

Dec 2019

CURRICULUM VITAE

Full name: Idan Porat
Identity No.: 029263290
Place of birth: Haifa, Israel
Address: Ha-Rimonim st 25, Kiryat Tivon
Telephone: office 04.8294017 mobile 054.2295577
E-mail address: ldanpo@technion.ac.il

1. EDUCATION

- 2008, Ph.D** The urban and regional planning program at the Technion, IIT, Supervision of Prof. Maxim Shoshany, Prof. Amnon Frenkel
- 2004, M.Sc** The urban and regional planning program at the Technion, IIT, Supervision of Prof. Danny Czamanski, Prof. Lucien Benguigui
- 2001, B.A** Environmental Sciences, Technion IIT,

2. APPOINTMENTS

2.1 Academic

Since 2019: Senior Lecturer, Faculty Member, School of Education, Head of the Specialization of Environmental Education, Ono Academic College.

Since 2019: Senior Lecturer, Faculty Member, School of Education, The College of Management Academic Studies, Member of the Research Committee

Since 2017: Adjunct Senior Lecturer, Faculty of Architecture and Town Planning, Technion, IIT

Since 2012: Senior Researcher, Center for Urban and Regional Studies, Technion, IIT

2017-2019: Full Time Senior Lecturer, Faculty Member, School of Education, Head of the Specialization of Environmental Education, The College for Academic Studies (Or Yehuda)

2013-2017: Full Time Lecturer, Faculty Member, School of Education, The College for Academic Studies (Or Yehuda). Manager of the Specialization of Environmental Education

2010 - 2012: Post-Doc Position, Environmental Simulation Laboratory, Geography Department, Tel Aviv University (Host: Prof. Yuval Portugali).

2009-2017: Adjunct Lecturer, Faculty of Architecture and Town Planning, Technion, IIT

2003-2012: Researcher, Center for Urban and Regional Studies, Technion, IIT

2003 - 2009: Adjunct Teacher, Faculty of Architecture and Town Planning, Technion, IIT

3. TEACHING

3.1 Courses Designed

- In 2020-The city and environmental quality, Graduate Course in MBA (Real-estate) Program (Bar Ilan)
- 2018- Smart Cities, Graduate Course in MBA Program (The College for Academic Studies).
- 2018- Education, Environment, Place, Graduate Course in Environmental Education (The College for Academic Studies).
- Since 2018- Advance Environmental Thinking, Graduate Course in Environmental Education (The College for Academic Studies).
- Since 2018-Introduction to environmental thinking, Undergraduate course in Education (The College for Academic Studies).
- 2014- 2017- Environmental and Community Planning, Graduate Course in Environmental Education (The College for Academic Studies). An innovative course on the relationship between the urban environment and communities
- 2014-2017-Water, Energy and Ecosystem Services, Graduate Course in Environmental Education (The College for Academic Studies). An innovative course on the ecosystem services in our neighborhoods
- Since 2015- Research Seminar, Graduate Course in Environmental Education (The College for Academic Studies). Supervision of 47 students in research seminar.

3.2 Courses taught

- Since 2012-Studio of Metropolitan Planning, Graduate Course in Town Planning (Technion, IIT).
- 2006- 2011- Studio of Town Planning, Graduate Course in Town Planning (Technion, IIT).
- Introduction of computerized mapping and GIS: Undergraduate Course in Geo-Information Engineering (Technion, IIT).

4. Research Interest

- GIS and Spatial Temporal analysis
- Strategic regional planning with Socio-Spatial Capital Assets
- Building morphometric analysis as a tool for urban renewal
- The city and environmental quality
- Analysis of population Migration with Social Network Analysis and Mathematical Modeling

4.1 Sponsored Research

2018: Israel 100, **Senior Researcher**, a masterplan of Israel for the year 2048. (PI. Visiting Professor Shamay Assif), \$1,500,000, fund by the Yad Hanadiv

A joint venture of seven research universities regarding the spatial policy and planning policy issues for the state of Israel in its 100th anniversaries.

