2nd Workshop on Virtual Clinical Trials

July 8, 2018, 2-5pm, prior to the IWBI 2018 Welcoming Reception

Oak Amphitheater

Virtual clinical trials (VCTs) in medical imaging have been accepted by researchers in academia, industry, and government as an efficient preclinical approach to validate novel imaging system and image processing methods. New research is advancing the role of VCTs, including clinical trial design, co-clinical trials, and use in regulatory approval. This development is made evident by the growing body of published work, numerous conference sessions dedicated to VCTs, and the activities of the AAPM Task Group on Virtual Tools for 3D/4D X-ray Breast Imaging Validation (TG234).

The workshop, sponsored by the AAPM, will include brief presentations reviewing the existing VCT pipelines, a limited number of proffered oral talks, and plenty of time for a focused panel discussion of the validation, standardization, challenging questions, and future of VCTs.

Have you developed or used VCT tools (e.g., breast phantoms, system modeling, model observers) in your research projects? We invite you to submit a 150 word abstract on your latest results, to be reviewed for short proffered talks. Please send the abstract to Predrag (Predrag.Bakic@uphs.upenn.edu) and Steve (Stephen.Glick@fda.hhs.gov). The deadline for submitting the abstracts is Tuesday, June 5. We will announce the selected presentations by June 12.

When planning to attend the VCT workshop, please arrange your travel appropriately. Rooms at the Emory Conference Center hotel are available for Saturday night at the same rate as for the IWBI.

AGENDA

2:00-2:10  P. Bakic & S. Glick: Introduction to the VCT workshop,

2:10-3:30  Invited Talks

R. Zeng: The in silico VICTRE trial at FDA
A.-K. Carton: Development of VCT for breast x-ray imaging at GE Healthcare
A. Maidment: Virtual clinical trials of breast imaging - demonstrating the need for VCT standardization
A. Mackenzie: The use and development of VCT in the OPTIMAM project

3:30-3:40  Short Break

3:40-4:30  Short Talks

T. Mertelmeier: Comparison of concepts for Virtual Clinical Trials
C. Balta: Assessment of mammographic imaging chain using a channelized Hotelling observer and acquired images of an anthropomorphic breast phantom
J. Vignero: Virtual clinical trials to assess the performance of differential phase-contrast mammography: the potential and the challenges
B. Barufaldi: Optimization of next-generation tomosynthesis using virtual clinical trials
O. Diaz: Breast compression framework for simulating MG and DBT in VCTs

4:30-5:00  Panel Discussion validation, standardization, challenging questions, & future of VCTs