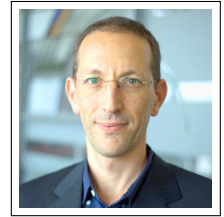


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## Education

- 2020 **J.D.**, *Wayne State Univ.*, Detroit.  
(exp. 2023) Law
- 2003 **Ph.D.**, *Univ. California*, Berkeley.  
Dec 2009 Integrative Biology
- 1994 **M.Sc.**, *Hebrew Univ.*, Jerusalem.  
Jun 2002 Computer Science (Optimization)
- 1989 **B.Sc.**, *Hebrew Univ.*, Jerusalem, *Magna cum laude*.  
May 1993 Degree from honours program; Majors Computer Science, Math (extended); Minor Physics

## Doctoral thesis

- title Neuromechanical Control Architectures in Arthropod Locomotion  
supervisor Robert J. Full

## Master thesis

- title Paging on Access Graphs of Minimal Degree 3  
supervisor Nati Linial

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## Work Experience

### Academia

- 19–now **Associate Professor**, *U. Michigan (Ecology and Evolutionary Biology)*, Ann Arbor.  
Research, student supervision; biomechanics and mathematical biology
- 19–now **Associate Professor**, *U. Michigan (Electrical Engineering and Computer Science)*, Ann Arbor.  
Research, student supervision; robotics and control theory
- 12–19 **Assistant Professor**, *U. Michigan (Ecology and Evolutionary Biology)*, Ann Arbor.  
Research, student supervision; biomechanics and mathematical biology
- 12–19 **Assistant Professor**, *U. Michigan (Electrical Engineering and Computer Science)*, Ann Arbor.  
Research, student supervision; robotics and control theory
- 11–12 **Visiting Assistant Professor**, *U. Michigan (Electrical Engineering and Computer Science)*.
- 09–12 **Postdoctoral Research Associate**, *U. Pennsylvania*, Philadelphia.  
Research, student supervision; robotics and control theory  
**Advisors** Mark Yim, Daniel E. Koditschek and George Pappas
- 06–09 **Graduate Student Researcher**, *U. California*, Berkeley.  
Funded Ph.D. research; biomechanics

### Tech Industry

- 19–now **General Manager**, *Izun, Inc.*, Ypsilanti.  
Consulting
- 03–now **Founding partner**, *Bio-Signal Analysis*, Tel-Aviv.  
Algorithms; Electrocardiology technology start-up
- 01–06 **Chief Architect, R&D**, *Harmonic, Inc.*, Sunnyvale.  
R&D, embedded programming, algorithms; Company develops digital video equipment for cable and satellite
- 98–01 **Chief Architect**, *Harmonic Data, Ltd.*, Tel-Aviv.  
Company-wide system architecture, basic research team manager, academic liaison; Company develops Internet over satellite solutions
- 96–98 **Instructor**, *John Bryce Training*, Ramat-Gan.  
Teaching Java, Javascript, HTML; Company trains IT professionals
- 97 **Software Engineer**, *Compedia, Ltd*, Ramat-Gan.  
Design and development of 3D video game engine; Company develops edutainment products for kids

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## Military Service (Israel)

- 96–17 **Reserve duty**, *IDF*.
- 93–96 **Mandatory service**, *IDF*.

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## Publications and Other Products