2015: Ecopotential, **Senior Researcher**, (P.I. Dr. Daniel Orenstein) \$50,000, fund by the EU H2020 program

Our part in this research explores landscape preferences of the public in the desert area of Israel.

2015: The Impact of the new Emek railway on the city of Beit Shean and the regional council of Emek HaMaayanot, **Senior Researcher**, (P.I. Prof. Amnon Frenkel) \$25,000, Funded by Bridge to the Future, KAMA, Oranim College of Education.

Assessment of the direct and indirect impacts of the new railway connection between Haifa and Beit Shean with Spatial Capital Model.

2015: "The New Israeli Project", **Research Leader**, (P.I. Visiting Prof. Shamay Assif) \$30,000, funded by the Jewish National Fund

Spatial assessment of the degraded social mass post WWII housing inventory and its impact on urban renewal processes.

2014: Residential Embedded Cost, **Research Leader**, (P.I. Visiting Prof. Shamay Assif) \$15,000, funded by the Jewish National Fund

This research addresses the economic costs of residential development for the local municipality and develop a residential integrated cost model.

2014: Accessibility, variety and choice – the spatial pattern of variety of urban amenities, **Research Leader**, (Visiting Prof. Shamay Assif) \$10,000, funded by the Jewish National Fund.

This research develops indicators for measuring the levels of accessibility to variety of amenities: urban CBDs, employment areas, hospitals, and high education institutions.

2013-2016: Israel Marine Spatial Planning, **Senior Researcher**, (P.I. Visiting Prof Shamay Assif) 1,600,000\$, funded by the Yad Hanadiv.

This project initiate a spatial plan and a policy plan for the Israeli territorial waters and the Exclusive Economic Zone in the Mediterranean Sea. My appointment in the project was Head of the GIS and Mapping aspects of the project.

2010-2013: Networked Cities, **Post-Doc Research**, Complex Networks Approach for Urban Dynamics, (P.I. Prof. Juval Portugali), \$100,000, Funded by the ISF research grant.

This research aims to developing urban simulation model representing the evolution and dynamics of systems of cities.

Since 2011: Spatial capital integrative model for local strategic planning, **Senior Researcher**, (P.I. Prof. Amnon Frenkel) \$200,000, funded by the Bridge to the Future, KAMA , Oranim College of Education.

This research develops a multi-criteria analysis of local municipalities based on benchmark analysis and spatial capital theory for providing a place based strategic planning to help local and regional municipalities in their strategic thinking processes.

2011-2012: Master Plan for Spatial Distribution of Fire Stations, **Research Leader**, (P.I. Prof. Maxim Shoshany) \$120,000, funded by the National Firefighting Commission.

This Research project analyzed alternatives for National Fire Fighting station's deployment, and their manpower and equipment implications.

2006- 2009: Dynamic Data Mining and Knowledge Discovery, **Research Leader**, (Prof. Maxim Shoshany, \$150,000), funded by MFAT- IDF R&D.

The aim of this research was to merge exploratory spatial statistics with Geographic Information Systems (GIS) for risk assessment.

2001-2003: Complex City models, **Researcher**, (P.I. Prof. Danny Czamanski & Prof. Lucien Benguigui), \$100,000, Funded by ISF research grant

This research develops dynamic models for urban self-organization description, fractal dimension and the complex morphology of urban core centers and urban spatial dynamics analysis models.

5. PROFESSIONAL PRACTICE

5.1 Planning/consulting

2019: Spatial capital analysis of Bet Shean and Emek HaMaayanot, **Spatial capital Consultant**, with Bridge to the Future, KAMA , Oranim College of Education.

2019: Demographic forecasts for Kibutz Ramat Yohannan for the year 2029, **Demographic Consultant**

2019: Demographic forecasts for the city of Elad for the year 2029, **Demographic Consultant** with Citylink Investments Ltd.

