

Mar, 2021

CURRICULUM VITAE AND LIST OF PUBLICATIONS

Personal Details

Name:	Bat-hen Nahmias-Biran
Date and place of birth:	Mar 29, 1982, Safet, Israel
Telephone number at home:	+972 545502238
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Education

Undergraduate and Graduate Studies

Ph.D – 2016, Technion-Israel Institute of Technology - Transportation Engineering

Name of advisor: Prof. Yoram Shiftan

Title of thesis: "Incorporating equity considerations in transport projects evaluation: developing new measures".

M.Sc. – 2011, Technion-Israel Institute of Technology - Transportation Engineering

Name of advisor: Prof. Yoram Shiftan

Title of thesis: "Equity aspects in transportation projects: Case study of Transit fare change in Haifa"

B.Sc. – 2008, Technion-Israel Institute of Technology– Civil and Environmental Engineering

Post-Doctoral Studies

2016-2018 Postdoctoral Associate, Future Urban Mobility, SMART Centre, Massachusetts Institute of Technology,
Name of advisor: Prof. Moshe Ben-Akiva

Academic Ranks and Tenure in Institutes of Higher Education

2019-Present	Research Affiliate, Intelligent Transportation Systems (ITS) Lab, Massachusetts Institute of Technology.
2018-Present	Lecturer, Faculty of Engineering, Ariel University
2016-2018	Postdoctoral Associate, Future Urban Mobility, SMART Centre, Massachusetts Institute of Technology.
2008-2016	Research and Teaching Assistant, Technion

Professional Activities

Positions in academic administration (Departmental, Faculty and University)

2020 Departmental Search Committee Chair, Civil Engineering, Faculty of Engineering, Ariel University

Professional functions outside universities/institutions (inter-university, national, international)

European Committees

2019-present COST Action: CA16222, Modelling and Policy Analysis Tools to Explore the Future of Autonomous and Connected Transport (ACT)

2019-present Member of Joint Research Centre's professional communities, European Commission

2013-2016 COST Action: TU1209, Transport Equity Analysis: assessment and integration of equity criteria in transportation planning (TEA), Member of the management committee on behalf of Israel

National local roles

2020 Member of Executive Committee: The Israel Association for Transportation Research

2020 Member of the Innovative Transportation Services committee: The Israeli Smart Transportation Research Center

2019- Present Member of Future Mobility IL professional committees: as part of their smart mobility section

Significant professional consulting

2020 Tel-Aviv Metropolitan Transportation Management Center, accompanying and reviewing the needs, tools, and methods for improving traffic management and control in Israel's largest metropolitan area, towards a large scale and long-term strategic plan, for Modeling Department, Ayalon Highways. Israel.

2020 Collaboration with Green Lights Trading under a patent protected method for an AI bid system allowing optimal usage of the transportation infrastructure.

2019-2022 Collaboration with Israeli's MOEP and Samuel Neaman Institute as part of research: "Operating Autonomous Vehicles in Israel: Environmental Costs, Regulations and Future Implications", for Ministry of Environmental Protection, Israel.

2017-2018 Collaboration with Singapore's MOT, LTA, URA as part of the L2NIC project: "Autonomous Mobility-On-Demand systems' impact on transportation in Singapore, for Ministry of National Development, Singapore.

Membership in professional/scientific societies

2016-Present Transportation Research Board
2016-2018 Transportation Economics Association
2013-Present Network on European Communications and Transport Activities Research
2017-Present World Conference on Transport Research Society
2015- Present International Association for Travel Behavior Research
2013- Present The Israel Association for Transportation Research
2016 –2018 The European Association for Research in Transportation
2011-2014 Israel Engineers Association for Construction and Infrastructure
2011-2015 Israeli Geographical Association

Educational activities

Courses taught in Recent Years

2020-Present Final Project in Transportation Engineering, Undergraduate, Civil Engineering, Ariel University
2019-Present Transportation Planning Studio, Undergraduate, Civil Engineering, Ariel University
2019-Present Introduction to Transportation Engineering (Introduction to Geometric Design, Traffic Engineering, Transportation Planning, and Pavement Design), Undergraduate, Civil Engineering, Ariel University (jointly taught)
2018-Present Introduction to Transportation Planning, Undergraduate, Civil Engineering, Ariel University
2014-2016 Transportation Economics, Graduate, Civil and Environmental Engineering, Technion (jointly taught)
2008-2016 Pavement Structural Design, Undergraduate, Civil and Environmental Engineering, Technion (jointly taught)
2008-2016 Introduction to Transportation Engineering (Introduction to Geometric Design, Traffic Engineering, Transportation Planning, and Transportation Economics), Undergraduate, Civil and Environmental Engineering, Technion (jointly taught)

