfusion.

**Chairs:**
Patrick Wouters (Gent, Belgium)
Peter Juhl-Olsen (Aarhus, Denmark)

**Introduction**
**Workstation 1. Haemodynamic monitoring**
**Workstation 2. Identify cardiac pathology (simulator)**
**Coffee break**
**Workstation 3. Abdominal and gastric ultrasound**
**Workstation 4. New and emerging ultrasound modalities**

**Evaluation and final words**
Instructors:
Patrick Wouters (Gent, Belgium)
Peter Juhl-Olsen (Aarhus, Denmark)
Stefan Weber (Köln, Germany)
Stefaan Bouchez (Gent, Belgium)
Fabio Guerracino (Pisa, Italy)
Sascha Treskatsch (Berlin, Germany)
Dominique A. Bettex (Zürich, Switzerland)
Johan Bence (Leicester, United Kingdom)
Ravi Hebballi (Birmingham, United Kingdom)
Michael Schupp (Leicester, United Kingdom)
Marc Vives (Girona, Spain)
Alberto Hernandez Martinez (Ibiza, Spain)