

## ISCM - 27

### יום העיון הישראלי העשרים ושבעה במכניקה חישובית The 27th Israel Symposium on Computational Mechanics

#### בחסות:

אוניברסיטת תל-אביב  
משרד הרקטור  
פקולטה להנדסה ע"ש איבי ואלדר פליישמן  
בית הספר להנדסה מכנית

מועד: יום חמישי, 15 באוקטובר, 2009

מיקום: אולם רוזנבלאט  
בניין להנדסת תוכנה, פקולטה להנדסה, אוניברסיטת תל-אביב

### הרשמה

דמי הרשמה ליום העיון:

חברי אישח"מ בשנת 2009-חינם  
לא חברים-70 ש"ח

דמי חבר באישח"מ:

120 ש"ח לשנה

כולל ימי עיון של אישח"מ, חברות באיגוד הבין-לאומי למכניקה חישובית IACM ובאיגוד האירופאי ECCOMAS, מנוי לעלון IACM, והנחות בארועים מיוחדים של אישח"מ. (הערה: תשלום דמי-חבר במסגרת יום-העיון כולל חברות לשנת 2010, כלומר מכסה השתתפות ב-3 ימי עיון!)

תעריפים מוזלים (לסטודנטים לתואר ראשון ולחיילים בשרות חובה)

דמי חבר לשנה – 60 ש"ח

דמי הרשמה ליום עיון – 30 ש"ח

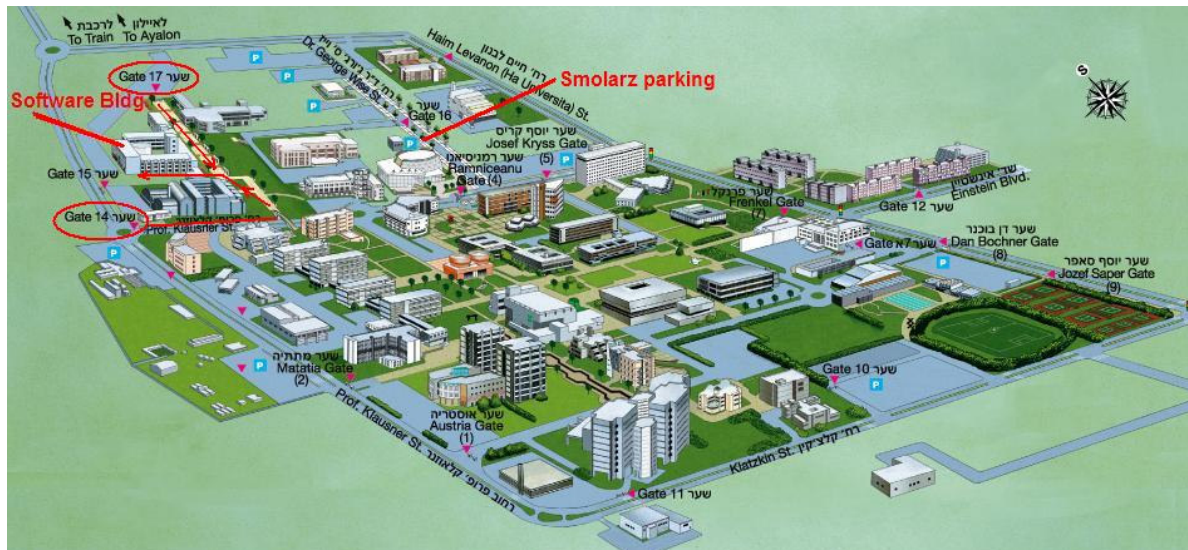
#### מארגנים מקומיים ונציגי אישח"מ

דר' סלבה קרילוב  
בית הספר להנדסה מכנית  
אוניברסיטת תל-אביב  
טלפון: 03 640 59 30  
פקס: 03 640 76 17

דואר אלקטרוני: vadis@eng.tau.ac.il

פרופ' ראמי חג'-עלי  
בית הספר להנדסה מכנית  
אוניברסיטת תל-אביב  
טלפון: 03 640 82 07  
פקס: 03 640 76 17

דואר אלקטרוני: rami98@eng.tau.ac.il



## Location

The conference will take place in the **Rosenblatt Auditorium**, located in the new **Wolfson Computer and Software Engineering Building** at Tel Aviv University. The location of the building, which is adjacent to the "old" Wolfson Electrical Engineering Laboratories building, may be found in the TAU map at <http://www2.tau.ac.il/map/unimapple1.asp>. Directions to Tel Aviv University may be found by pressing "access".

