

OPAI Workshop - June 26 - 27, 2009

1st International Workshop on Dynamic Modeling of Oral, Pharyngeal and Laryngeal Complex for Biomedical Applications

Thursday June 25th, 2009

Opening Cocktail

5:00 - 7pm
Welcome Reception (wine and cheese)
Nobel Biocare Center 2151 Wesbrook Mall, UBC

Friday June 26th, 2009

Plenary Sessions

9:00 - 5:00

Forestry Science Building, 1001 - 2424 Main Mall, UBC

8:00-9:00	Breakfast and Registration	
9:00-10:00	Greetings and Introduction Each participant introduces themselves	
10:00-11:00	Session 1: Obstructive Sleep Apnea Plus 10:00 - 10:15 Najib Ayas 10:15 - 10:30 Richard Schwab 10:30 - 10:45 John Fleetham 10:45 - 11:00 Jason Amatoury	Epidemiology and Health Consequences of Untreated Obstructive Sleep Apnea Pathogenesis of Obstructive Sleep Apnea Treatments for OSA The Effect of Tracheal Displacement on Peri-pharyngeal Tissue Pressures - Preliminary Results from Animal and Modeling Studies
11:00 - 12:00	Plenary 1 Discussion Session	
12:00 - 1:30	Lunch	
1:30 - 2:30	Session 2: Medical imaging and sensing of the OPAL complex I 1:30 - 1:45 Maureen Stone 1:45 - 2:00 Ghassan Hamarneh 2:00 - 2:15 Tim Bressman 2:15 - 2:30 Tricia Pang	A Preliminary Application of Principal Components Analysis to Tongue Motion Patterns Airway Segmentation using Crawlers and Optimal Paths The tongue: Two-dimensional views of a three-dimensional structure Progress towards Semi-automated Segmentation of Soft-tissue structure in the OPAL complex
2:30 - 3:00	Coffee Break	
3:00 - 4:15	Session 3: Mastication and Swallowing Behaviours 3:00 - 3:15 Jianwu Dang 3:15 - 3:30 Chris Peck 3:00 - 3:45 Art Miller 3:45 - 4:00 Alan Hannam/Ian Stavness 4:00 - 4:15 Ian Stavness	Modeling of Swallowing Mechanism based on MRI Observation Jaw motor plasticity in health and disease Concepts on Pharyngeal Function and Scar Tissue Predicting Muscle Patterns for Hemimandibulectomy Models Hyolaryngeal Biomechanics Modeling with Intramuscular Stimulation Data
4:15 - 5:00	Plenary 3 Discussion Session	
4:15 - 5:30	Artisynth Tutorial	
6:30-8:00	Dinner Location TBD	

Saturday June 27th, 2009

8:00-9:00	Breakfast	
9:00-10:00	Plenary 4: Medical imaging and sensing of the OPAL complex II 9:00 - 9:15 Ryan Swain and Jana Rieger 9:15 - 9:30 Florian Voigt 9:30 - 9:45 Chao-Min Wu 9:45 - 10:00 Pierre Boulanger	Integrating Structural and Functional Patient Data with the ArtiSynth Platform: A Technical Report Extraction of tongue shapes from MR data Construction of a MRI-based 3D atlas of the Human Tongue for Biomechanical Tongue Modeling. Three Dimensional Tracking of Orthodontic Patients Using CBCT and Photogrammetry
9:45 - 10:30	Plenary 4 Discussion Session + coffee	
10:30 - 11:45	Plenary 5: Speech and Heads 10:30 - 10:45 Masaaki Honda 10:45 - 11:00 Kiyoshi Honda 11:00 - 11:15 Kuratate Takaaki 11:15 - 11:30 Hani Yehia	Production of Various Voice Qualities Using Mechanical Vocal Code Model Visualization of the hypopharyngeal cavities and vocal-tract acoustic modeling Using 3D lip surface and MRI data to help build a speaker-specific Human Upper Airway 3D Image Registration for Patient Specific Model Generation
11:30 - 12:00	Plenary 5 Discussion Session	
12:00 - 1:30	Lunch	
1:30 - 2:15	Plenary 6: Faces & Heads 1:30 - 1:45 Mohammad Ali Nasari 1:45 - 2:00 Marek Bucki 2:00 - 2:15 Pascal Perrier 2:15 - 2:30 Eric Vatikiotis-Bateson	Biomechanical face model Finite Element Patient Specific Face Mesh Generation Featuring Muscles Insertion Towards modeling the jaw with a soft body approach Spatial and temporal coupling between respiration-dependent systems
2:30 - 3:15	Plenary 6 Discussion Session + Coffee break	
3:15 - 4:00	Plenary 7: Fluids in the OPAL complex 3:15 - 3:30 Peter Anderson 3:30 - 3:45 Mark Nicosia 3:45 - 4:00 Lynne Bilston	Modeling fluid flow in the airway using CFD with a focus on fricative acoustics Biomechanical Analyses of Oropharyngeal Swallowing Intramural mechanics of the human tongue during normal inspiration and inspiration with resistive loading
4:00 - 5:00	Plenary 7 Discussion Session	
6:00-???	BBQ at Fernanda's House - directions given during the workshop.	