- [1] S Revzen, B Bittner, R Hatton. “A Data-Driven Approach to Connection Modeling”. In: *arXiv preprint* (2018). URL: [\[LINK\]](#).
- [2] S Revzen, B Bittner, R Hatton. “Step Selection in Data-Driven Geometric Gait Optimization”. In: *American Physical Society March Meeting*. 2018.
- [3] B Banjanin, SA Burden, TY Moore, S Revzen, and RJ Full. “Estimating predictive dynamical models of legged locomotion from data”. In: *Integrative and comparative biology*. Vol. 56. 2016, E11–E11.
- [4] B A Bittner, R A Hatton, and S Revzen. “Geometrically Optimal Gaits: a Data-Driven Approach”. In: *Nonlinear Dynamics* 94.3 (2018), pp. 1933–1948. DOI: [10.1007/s11071-018-4466-9](#).
- [5] B Bittner, R L Hatton, and S Revzen. “Data-Driven Geometric System Identification for Shape-Underactuated Dissipative Systems”. In: *arxiv* (2020). URL: [\[LINK\]](#).
- [6] B Bittner and S Revzen. “Geometric Insights for Data-Driven Gait Analysis”. In: *IEEE International Conference On Intelligent Robots and Systems, Workshop on Robotics Inspired Biology*. 2017. URL: [\[LINK\]](#).
- [7] B Bittner and S Revzen. “The Locality of Data-Driven Models”. In: *Dynamic Walking*. 2018.
- [8] B Bittner and S Revzen. “What do nematode swimming gaits optimize?” In: *Yearly Meeting of the Society for Integrative and Comparative Biology*. 2018.
- [9] B Bittner and S Revzen. “Optimizing Gaits for Coverage on Lie Groups”. In: *Dynamic Walking*. Dynamic Walking. June 2019. URL: [\[LINK\]](#).
- [10] B Bittner and S Revzen. “Optimizing Gaits for Coverage on Lie Groups”. In: *Dynamic Walking*. 513. Dynamic Walking. Canmore AB, CA, June 2019. URL: [\[LINK\]](#).
- [11] B Bittner and S Revzen. “Geometric Gait Optimization with a five-link wheeled snake”. In: *American Physical Society*, 2020. URL: [\[LINK\]](#).
- [12] S A Burden, S Revzen, T Y Moore, S S Sastry, and R J Full. “Using reduced-order models to study dynamic legged locomotion: Parameter identification and model validation”. In: *Integrative and comparative biology*. 2013.
- [13] S A Burden, S Revzen, and S S Sastry. “From anchors to templates: Exact and approximate reduction in models of legged locomotion”. In: *Dynamic Walking*. 2013. URL: [\[LINK\]](#).
- [14] S A Burden, S Revzen, and S S Sastry. “Model reduction near periodic orbits of hybrid dynamical systems”. English. In: *arXiv preprint* (2013). URL: [\[LINK\]](#).
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- [16] S A Burden, S S Sastry, D E Koditschek, and S Revzen. “Event-selected vector field discontinuities yield piecewise-differentiable flows”. In: *arXiv preprint* (2014). URL: [\[LINK\]](#).

- [17] S A Burden, S S Sastry, D E Koditschek, and S Revzen. “Event-Selected Vector Field Discontinuities Yield Piecewise-Differentiable Flows”. In: *SIAM Journal of Applied Dynamical Systems* 15.2 (2016), pp. 1227–1267. DOI: [10.1137/15M1016588](https://doi.org/10.1137/15M1016588).
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- [21] G Council and S Revzen. “Recovering a gait using energy and phase”. In: *Dynamic Walking*. 2016.
- [22] G Council and S Revzen. “Gait Synthesis with Reduced Proprioceptive Requirements”. In: *IEEE International Conference On Intelligent Robots and Systems, Workshop on Robotics Inspired Biology*. 2017. URL: [\[LINK\]](#).
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- [64] S Revzen. “Tutorial 2 presentation: Phase estimation from kinematic data”. In: *MBI Workshop 4: Neuromechanics of Locomotion*. Mar. 2008. URL: [\[LINK\]](#).
- [65] S Revzen. “Neuromechanical Control Architectures in Arthropod Locomotion”. Department of Integrative Biology. PhD thesis. Univeristy of California, Berkeley, Dec. 2009. URL: [\[LINK\]](#).
- [66] S Revzen. *Experiments in Legged Locomotion: Animals, Robots and Rethinking Control*. Bio-Robotics seminar series, Arizona State University. Nov. 2012.

- [67]S Revzen. “Facing the Unknown Challenge - Structure and Modularity in Morphological Computation”. In: *International Workshop on Soft Robotics and Morphological Computation*. 2013. URL: [\[LINK\]](#).
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- [69]S Revzen. *Facing the Unknown, with Robots*. TEDx U of M. Apr. 2015. URL: [\[LINK\]](#).
- [70]S Revzen. “Synchronization and Dimensionality Reduction in Networks of Hybrid Phase Oscillators: A Perspective from Legged Locomotion”. In: *Network Frontiers Workshop*. Northwestern University. Dec. 2015. URL: [\[LINK\]](#).
- [71]S Revzen. (*invited presentation ARO workshop*). ARO workshop on The Future of Vibration Energy Transfer in Solids and Structures Needs and Opportunities Workshop. 2016.
- [72]S Revzen. (*invited presentation ONR workshop*). ONR workshop on Distributed Sensing, Actuation, and Control for Bioinspired Soft Robotics. Oct. 2016.
- [73]S Revzen. *A Few Reasons Why I Love Legs*. Ann Arbor Nerd Night Talk. June 2016. URL: [\[LINK\]](#).
- [74]S Revzen. *Seeking Simple Models for Multilegged Locomotion Hybrid Oscillators, Rapid Manufacturing, and Slippage*. University of California Berkeley. Jan. 2016.
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- [76]S Revzen. *Seeking Simple Models for Multilegged Locomotion Hybrid Oscillators, Rapid Manufacturing, and Slippage*. University of Washington Robotics Seminar. Dec. 2016.
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