Date: November 9<sup>th</sup>, 2020

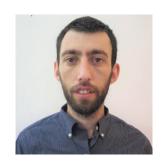
# RESUME

Full name: Yoav Vered

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### **ACADEMIC DEGREES**

2020: PhD – Mechanical Engineering, Technion.

Expected graduation: November 2020

2017: MSc – Mechanical Engineering, Technion. During a direct

doctoral track.

2016: BSc – Summa cum Laude, Mechanical Engineering, Technion.

### TA APPOINTMENTS

2015 - Today: Teaching assistant, Mechanical Engineering, Technion.

## TA EXPERIENCE

- Numerical analysis M, undergraduate-level, 2015.
- Introduction to control, undergraduate-level, 2016 and 2020.
- Theory of vibrations, undergraduate-level, 2016-2020.
- Linear systems M, undergraduate-level, 2017-2020.
- Experiments in Vibrations & Waves, New graduate-level, 2019.

#### **HONORS & AWARDS**

2020: The Irwin Jacobs Award for Excellence, during PhD (two

semesters).

Faculty Excellence Scholarship funding (single semester)

2019: Vivian Konigsberg Award for Excellence in Teaching, 2016,

2018, and 2019.

2017: The Irwin Jacobs Award for Excellence, during MSc (two

semesters).

2016: Dean's Excellence Scholarship funding (single semester).

Sidney and Beatrice Wolberg Award, during BSc.

### **PUBLICATIONS**

### Refereed papers in professional journals

#### Published papers

• **Y. Vered**, R. Gabai, and I. Bucher, "Waveguide dispersion curves identification at low-frequency using two actuators and phase perturbations." The Journal of the Acoustical Society of America 146.4 (2019), 2443-2451. doi:10.1121/1.5128482

#### Submitted papers

- **Y. Vered**, and I. Bucher, "Experimental multimode traveling waves identification in an acoustic waveguide." Mechanical Systems and Signal Processing, Submitted May 2020. arXiv:2007.11568
- E. Baruch, **Y. Vered**, H. Plat, and I. Bucher, "Active detection of small imperfections in structures with cyclic symmetry." Journal of Vibration and Acoustics, Submitted July 2020.
- **Y. Vered**, and I. Bucher, "Adaptive model-based control of boundary impedance in an acoustic waveguide." Applied Acoustics, Submitted Aug 2020.

#### In preparation papers

- **Y. Vered**, E. Baruch, and I. Bucher, "Experimental dispersion identification using a state-space mechanism." expected submission Dec 2020.
- I. Bucher, L. Mirkin, and **Y. Vered**, "Robust input shaping design via FIR L2 preview tracking", expected submission Dec 2020. (Alphabetic author order).
- **Y. Vered**, and I. Bucher, "Identifying the Acoustic Reflection and Transmission coefficients using a matrix method approach for a multimode acoustic waveguide." expected submission Jan 2021.
- E. Baruch, **Y. Vered**, H. Plat, and I. Bucher, "Fast iterative detection of perturbations in cyclic symmetry structure using traveling wave control." expected submission Jan 2021.

## Refereed papers in conference proceeding

- **Y. Vered**, R. Gabai, and I. Bucher, "Dispersion based reduced-order model identification and boundary impedance control in a weakly coupled impedance tube." Proceedings of Meetings on Acoustics 178ASA 39.1 (2019), 045005. <a href="doi:10.1121/1.5137245">doi:10.1121/1.5137245</a>
- **Y. Vered**, and I. Bucher, "Tailoring Phononic-Like Topologies for Controlling the Structural-Acoustic Coupling in Fluid-Filled Cylinders."

ISMA2018 Proceedings, The 2018 Leuven Conference on Noise and Vibration Engineering, September 17 – 19 2018, Leuven, Belgium. ISMA2018 Proceedings

• **Y. Vered**, and I. Bucher, "Determining the Underwater Acoustic Properties of materials, with a Fluid-Filled Impedance Tube and Two Spatial-Modes Reduced-Order Model." P. 1071-1076, UACE2017 Proceedings, The 4<sup>th</sup> Underwater Acoustic Conference and Exhibition, September 3 - 8 2017, Skiathos, Greece.

#### Accepted papers

• I. Bucher, L. Mirkin, and **Y. Vered**, "Input shaping via FIR L2 preview tracking", 59<sup>th</sup> IEEE conference on decision and control (Alphabetic author order).

#### **CONFERENCES**

#### Lectures

- "Input shaping via FIR L2 tracking framework." CDC 2020 59<sup>th</sup> Conference on Decision and Control, Dec 14-18 4 2020, Jeju Island, Republic of Korea.
- "Adaptive model-based control of traveling wave in a dispersive impedance tube." The 179th Meeting of the Acoustical Society of America, December 07-11 2020, Acoustics Virtually Everywhere, Webinar.
- "Input shaping via FIR H2 tracking framework." GSC 2020 The Annual Workshop of Graduate Students in Systems & Control, May 4 2020, Tel-Aviv, Israel. GSC2020 Presentation
- "Dispersion curves identification and traveling wave control in a weakly coupled impedance tube." The 178th Meeting of the Acoustical Society of America, December 02-06 2019, San Diego, California, USA. 178th ASA Meeting Presentation
- "Multi-mode dispersion estimation in coupled waveguides." ISTAM2018, December 9 2018, Tel-Aviv, Israel.
- "Tailoring Phononic-like topologies for controlling the structural acoustic coupling in fluid-filled cylinders." ISMA2018, September 17 19 2018, Leuven, Belgium.
- "Underwater acoustic properties estimation in presence of coupled fluid-solid impedance tube." The 6 UWA symposium, June 15 2017, Tel-Aviv, Israel.

### Poster presentation

• "Determining the underwater acoustic properties of materials, with a fluid-filled impedance tube and two spatial-modes reduced-order model." The 4th Underwater Acoustic Conference and Exhibition, September the 3 - 8 2017, Skiathos, Greece.