
GSC 2015 - The Annual Workshop of Graduate Students in Systems & Control
Under the auspice of IAAC – the Israeli Association for Automatic Control

Sponsored by



Bernard M. Gordon Center for Systems Engineering at the Technion

Monday, May 4, 2015

Department of Aerospace Engineering, Room 235 (Auditorium)
Technion – Israel Institute of Technology

CALL FOR PARTICIPATION

Dear Friends and Colleagues,

You are cordially invited to attend the annual workshop of graduate students in Systems and Control (GSC 2015). The event will take place on Monday, May 4, 2015. We are pleased to host it, this time around, at the Technion, in the Department of Aerospace Engineering, Room 235 (Auditorium).

The workshop program is attached below, along with a map of the Technion. A book of abstracts of the talks is available on the IAAC site at <http://iaac.technion.ac.il/workshops/2015/GSC15abstracts.pdf>

As always, this yearly event provides a panorama of the research that is carried out in these areas in the various research institutions and departments in Israel. Moreover, the meeting

- Provides a unique opportunity for graduate students to present their work before a professional audience, and to observe the work of their peers.
- Allows an informal meeting between faculty, industry, and students.
- Provides an opportunity to industry people, as prospective employers, to get acquainted with the best students in systems and control (and vice versa).

The success of the event obviously depends on the participation of senior people from academia and industry in addition, of course, to the graduate students themselves. I hope that you will be able to join us on May 4. The participation in the workshop is free and includes lunch and two coffee breaks. To properly prepare for the event, we ask you to register with Mira Aran, Tel. 04-829-4780, mira@ee.technion.ac.il, who can be contacted in all related matter.

This invitation should be used for entry into the Technion. Please print it and present it at the gate.

הזמנה זו מהווה אישור כניסה לקמפוס הטכניון ביום האירוע, 4 למאי, 2015.

With best wishes,

Moshe Idan
GSC 2015 organizer
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GSC 2015 - PROGRAM