2017- 2018: Spatial analysis of capital capabilities in the Northern parts of the Israeli Galilei for identification of areas and municipalities with high potential for urban development, **Spatial capital Consultant** in Project, Head Farchi-Zafir Architects, for Israel Lands Authority.

2016: Population and employment forecasts for the Israel's northern region as a demographic base for transportation planning, **Demographic Consultant** in Project, Head Amnon Frenkel, for YefeNof, Transportation, Infrastructure, construction Ltd

2016: Capabilities analysis of israel's municipalities of developing housing and economic Incentives of local authorities to authorize residential development, **Spatial capital Consultant** in Project, Head Shamay Assif and Amnon Frenkel, for Israel Lands Authority.

2016: Master planning for new metropolitan area in the north of Israel, **Strategic planning and housing Consultant** in Project, Head Shamay Assif and Amnon Frenkel, for ministry of Construction and Housing

2012- 2013: Spatial economic analysis for Kibutz Shaar HaAmakim, **Planning Consultant**, with CityLink Investments Ltd.

2010-2011: Megido regional council: Entitlement for residential benefits, **Expert Opinion**, with Amnon Frenkel

2009-2010: Bet Hannanya, relocation of road #2, **Expert Opinion**

2009 – 2010: Yahud-Monoson: **Consultant**, for opposition initiative for assessing the city

2008 – 2009: Municipal boundarie's committee between Bat Yam, Holon and Rishon Le-Ziyyon- **Expert Opinion** representing Bat Yam

5.2 Public Professional Service

2016- 2018: **Audit Committee** of the Israeli Section of the European Regional Science Association

2009-2014: Qiryat Tiv'on: **member** in a long-term planning and master plan steering committee.

6. PUBLICATIONS

6.1 Theses

1. PhD Thesis: Spatio-temporal polycentricity analysis of re-urbanization: the case study of the built area of Tel Aviv (Under the Supervision of Prof. Maxim Shoshany and Prof. Amnon Frenkel).
2. MSc Thesis: Spatial order inside Cities- The Case of Cultural Centers in the Tel-Aviv Area (Under the Supervision of Prof. Danny Czamanski and Prof. Lucian Benguigui)

6.2. Chapters in Books and editor of Books

1. **Porat, I.**, Shoshany, M., Frenkel, A., (2019), Two Phase Temporal-Spatial Autocorrelation of Urban Patterns: Revealing Focal Areas of Re-Urbanization in Tel Aviv-Yafo (p. 352-370) Research of geoinformatics in Israel 2020. (Hebrew).
2. Shamay Assif, **Idan Porat** Editors, Israel 100-Strategic planning for Israel Towards 2048 (2019), The Center for Urban and Regional Studies, Technion, IIT. (Hebrew).
3. Israel Marin Spatial Plan (2015), The Center for Urban and Regional Studies, Technion, IIT. (Hebrew).

6.3 Refereed publications (journals)

1. **Porat I**, Shach-Pinsly, D., 2019, Building morphometric analysis as a tool for urban renewal, Environment and Planning B: Urban Analytics and City Science, 2399808319861977.
2. Benguigui L, **Porat I**, 2018, Relationships between centrality measures of networks with diameter 2, *Physica A*, Statistical Mechanics and its Applications, 505, 243-251.
3. Frenkel A, **Porat I**, 2017, "An Integrative Spatial Capital-Based Model for Strategic Local Planning", Planning Practice & Research, 32(2), 171-196.
4. **Porat I**, Benguigui L, 2016, "Global migration topology-analysis and modeling of flow network 2006-2010" Europhysics Letters 115, 18002.
5. Shach-Pinsly D, **Porat I**, 2016, "Multi-identity planning process in a studio course; integrative planning in multi-identity environments" Frontiers of Architectural Research 5(3) 279-289.
6. **Porat I**, L Benguigui, 2014, "World Migration Degree: Global migration flows in directed networks" arXiv arXiv:1511.05338.
7. **Porat I**, Shoshany M, Frenkel A, 2012, "Two phase Temporal-Spatial Autocorrelation of Urban Patterns: Revealing focal areas of Re-Urbanization in Tel Aviv-Yafo" Applied Spatial Analysis and Policy, 5 (2) 137-155.

