DMIP retreat 2007-2008 schedule

April 15, 2008

7:30-8:00 Breakfast and warm-up (Wii)

8:00-8:15 Opening remarks—Katsuyuki (Ken) Taguchi

8:15-9:45 Paper session 1 (90 min: 6 × 15 min)—Martin Stumpf

- A Monte Carlo simulation study of scatter in microCT using photon-counting detector —Xiaolan Wang, Yong Du and Eric C. Frey
- Penalized Maximum Likelihood Method for Photon Counting X-ray Detector with Pulse Pileup —Mengxi Zhang, Eric C. Frey, Jingyan Xu and Katsuyuki Taguchi
- Investigating the Effect of Fourier Rebinning Method on the Quantitative Capability of Small Animal PET with a Monte Carlo Simulation Study—Ching-Ching Yang, Jianhua Yu, Benjamin M.W. Tsui
- Investigation of using fluorescent X-ray to enhance CZT detector resolution for OctoSPECT —Si Chen, Yuchuan Wang, Dirk Meier, Douglas Wagenaar* and Benjamin M.W. Tsui
- Banding Artifact Reduction for Cardiac CT —Zhihui Sun and Katsuyuki Taguchi
- Ablation Monitoring with 3D Elastography: Ex-vivo and In-vivo Studies — Hassan Rivaz, Ioana Fleming, Ulrike Hamper, Gabor Fichtinger, Gregory Hager, Michael Choti, and Emad Boctor

10:30-10:45 Break

10:00-10:30 Overview Session (30 min)—Seng Peng (Greta) Mok

- **Overview** of collaborative research projects in DMIP—Benjamin M. W. Tsui
- **Overview** of research projects in Radiation Oncology—John Wong

10:30-11:45 Paper Session 2 (75 min: 5 × 15 min)—Seng Peng (Greta) Mok

- Ultrasound Elastography - Enabling Technology for Image Guided Laparoscopic Prostatectomy —Ioana Fleming, Hassan Rivaz, , Ulrike Hamper, Li-Ming Su, Tamara Lotan, Gregory Hager, Russ Taylor, Katarzyna Macura and Emad Boctor
- Evidence of Reduced Mechanosensitivity in Postmenopausal Women from the Women's Health Initiative Observation Study who Suffer Fractures—Alia Khaled, Thomas J. Beck, Jane Cauley, Cora B. Lewis, Tamsen Bassford, Scott Going, Zhao Chen
- Investigation of a Quantitative Problem of the Point Source Scanned on the VISTA Small Animal PET System—Jianhua Yu, Chingching Yang, Benjamin Tsui
- Evaluation of the Quantitative SPECT for I-131 by Monte Carlo Simulation —Na Song, Bin He, Yong Du and Eric C. Frey
- Breast Irradiation Planning System Based on Multi-modality Fusion of CT, 3DUS, and Tracked Strain Images—Pezhman Foroughi, Csaba Csoma, Hassan Rivaz, Gabor Fichtinger, Gregory Hager, Richard Zellars, and Emad Boctor

11:45-13:45 Lunch, Games, and Hiking

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13:45-14:45 Proposal Session 1 (60 min: 3 × 10 min + 30 min breakout session)—Susanne Bonekamp

- Ultrasound Guided Refocused SPECT (US-ReSPECT) for In vivo Cancer Imaging —Yuchuan Wang, Emad Boctor, Russell Taylor, and Benjamin Tsui
- Statistical iterative reconstruction methods with region-of-interest resolution compensation for x-ray CT applications—Jingyan Xu, Benjamin M. W. Tsui, Elliot Fishman, Thomas Flohr
- Development of optimized 4D image reconstruction methods for gated MP SPECT —Taek-Soo Lee

14:45-15:00 Break

15:00-16:00 Proposal Session 2 (60 min: 3 × 10 min + 30 min breakout session)—Yuchuan Wang

- Partial Volume Compensation for Cardiac Emission Computed Tomography —Yong Du
- Quantitative Tumor Imaging Methods for Targeted Radionuclide Therapy —Bin He
- Four-dimensional imaging and data analysis toward quantitative evidence-driven interventional tumor oncology—Katsuyuki (Ken) Taguchi, Jean-Francois H. Geschwind, Sabine Mollus, Juergen Weese, and Jan Timmer

16:00-16:15 Break

16:15-17:15 Proposal Session 3 (60 min: 3 × 10 min + 30 min breakout session)—Shiu-Kai (George) Fung

- Task-based Optimization for Clinical Rb-82 Myocardial PET imaging —Jing Tang, Benjamin M. W. Tsui, Arman Rahmim, and Frank Bengel
- Three-class ROC Analysis for Diagnostic Task Perfromance Evaluation —Xin He
- Dual-isotope or photon counting x-ray micro-CT —Eric C. Frey

17:15-17:25 Break and Award judge discussion

17:25-17:35 Award presentation

17:35-17:45 Closing remarks—Benjamin M. W. Tsui

18:00- Game, game, game!!!