Supervision of Research Students

PhD Training in Progress

- 2020- Present Serio Angelo Maria Agriesti. Integration of supply and demand modeling to address the design of future automated mobility systems. Supervisor: Roncoli Claudio, Advisor: Bat-hen Nahmias-Biran, Aalto University.
- 2020- Present Amit Rahamim. “Future urban mobility in artificial islands”. Supervisor: Nathan Gartner and Bat-hen Nahmias-Biran, Ariel University

Post-Doctoral Training in Progress

- 2020 - Present Ido Orenstein. “Optimizing Automated Mobility-on-Demand Systems at the City Scale”. Supervisor: Bat-hen Nahmias-Biran, Ariel University
- 2019- Present Yedidya Levi. “Development of simulation-based tool for evaluating smart mobility scenarios”. Supervisor: Bat-hen Nahmias-Biran, Ariel University

Awards, Citations, Honors, Fellowships

Honors, Citation Awards (including during studies)

- 2008 Technion - Hershkowitz Award for Excellence in Transportation Engineering Final Project.
- 2007 Technion- Dean's List for Excellence in Academic Achievement.
- 2006 ISEF (International Foundation for Education) - ISEF Foundation Award for Excellence in the Community Service Program.
- 2003 Israel Defense Forces - Head of PDHR Division Award for Excellence in Duty Fulfillment.

Fellowships (e.g. Fullbright)

- 2017-2018 ISEF Fund: Postdoctoral Fellowship, New York
- 2011-2016 Faculty Scholarship: Ph.D. Studies Scholarship, Technion
- 2015 The Israel Science Foundation: Travel Scholarship for ITEA Annual Conference and Summer School (Kuhmo Nectar)
- 2011-2015 ISEF Fund: Doctoral Fellowship, Israel
- 2008-2011 Faculty Scholarship: M.Sc. Studies Scholarship, Technion

2008 -2011 ISEF Fund: M.Sc Fellowship, Israel

2005 -2008 ISEF Fund: B.Sc. Fellowship, Israel

Scientific Publications

Authored books

Scientific Books (Monographs)

Nahmias–Biran, B. (2015). *Equity aspects in transportation projects: Case study of Transit fare change in Haifa*. [LAP LAMBERT Academic Publishing](#).

Articles

Refereed articles and refereed letters in scientific journals

1. **Nahmias–Biran, B.**, Sharabi, and N., Shiftan Y. (2014). “Equity aspects in transportation projects: Case study of Transit fare change in Haifa”, *International Journal of Sustainable Transportation*, 8(1): 69-83. (IF 2.709, SJR 1.493, Citations 28, Q1)
2. **Nahmias–Biran, B. H.**, & Shiftan, Y. (2016). Towards a more equitable distribution of resources: Using activity-based models and subjective well-being measures in transport project evaluation. *Transportation Research Part A: Policy and Practice*, 94, 672-684. (IF 3.992, SJR 2.109, Citations 15, Q1)
3. **Nahmias–Biran, B.**, Martens, K., and Shiftan Y. (2017). “Integrating equity in transportation project assessment: A philosophical explorations and Its Practical Implications”, *Transport Reviews*, 2, 192-210. (IF 6.704, SJR 3.196, Citations 26, Q1)
4. **Nahmias-Biran, B. H.**, Han, Y., Bekhor, S., Zhao, F., Zegras, C., & Ben-Akiva, M. (2018). Enriching Activity-Based Models using Smartphone-Based Travel Surveys. *Transportation Research Record*, 2672(42), 280-291. (IF 1.029, SJR 0.54, Citations 11, Q2)
5. Basu, R., Araldo, A., Akkinpally, A. P., **Nahmias Biran, B. H.**, Basak, K., Seshadri, R., & Ben-Akiva, M. (2018). Automated Mobility-on-Demand vs. Mass Transit: A Multi-Modal Activity-Driven Agent-Based Simulation Approach. *Transportation Research Record*, 0361198118758630. (IF 1.029, SJR 0.54, Citations 55, Q2)
6. **Nahmias-Biran, B. H.**, Oke, J. B., Kumar, N., Basak, K., Araldo, A., Seshadri, R., ... & Ben-Akiva, M. (2019). “From Traditional to Automated Mobility on Demand: A Comprehensive Framework for Modeling On-Demand Services in SimMobility”. *Transportation Research Record*, 0361198119853553 (IF 1.029, SJR 0.54, Citations 9, Q2)

