

EMBC Workshop Proposal

Workshop Type (select one):

Full Day Workshop

Half Day Workshop

Workshop Title:

Health Information Technology Evaluation. From meaningful use to meaningful outcome.

Workshop Organizer Name & Affiliation:

Vitaly Herasevich, MD, PhD, Professor of Anesthesiology and Medicine, Mayo Clinic

Workshop Organizer/Speaker Name & Affiliation 1:

Vitaly Herasevich, MD, PhD, Professor of Anesthesiology and Medicine, Mayo Clinic

Workshop Organizer/Speaker Name & Affiliation 2:

Workshop Organizer/Speaker Name & Affiliation 3:

Workshop Organizer/Speaker Name & Affiliation 4:

Workshop Organizer/Speaker Name & Affiliation 5:

Workshop Organizer/Speaker Name & Affiliation 6:

Theme (Select one):

- 01. Biomedical Signal Processing
- 02. Biomedical Imaging and Image Processing
- 03. Micro/ Nano-bioengineering; Cellular/ Tissue Engineering & Biomaterials
- 04. Computational Systems & Synthetic Biology; Multiscale modeling
- 05. Cardiovascular and Respiratory Systems Engineering
- 06. Neural and Rehabilitation Engineering
- 07. Biomedical Sensors and Wearable Systems
- 08. Biorobotics and Biomechanics
- 09. Therapeutic & Diagnostic Systems and Technologies
- 10. Biomedical & Health Informatics
- 11. Biomedical Engineering Education and Society
- 12. Translational Engineering for Healthcare Innovation and Commercialization

Workshop Synopsis— Max 2000 Characters

Governments and providers are investing in Health Information Technologies (HIT) with little evidence as to their ultimate value. For years, HIT has been implemented with the goals of improving clinical care processes, health care quality, and patient safety.

Evaluations allow to analyze HIT projects and to understand what has worked and what has not. In addition, evaluations help justify investment in health IT projects by demonstrating project impacts. Thus, the question of the day is no longer "Why do we do evaluations", but "How do we do" them.

Proposed 3.5 hours course address core skills and knowledge for HIT evaluation process.

The primary focus of course is the HIT - understanding and evaluation of its value as technology use becomes more widespread in health care. The class is focuses on a variety of outcomes including clinical quality and safety, economic value, health IT adoption, and consumer and provider experience.

The workshop addresses core components of technology assessment:

- Safety: technology itself and action that arises from its use
- Efficacy: measure what it is supposed to under ideal condition
- Effectiveness: measure what it is supposed to under average condition
- Cost (efficiency): assessment presuppose effectiveness and consider the resources needed to provide the technology
- User experience: evaluation of user-computer interaction behaviors, attitudes, and emotions using HIT.

This course built on the author's book Health Information Technology Evaluation Handbook: From Meaningful Use to Meaningful Outcome, 2017, 208 pages, CRC Press, ISBN 978-1-498766470