## Directions

**General:** The Engineering Quad is best reached from **Gate 14** or **Gate 17** (Social Work).

**By Car via Ayalon:** exit at Tel Aviv University exit, and follow directions to TAU up the hill. Drive straight keeping to the right. After passing a first traffic circle, there is an entrance to a first parking lot on the left, ca. 200 m. after the circle. The parking lot is adjacent to **Gate 17**. The Engineering buildings are immediately on the right as you enter through **Gate 17**. Those who "miss" this parking lot may continue to a second traffic circle, which sits near **Gate 14**. Alternatively, it is possible to park in the George Wise East parking lot (Smolarz lot) adjacent to the Smolarz auditorium. Park in the adjacent public parking facility and walk to the Engineering Quad.

**By Train:** exit at the Tel Aviv University station and either **walk** via the tunnel (follow directions to TAU) and up the hill (ca. 600 m) to **Gate 17** or **14**, or take the **bus** or **taxi** to **Gate 14**.

**Please note that the University does not allow car entrance to conference participants.**

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#### Program

- 9:00**      **Registration.**
- 9:20**      **Opening.**  
Prof. Ehud Heyman — Dean of Engineering, Tel Aviv University
- 9:30-10:30**    **Keynote lecture.**  
*Bifurcations and instabilities in particulate flows: a computational investigation*  
Roland Glowinski,  
Cullen Professor of Mathematics and Mechanical Engineering,  
University of Houston, TX
- 10:30**      **Coffee break.**
- 10:50-12:30**    **Morning session.** Chairman: S. Krylov, Tel Aviv University
- 10:50-11:15    *Analysis of stresses and wrinkles in a parachute skirt model using "wrinkle fields"*  
Y. Ofir, D. Givoli and A. Libai,  
Department of Aerospace Engineering, Technion – Israel Institute of Technology,  
Haifa, Israel
- 11:15-11:40    *Can dynamic cracks attain Rayleigh free surface waves speed limit?*  
F. Atrash and D. Sherman,  
Department of Materials Engineering, Technion – Israel Institute of Technology,  
Haifa, Israel
- 11:40-12:05    *Element integration along its boundaries with applications to enriched elements*  
C. Sussmann, H. Waisman and G. Dasgupta,  
Department of Civil Engineering & Engineering Mechanics,  
Columbia University, NY
- 12:05-12:30    *Elasticity with energy limiters for modeling dynamic failure propagation*  
P. Trapper and K.Y. Volokh,  
Faculty of Civil and Environmental Engineering,  
Technion – Israel Institute of Technology, Haifa, Israel



**12:30-13:30 Lunch break.** IACMM council meeting.

**13:30-14:00 General Assembly of the association (including change in IACMM bylaws).**

**14:00-15:40 Afternoon session.** Chairman: R. Haj-Ali, Tel Aviv University

14:00-14:25 *High-order schemes for the streamfunction formulation of Navier-Stokes equations in two and three dimensions*

D. Fishelov<sup>1</sup>, M. Ben-Artzi<sup>2</sup> and J.-P. Croisille<sup>3</sup>,

<sup>1</sup>Afeka - Tel-Aviv Academic College of Engineering, Tel Aviv, Israel

<sup>2</sup>Institute of Mathematics, The Hebrew University, Jerusalem,

<sup>3</sup>Department of Mathematics, LMAM, University of Paul Verlaine-Metz, Metz, France

14:25-14:50 *Ex vivo biomechanics of human fetal membrane*

M. Jabareen<sup>1</sup>, M. Hollenstein<sup>2</sup>, J. Egger<sup>2</sup>, E. Mazza<sup>2</sup>, A. Mallik<sup>3</sup>, C. Haller<sup>3</sup> and A. Zisch<sup>3</sup>,

<sup>1</sup>A Faculty of Civil and Environmental Engineering,

*Technion-Israel Institute of Technology*, Haifa, Israel

<sup>2</sup>Mechanical Engineering Department, Swiss Federal Institute of Technology, Zurich, Switzerland,

<sup>3</sup>Obstetrics and Gynecology Department, University Hospital Zurich, Zurich, Switzerland

14:50-15:15 *Energy-minimizing openings around a circular hole in an elastic plate*

S. Vigdergauz,

Research and Development Division, The Israel Electric Corporation Ltd., Haifa, Israel

15:15-15:40 *A generation algorithm of a fiber reinforced concrete unit cell*

E. Gal, A. Ganz, L. Hadad and R. Kryvoruk,

Department of Structural engineering, Ben-Gurion University, Beer-Sheva, Israel

**15:40 Coffee break.**

**16:00-17:00 Keynote lecture.**

*Some remedies for some intractable engineering optimization problems*

A. Ben-Tal, The William Davidson Faculty of Industrial Engineering and Management, Technion – Israel Institute of Technology

**17:00 Closing.**