7. **Nahmias–Biran, B.** and Shiftan Y. (2019) “Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects”, *Transportation*, 1-19. (IF 4.082, SJR 1.829, Citations 6, Q1)
8. Adnan, M., **Nahmias-Biran, B.**, Baburajan, V., Basak, K., & Ben-Akiva, M. (2020). Examining impacts of time-based pricing strategies in public transportation: A study of Singapore. *Transportation Research Part A: Policy and Practice*, 140, 127-141. (IF 3.992, SJR 2.109, Citations 1, Q1)
9. **Nahmias-Biran, B. H.**, Oke, J. B., Kumar, C. L. Azevedo, M. Ben-Akiva. (2020) Evaluating the impacts of shared automated mobility on-demand: an activity-based accessibility approach, *Transportation*. <https://doi.org/10.1007/s11116-020-10106-y>. (IF 4.082, SJR 1.829, Citations 4, Q1)
10. **Nahmias-Biran, B.**, J. B. Oke, N. Kumar. (accepted). Who Benefits from AVs? Equity Aspects of Autonomous Vehicles Policies in Full-Scale Prototype Cities. *Transportation Research Part A: Policy and Practice*.
11. Kumar, N., Oke, J. B., and **Nahmias-Biran, B. H.** Activity-based contact network scaling and epidemic propagation in metropolitan areas. arXiv preprint arXiv:2006.06039. In review in *Scientific Reports*.
12. Oke, J. B., A. P. Akkinapally, S. Chen, Y. M. Aboutaleb, Y. Xie, **B. Nahmias-Biran**, C. L. Azevedo, Y. Han, P. C. Zegras, J. Ferreira, and M. Ben-Akiva. Simulation and Evaluation of Automated Mobility On-Demand Strategies in Dense Transit-Oriented Cities. In review in *International Journal of Sustainable Transportation*.

Articles in Conference Proceedings (with full peer review process)

1. **Nahmias–Biran, B.**, Oke, J., N., Kumar., Basak, K., Araldo, A., Seshadri, R., Lima Azevedo, C., Ben-Akiva, M.. “From Traditional to Automated Mobility on-Demand: A Comprehensive Framework for Modelling on-Demand Services in SimMobility” Lecture Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2019.
2. Gross, E., Oke, J., Akkinapally, A., **Nahmias-Biran, B. H.**, Azevedo, C. L., Zegras, P. C., and Ben-Akiva, M. (2019). “Accessibility and Energy Consumption Evaluation under Different Strategies of Mobility On-Demand Deployment”. Lecture Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2019. (No. 19-02656).
3. **Nahmias –Biran, B.**, Han, Y., Bekhor, S., Zhao, F., Zegras, C., Ben-Akiva, M.”Enriching activity based models using smartphone-based travel surveys”, Poster Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2018.
4. Basu, R. Araldo, A., Akkinapally, A., **Nahmias–Biran, B.**, Basak, K., Seshadri, R., Deshmunkh, N., Kumar, N., Lima Azevedo, C., Ben-Akiva, M. “Implementation and

Policy Applications of AMoD in multi-modal activity-driven agent-based urban simulator SimMobility” Poster Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2018.

5. **Nahmias–Biran, B.**, Bills, T., Shiftan. “Incorporating equity considerations in transport projects evaluation: The San-Francisco Bay area case study”, Lectern Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2017.
6. **Nahmias–Biran, B.**, & Shiftan, Y. "Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects”, Poster Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2016.

