

Special Session Proposal
15th International Conference on Social Robotics
<https://icsr23.qa>

1. Title: Robotic Surgery: Myths and Realities

2. Organizers:

Session Chair: Uvais Qidwai, uqidwai@qu.edu.qa
Professor of Computer Engineering, Qatar
University

Session Co-chair: Rashid Mazhar, rhaq@hamd.qa
Sr. Consultant Thoracic Surgeon, Hamad
Medical Corporation, Qatar.

3. Session Description and Objectives: Please write a detailed description of the content and objectives of your session.

- To objectively analyze the advantages of the present-day robotic surgical solutions – from a user-end perspective.
- To dispel presumptions from operational field-realities during a surgical operation using the surgical robots.
- To propose alternative, ergonomic and economical alternatives.

While most of the speakers as well as the relevant topics seems to be of interest to medical community, it provides a huge opportunity to engineers, specifically those working in robotics to come up with solutions to the voids mentioned by the medical professionals.

4. Intended Audience and Plans to Solicit Participation: Please explain who your intended audience is, plans to solicit participation, and how you plan to encourage discussions and exchanges between the participants of your session.

Intended audience: Robotic surgeons, Surgical trainees and Paramedical personnel, engineers from various disciplines relevant to the workings of the surgical robots and Students.

Plans to Solicit Participation: Through direct invitation to the known names in the field and via publicity through social media. CME awards would be available. For interested participants, there may be opportunities to be part of research projects pertaining to the subject.

Plan to encourage discussions: The workshop would be highly provocative, challenging the currently accepted “state-of-the-art” through a combined surgical and engineering perspective. This would generate pointed discussions in various fields

of computerised mechanics, computer vision, ergonomics, and economy of the innovations.

5. List of Topics: Please provide a bulleted list of the topics of interest that will be covered by the session.

- Reductive analysis of the components of the popular surgical robotic solutions.
- Utility of these components through the lens of practicing surgeons.
- Theoretical alternatives for improvements in the current art.
- Exhibition and discussion on “proof-of-concept” prototypes, providing improvement on the current art.

Proposed hands-on activities:

- The egg in the robotic hand: a haptic-feedback scenario.
- Stereoscopic vision.

6. List of Invited Speakers: If applicable, please list the speakers you plan to invite to your session.

Dr. Abdulla Ansari (& his invitees). [Abdulla Ali Al-Ansari \(hamad.qa\)](#) Chief Medical Officer for Hamad Medical Corporation (HMC). Director of the Qatar Robotic Surgery Centre (QRSC) at the Qatar Science and Technology Park (QSTP)

Dr. Yusuf Al-Maslamani ([Dr. Yousef Al Maslamani \(hamad.qa\)](#))

Dr. Abdulla Al-Naemi ([17 Abdulla Al-Naimi \(researchgate.net\)](#))

Dr. Abdulwahed Al-Mulla [MEFQSH2016 \(hamad.qa\)](#)

Dr. Hasan Saud Al-Thani [Hassan Al Thani \(hamad.qa\)](#)

Dr. Amjad Pervaiz [Amjad Parvaiz \(hamad.qa\)](#) Director and Founding Member of the European Academy of Robotic Colorectal Surgery (EARCS)

Jassim Hamdan Al-Abdalla. Head of thoracic surgery. Robotic surgeon.
HAIAbdulla2@hamad.qa

Faisal Aljaber (Qatar University) {Soft Robotics}

Engr. Ahmed Saeed {Mechanism Design and Control, Qatar University}

7. List of potential papers

- A novel optical solution for minimal-access surgery.
- A novel operative field display platform.
- Hand-held robotic instrument – made simple.
- A highly economical and effective alternate to the existing surgical robotic platform.