SMART CITIES – summer course
July 22, 2019 – August 8, 2019
4 Credits (minimum 52 academic hours)
Instructor: Dr. Ronit Purian

Urbanization is one of the great challenges and opportunities of this century. The last decades have witnessed unprecedented population growth with the implication that today, for the first time in human history, more than half of the world population lives in cities. Furthermore, the last decades have also witnessed unprecedented development of big data and data mining tools, IoT (Internet of Things), and AI (artificial intelligence). These have the potential to revolutionize the dynamics and structure of cities and the lives of those who inhabit them. However, although the smartification of cities implies an integration of the real and virtual worlds, data integration is still scarce.

Project outline
Develop a data-based "planning process" or "planning approach" that takes into account the various aspects of urban life (traffic, accessibility to green spaces, waste management, urban food supply chain, micro-climatic conditions and vegetation, and other ecological and socioeconomic aspects):

- Group projects (teams of 3-5 people) will be focused on a specific area in Tel Aviv.
- Final papers (personal) will identify the generic aspects, shared by Tel Aviv (as presented in your group project) and by a city you know well (in China / Brazil / USA / Germany, etc.); as well as the unique aspects that characterize different places.

In your work, note that you:

1. Identify the potential impact of technological mechanisms on social and environmental issues.
2. Propose creative solutions to threats and opportunities.
3. Understand the physical aspects of digital identities – in the urban experience, in nature, in movement and in the human encounter in space.
4. Plan partnerships between the different sectors in society (public, private, civil society organizations, NGOs etc.) in areas where the cooperation is relatively new, and after acquiring the relevant knowledge.
5. Think critically and move into practice: Responsibility in technology management and data integration.
6. Promote social and environmental values, beyond the profit line (avoid green-wash).
7. Design your own life, not just the system / society, by observing reality.
Participants (in alphabetical order)

**Academy**

Dr. Sigal Portnoy  
Prof. Oded Potchter  
Dr. Tal Raviv  
Dr. Orli Ronen  
Gil Barnea  
Golan Ben-Dor  
Jonathan Dortheimer  
Nir Fulman  
Moshe Mandelmilch  
Noa Mandelmilch

**Government**

Adv. Sharon Shemesh Azarya – Israeli Privacy Protection Authority

**Industry**

Avi Aflalo – Simplex-Mapping  
Noga Kap – i3 Equity Partners  
Avi Nachmias – Axilion Smart Mobility  
Eyal Shmueli – Simgo Mobile  
Yael Shmueli – General Motors  
Michelle Specktor – IPgallery

**Tel Aviv municipality – Computing Division**

4 Antokolsky Street, Tel Aviv  
Liora Shechter, CIO  
Itzhak Ben David, Deputy CIO  
Sigal Sardes, Shira Rosio – Mobile app  
Batya Meiri – DigiTel, TLV smart card  
Hadas Meir – Open data  
Shani Bachar – BI  
Liron Ben-Eliahu – DigiDog, DigiDug, etc.

**Engineering Division**

5 Philon Street, Tel Aviv  
Avi Wiesman – Traffic control and traffic lights operation center  
Kasem Slalha – Planning Department

David Aharoni, Avi David – Security Control Center and Municipal Situation Room
Important dates (long days!):

Field experiments:
July 24-28 (Wed, Thu, Sun): Traffic – AV;
August 1-2 (Thu-Fri): Climate – urban heat island.

Visits:
July 29 (Mon): Hiriya Recycling Park – Center for Environmental Education
August 5 (Mon): Tel Aviv municipality – three locations: https://goo.gl/maps/PijuDshv7GzQKoBZ6
  ▪ Computing Division, 4 Antokolsky Street
  ▪ Engineering Division, 5 Philon Street
  ▪ Security Center, 69 Ibn Gabirol Street

Classes take place at:
**Dan David** building, room 207 https://goo.gl/maps/fWEWUYHXAzteEjvi9
**Yad Avner** building, room 115 & lab 232 (August 4-8) https://goo.gl/maps/hawn9fHbtDPKDYa19

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