Lectures and Presentations at Meetings and Invited Seminars not Followed by Published Proceedings

Presentation of papers at conferences/meetings

1. Kumar, N., Oke, J. B., and Nahmias-Biran, B. H. (2021). Activity-based contact network scaling and epidemic propagation in metropolitan areas. As part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2021.
2. Oke, J. B., A. P. Akkinpally, S. Chen, Y. M. Aboutaleb, Y. Xie, B. Nahmias-Biran, C. L. Azevedo, Y. Han, P. C. Zegras, J. Ferreira, and M. Ben-Akiva. Simulation and Evaluation of Automated Mobility On-Demand Strategies in Dense Transit-Oriented Cities, As part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2020.
3. Nahmias-Biran, B., J. B. Oke, N. Kumar, A. P. Akkinpally, C. L. Azevedo, J. Ferreira, P. C. Zegras, and M. Ben-Akiva, Who Benefits from AVs? Equity Aspects of Autonomous Vehicles Policies in Full-Scale Prototype Cities. As part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2020.
4. Nahmias-Biran, B. H., Oke, J. B., Kumar, C. L. Azevedo, M. Ben-Akiva. “Evaluating the impacts of shared automated mobility on-demand: an activity-based accessibility approach”, Network on European Communications and Transport Activities Research (NECTAR), Helsinki, June 2019.
5. Nahmias–Biran, B., Oke, J., N., Kumar., Basak, K., Araldo, A., Seshadri, R., Lima Azevedo, C., Ben-Akiva, M.. “From Traditional to Automated Mobility on-Demand: A Comprehensive Framework for Modelling on-Demand Services in SimMobility” The 21st Conference of Industrial Engineering and Management, Apr 2019.
6. Adnan, M., Nahmias Biran, B., Baburajan, V., Loganathan, H., Ben-Akiva, M. “Examining impacts of pricing strategies in public transportation using SimMobility Mid-Term simulator: A Study of Singapore”, The Israel Association of Transportation Research, Tel-Aviv, Apr 2019.

7. Nahmias–Biran, B., Oke, J., N., Kumar., Basak, K., Araldo, A., Seshadri, R., Lima Azevedo, C., Ben-Akiva, M.. “From Traditional to Automated Mobility on-Demand: A Comprehensive Framework for Modelling on-Demand Services in SimMobility” Lecture Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2019.
8. Gross, E., Oke, J., Akkinepally, A., Nahmias-Biran, B. H., Azevedo, C. L., Zegras, P. C., and Ben-Akiva, M. (2019). “Accessibility and Energy Consumption Evaluation under Different Strategies of Mobility On-Demand Deployment”. Lecture Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2019. (No. 19-02656).
9. Basu, R. Araldo, A., Akkinepally, A., Nahmias–Biran, B., Basak, K., Seshadri, R., Deshmunkh, N., Kumar, N., Lima Azevedo, C., Ben-Akiva, M. “Implementation and Policy Applications of AMoD in multi-modal activity-driven agent-based urban simulator SimMobility” Poster Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2018.
10. Nahmias–Biran, B., Han, Y., Bekhor, S., Zhao, F., Zegras, C., Ben-Akiva, M.”Enriching activity based models using smartphone-based travel surveys”, Future Urban Mobility Symposium, Poster Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2018.
11. Nahmias-Biran, B., Kumar, N., Araldo, A., Basak, K., Seshadri, R., Oke, J., Akkinepally, A., Lima Azevedo, C., Ben-Akiva, M.”A Comprehensive Framework for Modelling Mobility on Demand Services in SimMobility”, hEART 2017: 6th Symposium of the European Association for Research in Transportation, Haifa, Israel, Sep 2017.
12. Nahmias–Biran, B., Han, Y., Bekhor, S., Zhao, F., Zegras, C., Ben-Akiva, M. ”Enriching activity based models using smartphone-based travel surveys”, Future Urban Mobility Symposium, Singapore, July 2017.
13. Nahmias–Biran, B., Bills, T., Shiftan. “Incorporating equity considerations in transport projects evaluation: The San-Francisco Bay area case study”, Lectern Session as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2017.
14. Nahmias–Biran, B., & Shiftan, Y. “Incorporating equity considerations in transport projects evaluation: developing new measures”, The Israel Association of Transportation Research, Tel-Aviv, April 2016.
15. Nahmias–Biran, B., & Shiftan, Y. “Incorporating equity considerations in transport projects evaluation: developing new measures”, Workshop on Doctoral Research in Transportation Modeling as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2016.
16. Nahmias–Biran, B., & Shiftan, Y. "Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects”, Poster Session

as part of the Transportation Research Board Annual Meeting, Washington, US, Jan 2016.

