

**IPCAI 2013 - 4th International Conference on Information Processing in
Computer-Assisted Interventions**

General Chairs: **Nassir Navab, PhD (D), Pierre Jannin, PhD (F)**

Program Chairs

Stéphane Cotin, PhD (F)

Dean Barratt, PhD (UK)

Gabor Fichtinger, PhD (CDN)

Wednesday, June 26, 2013

8:30 Opening remarks

8:45 Computer Assisted Interventions: Future and applications

Invited Speaker: *T. Salcudean*, Univ. of British Columbia, Vancouver (CDN)

9:45 Coffee break

10:00 Simulation for Computer Assisted Interventions

Session Chairs: *Purang Abolmaesumi, PhD (CDN) & Leo Joskowicz, PhD (IL)*

Development and procedural evaluation of immersive medical simulation environments

P. Wucherer, P. Stefan, S. Weidert, LMU Munich (D), *P. Fallavollita, N. Navab*, Technical Univ. München (D)

Generation of synthetic 4D cardiac CT images for guidance of minimally invasive beating heart interventions

F.P. Li, M. Rajchl, J.A. White, A. Goela, T.M. Peters, The Univ. of Western Ontario, London (CDN)

11:15 Neurosurgical Interventions

Session Chairs: *Purang Abolmaesumi, PhD (CDN) & Leo Joskowicz, PhD (IL)*

Intra-operative identification of the subthalamic nucleus motor zone using goniometers

R. Shamir, R. Eitan, S. Sheffer, O. Marmor-Levin, D. Valsky, S. Moshel, A. Zaidel, H. Bergman, Z. Israel, The Hebrew University Hadassah Medical School, Jerusalem (IL)

Model guided placement of cerebral ventricular catheters

I. Reinertsen, A. Jakola, O. Solheim, F. Lindseth, G. Unsgard, SINTEF, NTNU, Trondheim (N)

12:30 Lunch break

13:00 Ultrasound Guided Interventions

Session Chairs: *Terry M. Peters, PhD (CDN) & David Hawkes, PhD (UK)*

Ultrasound-Based Image Guidance for Robot-Assisted laparoscopic radical prostatectomy: initial in-vivo results

O. Mohareri, The Univ. of British Columbia, Vancouver (CDN), *C. Schneider, T. Adebar, M. Yip, P. Black, C. Nguan, S. Salcudean, S. DiMaio, J. Seroger, D. Bergman*, Intuitive Surgical Inc., (USA)

Augmentation of paramedian 3D ultrasound images of the spine

A. Rasouliyan, R. Rohling, P. Abolmaesumi, The Univ. of British Columbia, Vancouver (CDN)

3D segmentation of curved needles using Doppler ultrasound and vibration

T. Adebar, A. Okamura, Stanford Univ. (USA)

Mobile EM field generator for ultrasound guided navigated needle insertions

K. März, A.M. Franz, B. Stieltjes, J. Iszatt, A. Seitel, B. Radeleff, H.-P. Meinzer, L. Maier-Hein, German Cancer Research Center, Heidelberg (D)

15:00 Coffee break

15:15 Image Guided Interventions

Session Chairs: *Kevin Cleary, PhD (USA) & Ichiro Sakuma, PhD (J)*

First flexible robotic intra-operative nuclear imaging for image-guided surgery

J. Gardiazabal, T. Reichl, A. Okur, T. Lasser, N. Navab, Technical Univ. München (D)

Robust real-time image-guided endoscopy: a new discriminative structural similarity measure for video to volume registration

X. Luo, H. Takabatake, H. Natori, K. Mori, Nagoya Univ. (J)

Declustering n-connected components for segmentation of iodine implants in C-arm fluoroscopy Images

C. Amat di San Filippo, P. Fallavollita, Technical Univ. Munich (D), *G. Fichtinger*, Queen's University, Kingston, (CDN), *W. Morris*, Vancouver Cancer Center, (CDN), *T. Salcudean*, University of British Columbia, (CDN), *E. Dehghan*, Philips Healthcare, (USA)

16:45 Panel Discussion

17:30 End of Session