INVITATION

ISRACAS’2009

The 12th Israeli Symposium on Computer-Aided Surgery, Medical Robotics and Medical Imaging
Thursday May 7, 2009
Joan and Jaime Constantiner Auditorium
Tel-Aviv Sourasky Medical Center (Ichilov)

Endorsed by
International Society of Computer Aided Surgery
Israel Society for Medical and Biological Engineering
Israel Life Science Industry

Sponsored by
Tel Aviv Sourasky Medical Center
Technion - Israel Institute of Technology
Minerva Leibniz Center for Research in Computer Science
The Hebrew University of Jerusalem
NDI - Northern Digital Inc

Goal
The goal of the Symposium is to convene in Israel clinicians, scientists, and engineers actively interested in medical imaging, computer science, and robotics, and their application to the planning, monitoring, and execution of medical surgeries. The symposium is the sequel of eleven ISRACAS symposia, held in May since 1998 in Jerusalem, Haifa, and Tel-Aviv. Each was attended by over 150 participants including clinicians, industry and engineering academia. The one-day events included invited speakers, 17 oral presentations of refereed papers, industrial exhibits and system demonstrations.

Symposium format
This year we will continue with the one-day symposium consisting of two invited talks by internationally recognized experts and oral presentations of original peer-reviewed papers.

Symposium Organizers
D. Ben Bashat PhD Brain Imaging Center Tel Aviv Sourasky Medical Center
L. Joskowicz PhD The Hebrew University of Jerusalem
M. Shoham DSc Technion, Israel Institute of Technology

Local Program Committee
D. Adam PhD Technion
M. Berman PhD Biomedicom Ltd.
R. Beyar MD DSc Rambam MC and Technion
M. Blumenfeld PhD MediTech Advisors
S. Elay PhD Tel-Aviv University
M. Gorod MD Hadassah Hospital
H. Greenspan PhD Tel-Aviv University
D. Hadomi MSc Mazor Surgical Technologies Ltd
M. Liebergall MD Hadassah Hospital
Y. Shoshan MD Hadassah Hospital
D. Moser DSc IntSightec
M. Zaaroor MD Rambam Medical Center
A. Wolf PhD Technion

International Advisory Board
N. Ayache PhD INRIA, Sophia-Antipolis, France
A. Bajer MD Marbella, Spain
G. Barnett MD Cleveland Clinic Foundation, USA
R. Bucholz MD St. Louis U., USA
E. Coste-Maniere PhD Ahava ITech, France
A. Colchester PhD U. of Kent, UK
P. Dario PhD Scuola Superiore Sant’Anna, Italy
D. Davies PhD Imperial College, UK
S. Delp PhD Stanford U., USA
R. Ellis PhD Queen’s University, Canada
K. Hohne PhD Hamburg U., Germany
B. Jaramaz PhD Western Pennsylvania Hospital, Pittsburgh USA
R. Kikinis MD Harvard MedicalTel-Avival School, USA
H. Lemke PhD Technische Universität, Berlin, Germany
N. Navab PhD Technical University of Munich, Germany
L. Nolte PhD U. of Bern, Switzerland
R. Phillips PhD U. of Hull, UK
R. Shahidi PhD Stanford U., USA
D. Stulberg MD Northwestern U., USA
R.H. Taylor PhD Johns Hopkins U., USA
M. Vannier MD University of Iowa, USA

Registration
Participants are required to register and pay a nominal fee which entitles them to 1 copy of the Symposium proceedings on CD, lunch, and coffee break refreshments.

FEE - Early registration by May 1, 2009
IS 300 (US $80), IS 150 (US $40) for students.

FEE - On-site registration
IS 350 (US $100), IS 200 (US $50) for students.

For early registration until May 1, 2009:
Please e-mail the following information:
First Name, Last Name, Title, Company/Institute, E-mail, Phone
To: mestern@technion.ac.il
Or by fax to: 04-8228931
Then, please send a check payable to Technion:
Lea Stern Mechanical Engineering, Technion, Haifa, 32000 ISRAEL

For further information, please contact us at:
Prof. Moshe Shoham
Shoham@technion.ac.il
Phone: +972-4-8293264/2102
Prof. Leo Joskowicz
Josko@cs.huji.ac.il
Phone: +972-2-8586299

Web site:
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Type</th>
<th>Title</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Registration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>Welcome and Introductory Remarks</td>
<td>M. Shoham and L. Joskowicz</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Papers Session 1: Orthopedics</td>
<td>Quantitative comparative patient-specific evaluation of femoral fracture fixations: a clinical study</td>
<td>Eran Peleg, Leo Jokowicz, Amit Gefen, Meir Liebergall, Rami Mosheiff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The Hebrew Univ. of Jerusalem, ISRAEL.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hadassah University Medical Center, Jerusalem, ISRAEL.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tel Aviv University, Tel Aviv, ISRAEL.</td>
</tr>
<tr>
<td>09:15</td>
<td></td>
<td></td>
<td>Mechanical analysis of micro-scaffold-based implants for bone tissue engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Technion - Israel Institute of Technology, Haifa, ISRAEL.</td>
</tr>
<tr>
<td>09:30</td>
<td></td>
<td></td>
<td>Patellofemoral joint reconstruction from CT/MRI images</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Technion - Israel Institute of Technology, Haifa, ISRAEL.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Padraig P. O'Loughlin, Dimitrios Koulalis, Christopher Plaskos, Daniel Kendoff, Andrew D. Pearle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Praxim Inc. New York, NY, USA</td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td></td>
<td>Robotic uni-compartmental total knee replacement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hospital for Special Surgery, New York, USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mako Surgical Corporation, Florida, USA</td>
</tr>
<tr>
<td>10:15</td>
<td></td>
<td></td>
<td>The role of hip motion simulations to improve navigation systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Talahasee, Florida, USA</td>
</tr>
<tr>
<td>10:45</td>
<td></td>
<td></td>
<td>Haptic control system for a robotic medical system with applications to surface acquisition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Technion - Institute of Technology, Haifa, ISRAEL.</td>
</tr>
<tr>
<td>11:15</td>
<td>Papers Session 2: Maxillofacial, Spine, Neurosurgery</td>
<td>Mandibular reconstruction using 3D-printing modeling technology</td>
<td>Avi Cohen, Jawad Abu-Tair, Adir Cohen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Objet Geometries Ltd., ISRAEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hadassah Hospital Jerusalem, ISRAEL.</td>
</tr>
<tr>
<td>11:30</td>
<td></td>
<td></td>
<td>Miniature robotic spine surgery - a surgical toy or a break-through</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hadassah Hebrew University Medical Center, Jerusalem, ISRAEL</td>
</tr>
<tr>
<td>11:45</td>
<td></td>
<td></td>
<td>ROBOCAST: development of robotic system for neurosurgery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Technion - Israel Institute of Technology, Haifa, ISRAEL.</td>
</tr>
<tr>
<td>12:00</td>
<td></td>
<td></td>
<td>Worst-case analysis of target localization errors in fiducial-based rigid body registration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The Hebrew University, Jerusalem, ISRAEL</td>
</tr>
</tbody>
</table>