17. Nahmias–Biran, B., & Shiftan, Y. "Using activity-based models to analyze equity in sustainable transportation policies", Workshop on travel behavior and equity as part of the IATBR conference, London, UK, July 2015.
18. Nahmias–Biran, B., & Shiftan, Y. "Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects", The 14th International Conference on Travel Behavior Research (IATBR), London, UK, July 2015.
19. Nahmias–Biran, B., Barth, T., Arsenio, E., and Shiftan Y "Equity in Transport and Health, what can we learn from each other?", Climate Change Targets and Urban Transport Policy Conference, WCTR SIGG3, Malta, April 2015.
20. Nahmias–Biran, B., Martens, K., and Shiftan Y. "Integrating equity in transportation project assessment: philosophical explorations", The Annual Conference of the Israeli Planners Association (IPA), Ben-Gurion University, Israel, February 2015.
21. Nahmias–Biran, B., & Shiftan, Y. "Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects", The 56th Conference of the Israeli Geographical Association, Hebrew University, Israel, December 2015.
22. Nahmias–Biran, B., & Shiftan, Y. "Incorporating equity considerations in transport projects evaluation: developing a new measure", Network on European Communications and Transport Activities Research (NECTAR), Azores (Portugal), June 2013.
23. Nahmias–Biran, B., & Shiftan, Y. "Incorporating equity considerations in transport projects evaluation: developing a new measure" The Israel Association of Transportation Research, Tel-Aviv, March 2013.
24. Nahmias–Biran, B., & Shiftan, Y. "Incorporating equity considerations in transport projects evaluation: developing a new measure", The 53th Conference of the Israeli Geographical Association, Bar-Ilan University, Israel, December 2013.
25. Nahmias–Biran, B., Sharabi, and N., Shiftan Y. "Equity aspects in transportation projects: Case study of Transit fare change in Haifa" The 52th Conference of the Israeli Geographical Association, Tel-Aviv University, Israel, December 2011.
26. Nahmias–Biran, B., Sharabi, and N., Shiftan Y. "Equity aspects in transportation projects: Case study of Transit fare change in Haifa" The 7th Conference for Construction and Infrastructure, Israel Engineers Association for Construction and Infrastructure, Tel-Aviv, Israel, November 2011.

Presentations at informal international seminars and workshops

1. "Evaluating the impacts of shared automated mobility on-demand: an activity-based accessibility approach", WG5 Webinars of COST Action CA16222. Mar 2020.
2. "Understanding Preferences Towards Automated Mobility Choice Using SP and RP Survey", Training school of COST Action CA16222: Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport. The Technion, Haifa, Mar 2019.
3. "Incorporating equity considerations in transport projects evaluation: The San-Francisco Bay area case study", Workshop on "Bridging Transport Equity: A real-life lab about TEA guidelines implementation", Barcelona, Spain, March 2017.
4. "Using Activity-Based Models and the Capability Approach to evaluate equity considerations in transportation projects", Workshop on "Equity tools and new technologies", Aachen, Germany, Nov 2015.
5. "Incorporating equity considerations in transport projects evaluation: developing a new measure" The 1st Binational Student Workshop on Transportation, The Technion, Haifa, March 2013.
6. "Incorporating equity considerations in transport projects evaluation: developing a new measure", 1st Workshop on equity challenges in the decision-making process, The Technion, Haifa, December 2013.
7. "Integrating equity in transportation project assessment: philosophical explorations", 1st Workshop on equity challenges in the decision-making process, The Technion, Haifa, December 2013.

Seminar presentations at universities and institutions

May 2019, Tel-Aviv University, Israel

Mar 2019, Ariel University, Israel

Mar 2018, Ariel University, Israel

Mar 2018, Bar-Ilan University, Israel

Oct 2017, Ben-Gurion University, Israel

April 2017, MIT-FM Seminar, Singapore

March 2016, Ben-Gurion University, Israel

Research Grants

- 2020 Judea and Samaria Research Center: Methodologies for Studying Accessibility and Dynamics of Travel Patterns in Judea and Samaria, 20,000NIS, D. Borg and B. Nahmias-Biran.
- 2019 Ariel University Grant: Future Mobility Lab. 310,000 NIS (approx. \$86,000), B. Nahmias-Biran.
- 2019 The Israel Ministry of Environmental Protection: Operating Autonomous Vehicles in Israel: Environmental Costs, Regulations and Future Implications, 481,100 NIS (approx. \$134,000), B. Nahmias-Biran.