8. **Porat I**, Shoshany M, Frenkel A, 2008, "Residential and nonresidential construction initiations in Tel Aviv-Yafo: autocorrelation analysis of urban structure evolution", Environment and Planning B: Planning and Design, 35, pages 535 – 551.

6.4. Submitted:

1. **Porat I**, Benguigui L, Network theory and immigration, Physica A.

6.5 Refereed Conference Proceedings:

1. **I Porat**, L Benguigui, 2014, "World migration degree", European Regional Science Association conference papers
2. **I Porat**, M Shoshany, A Frenkel, 2006, "Dynamic Spatial Confluence of Residential Construction Initiations Autocorrelation in Tel Aviv-Yafo 1976-2003", European Regional Science Association conference papers

6.6 Research reports in Hebrew

1. Assif S, Frenkel A, **Porat I**, 2018, New metropolitan area in the north of Israel
2. Assif S, Porat I, Shach Pinsky D, 2015, The new Israeli project, building pattern recognition for sporting urban renewal processes, http://www.kkl.org.il/files/HEBREW_FILES/machon-mediniut-karkait/karka-73/karka-73-2016-1.pdf
3. Adler E, Assif S, Cohen Y, Portman M, Porat I, Taff Y, Perelman A, Catz B, 2015, Israel Marine Spatial Plan, stage 1-Current Situation of the Sea
4. Assif S, Porat I, Yafe I, Dombrovski D, 2014, Examination of incentives to encourage local authorities for residential construction and attracting population
5. Assif S, Porat I, Golan L, Polinov S, 2014, Examination of deployment patterns of towns depending on accessibility to public services centers, employment, health and education
6. Frenkel A, Porat I, 2014, Spatial Capital Assessment of Bet-Shean and Emek HaMaayanot (update)
7. Frenkel A, Israel E, Porat I, 2013 Spatial Capital diagnosis for Bet Shean
8. Frenkel A, Israel E, Porat I, 2013 Spatial Capital diagnosis for Emek Hamaynot
9. Frenkel A, Porat I, Israel E, 2013, Strategic Engines for Regional development in Emek HaMaayanot
10. Frenkel A, Porat I, Israel E, 2013, Strategic Tourism Engines for Beit Shean
11. Shoshany M, Bechor S, Port I, Aminov R, 2012, Assessment of alternatives for National Fire Fighting stations' distribution, and their Man-Power and Equipment implications
12. Frenkel A, Porat I, 2012, Spatial Capital Assessment of Bet-Shean and Emek HaMaayanot
13. Frenkel A, Porat I, 2011, Spatial Capital Model for Local Strategic Planning, Methodology report.
14. Alterman R, Plaut P, Porat I, 2008, Planning report for Hatzor HaGlilit and participation in a special conference on Hatzor's long range planning, The Center for Urban and Regional Studies

7. CONFERENCES

7.1 Presentations

International:

1. **I Porat**, Shach Pinsly D, 2019, Morphometric analysis of post-WWII mass public housing as a tool for urban renewal, Association of European Schools of Planning, Venice, Italy.
2. **I Porat**, D Orenstein, M Tsalyuk, 2018, Yellow or Green? An investigation of landscape preferences in an arid environment, IAPS, Rome, Italy.
3. **I Porat**, L Benguigui, 2017, The directed network topology of the global migration network, XXXVII Sunbelt Conference of the International network for Social Network Analysis, Beijing, China
4. **I Porat**, D Shach-Pinsly, 2017, Urban renewal potential of mass post World War II social public housing, Association of European Schools of Planning, Lisbon, Portugal
5. **I Porat**, L Benguigui, 2017, The form and function of global migration network: Analysis and modeling of bilateral flow network 2006-2010, NetSci-X Tel Aviv, Israel
6. **I Porat**, L Benguigui, 2016, Global migration topology-analysis and modeling of flow network 2006-2010, European Regional Science Association Congress, Vienne, Austria
7. **I Porat**, 2016, Public participatory GIS for mapping urban ecosystem services - a dynamic and effective tool for community building and environmental education, International Association People-Environment, Lund, Sweden
8. **I Porat**, D Shach-Pinsly, 2015, Multi-identity planning process in a studio course; How to combine different ideologies/identities in integrative coherent planning?, Association of European Schools of Planning Annual Congress, Prague, Czech Republic
9. **I Porat**, 2015, Public Participation GIS for mapping urban ecosystem services – implementations for community building and environmental education teaching, 8th World Environmental Education Congress, Gothenburg, Sweden
10. **I Porat**, S Asiff L Golan, S Polinov, 2015, Accessibility availability and diversity - analysis of transportation networks from the perspective of service areas, European Regional Science Association Congress, Lisbon, Portugal
11. **Porat I**, Benguigui L, 2014, "World Migration Degree, Global migration flows in directed networks, European Regional Science Association Congress, St Petersburg, Russia
12. **Porat I**, Benguigui L, 2011, "Inner migration Networks in Israel", Complexity- Architecture, Design and Urban Planning workshop, Tel Aviv, Israel

13. **Porat I**, Shoshany M, and Frenkel A, 2008 "Spatio-temporal patterns of re-urbanization: geo-statistical analysis of construction initiation in Tel Aviv-Yafo" Proceedings of the European Regional Science Association, Liverpool, UK
14. **Porat I**, Shoshany M, and Frenkel A, 2006, "Dynamic spatial confluence of residential construction initiations: autocorrelation in Tel Aviv-Yafo 1976-2003", Proceedings of the European Regional Science Association, Volos, Greece

National:

1. **Porat I**, 2019, Israel Marine Plan, Environmental Education Annual Conference
1. **Porat I**, Shach-Pinsly D, Assif S, 2017, Delineating urban sites of mass post-WWII public housing for urban renewal potential Israeli Regional Science Association Congress
2. **Porat I**, Benguigui L, 2016, Global migration topology-analysis and modeling of flow network 2006-2010, Israeli Regional Science Association Congress
3. **Porat I**, Assif S, Shach-Pinsly D, 2016, The New Israeli Project, Israeli Regional Science Association Congress
4. **Porat I**, Assif S, Golan L, Polinov S, 2015, Examination of deployment patterns of towns depending on accessibility to public services centers, employment, health and education, Israeli Regional Science Association Congress
5. **Porat I**, 2015, Public Participation GIS for mapping urban ecosystem services – implementations for community building and environmental education teaching, the 15th Annual Congress for Environmental Education
6. **Porat I**, Frenkel A, 2010, "Re-urbanization- development patterns, implementation potential and strategic actions" Proceedings of the Israeli Regional Science Association
7. **Porat I**, Frenkel A, Shoshany M, 2008, "Assessment of the contribution of urban planning to development directing in Tel Aviv-Yafo", Proceedings of the 016, Israeli Regional Science Association Congress, Israel
8. **Porat I**, Frenkel A, Shoshany M, 2008, "Reurbanization spatial pattern analysis- application of spatio-temporal methods", Proceedings of the Israeli Regional Science Association
9. **Porat I**, Shoshany M, Frenkel A, 2006, "The dynamic changes of Building starts spatial patterns in Tel Aviv-Yafo: 1976-2003", Israeli Regional Science Association

8. HONORS AND AWARDS

2009: Gerhard Karplus Memorial Prize, for **Outstanding Excellence in Doctoral Research** in Urban and Regional Planning

2007: **Excellence in Research Achievements** Faculty of Architecture and Town Planning, Technion -Israel Institute of Technology

9. MEMBERSHIPS (IN PROFESSIONAL ORGANIZATIONS)

European Regional Science Association

Israeli Regional Science Association

Israel Planners Association