- 8:00 **Gathering and Light Refreshments**
- 8:30 **Opening Remarks**
- 8:40 Implementation of Minimal Feedback CPG Controller for Dynamic Walking Using Series Elastic Actuation
Israel Schallheim, ME, Technion, M.Sc. supervisor: M. Zacksenhouse
- 9:00 Vehicle Platoon Formation Using Interpolating Control
Alon Tuchner, Autonomous Systems & Robotics, Technion, M.Sc. supervisor: J. Haddad
- 9:20 Vision-Based Formation Control of Autonomous Robots Using Multi-View Geometry
Eran Nissim, AE, Technion, M.Sc. supervisors: V. Indelman and E. Rivlin
- 9:40 Theoretical and Experimental Investigation of the Twistcar Vehicle's Dynamics
Ofir Chakon, ME, Technion, M.Sc. supervisor: Y. Or
- 10:00 Distance-Based Formation Tracking Control
Oshri Rozenheck, Autonomous Systems, Technion, M.Sc. supervisor: D. Zelazo
- 10:20 Time Optimal Trajectory Planning with Feedforward and Friction Compensation
Ari Berger, CEE, Technion, M.Sc. supervisor: P-O. Gutman
- 10:40 **Coffee Break**
- 11:00 Analytical Observability Analysis of Vehicle Constraints and Vision Aided Navigation
Yaacov Rothman, CEE, Technion, M.Sc. supervisors: S. Filin and I. Klein
- 11:20 The Ribosome Flow Model on a Ring
Alon Raveh, EE, TAU, M.Sc. supervisor: M. Margaliot
- 11:40 All in One-Fractional Order Impedance Matching, Delay Compensation and Repetitive Control of the Damped Wave Equation
Lea Beilkin, ME, Technion, Ph.D. supervisor: Y. Halevi
- 12:00 Minimizing the Maximal Characteristic Frequency of a Linear Chain
Yoram Zarai, EE, TAU, Ph.D. supervisor: M. Margaliot
- 12:20 A Time-Delay Approach for Decentralized Networked Control of Systems with Local Networks
Dror Freirich, EE, TAU, M.Sc. supervisor: E. Fridman
- 12:40 **Lunch**
- 14:00 New Stability and Exact Observability Conditions for Semilinear Multidimensional Wave Equations
Maria Terushkin, EE, TAU, M.Sc. supervisor: E. Fridman
- 14:20 Wave-Number Pair Efficient Control of Plane Poiseuille Flow Transition
Aaron Friedman, AE, Technion, Ph.D. supervisors: Y. Oshman and Y. Cohen
- 14:40 Symmetries and Gaits for Purcell's Three-Link Microswimmer Model
Emiliya Gutman, ME, Technion, Ph.D. supervisor: Y. Or
- 15:00 Modeling and Control of a Hexacopter UAV with a Rotating Seesaw
Dolev Yecheskel, ME, BGU, M.Sc. supervisor: S. Arogeti
- 15:20 A Dynamic Model of Vehicle During Four-Wheel and Two-Wheel Roll Over, with Steering and Braking Anti-Roll Over Actuation
Arie Shraiber, CEE, Technion, Ph.D. supervisors: P-O. Gutman and T. Shima
- 15:40 **Coffee Break**
- 16:00 Comparison of Nonlinear State Estimators: Methodology and Application
Oron Ben Aloul, EE, Technion, M.Sc. supervisors: N. Shimkin and I. Rusnak
- 16:20 Sensory Adaptation for Control based on Point-Process Observations using Gaussian Approximations
Yuval Harel, EE, Technion, M.Sc. supervisor: R. Meir
- 16:40 Probabilistic Data Association in the Presence of Unobserved Areas
Matan Yeger, AE, Technion, M.Sc. supervisor: Y. Oshman
- 17:00 Energy-Optimal Precise Wafer Stage Positioning: Equivalence with Minimal Time Optimality
Shai Moshenberg, CEE, Technion, M.Sc. supervisors: B. Fishbein, P-O. Gutman and I. Ioslovich
- 17:20 Region of Attraction Estimation for Periodically Actuated Compass Biped
Eric Sidorov, ME, Technion, M.Sc. supervisor: M. Zacksenhouse
- 17:40 Real-Time Power Sharing with Low-Rank Coordination
Ido Avraham, EE, Technion, M.Sc. supervisors: Y. Levron and L. Mirkin
- 18:00 **End**



HAIFA

TECHNION CITY



LEGE ND

	Roads
	PEDESTRIAN
	PARKS
	BUILDINGS
	STAIRS
	CAMPUS BOUNDARY
	ALTITUDE
	BANK
	FACILITIES & INSTITUTES
	RESIDENCES
	CAFETERIA
	COFFEE SHOP
	BUS STOP
	POST OFFICE
	MARKET
	BOOK STORE
	HAIRDRESSER
	VISITORS CENTER
	GATE
	RESTRICTED PARKING
	VISITORS PARKING
	CLINIC

Academic Units

Aerospace Engineering	E6, 310	Education in Technology & Science	G4, 705
Architecture & Town Planning	E3, 830	Electrical Engineering	F4/5, 585
Biology	G3, 710	Humanities & Arts	F3, 350
Biomedical Engineering	G5, 510	Industrial Engineering	F6, 405
Chemical Engineering	G3, 730	Materials Engineering	F6S, 590
Chemistry	FG3, 720	Mathematics	E3, 840
Civil & Environmental Engineering	E3, 810	Mechanical Engineering	E5/6, 370
Computer Science	E4, 250	Medicine	F4, 240
Continuing Education & External Studies	O7, 380	Pre-University Education (Mechina)	GF15, 690



Off-Campus Buildings

- A** KESSEL
- B** HISTORIC TECHNION BUILDING
- C** MAYAM HIGH TECH PARK
- H** MEDICINE
- H** NATIONAL MUSEUM OF SCIENCE, TECHNOLOGY & SPACE
- H** TECHNION ENTREPRENEURIAL INCUBATOR COMPANY

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