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CURRICULUM VITAE

Name: Bella Gurevich

Date & place of birth: February 27, 1985, Tbilisi, Georgia.

Citizenship: Israeli

Date of arrival to Israel: August 1991.

Marital status: Married +1

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1. Academic education

2009-2013 Ph.D. in Mechanical Engineering. Ben Gurion University of the Negev, Israel. Dissertation title: Investigation of Parallel Bubble Pumps Operating with a Binary Organic Working Fluid. Advisors: Prof. Levy, A and Prof Borde, I.

2006-2009 M.Sc. in Mechanical Engineering, Tel Aviv University, Israel.
Dissertation title: Splitting Characteristics of Two Phase Flow Air-Water in Two Parallel Pipes. Advisors: Prof. Barnea D., and Prof, Taitel Y.

2002-2006 B.Sc. in Mechanical Engineering. Ben Gurion University of the Negev, Israel.

2. Academic employment

Since 2014 Associate lecturer. Mechanical Engineering Department, SCE - Sami Shamoon College of Engineering, Israel.

2009-2014 Lecturer and Teaching Assistant. Mechanical Engineering Department, SCE - Sami Shamoon College of Engineering, Israel.

2009-2013 Teaching Assistant. Mechanical Engineering Department, Ben Gurion University of the Negev, Israel.

2006-2009 Teaching Assistant. Mechanical Engineering Department, Tel Aviv University, Israel.

3. Industrial engineering experience

4. Academic research and development activities

4.1. Previous research and development activities

2019-Present Development of experimental setups for fluid mechanics laboratory and natural gas laboratory.

2014-2015 Development, construction and operating of an experimental system of parallel bubble pumps and a generator with a common feed (1 refereed conference volumes.

2009-2014 Development of an experimental system for the investigation of the performance of a bubble pump operating with parallel lifting tubes and operating with a binary solution of DMAC-R134a (1 peer reviewed paper and 1 refereed conference volumes).

2010-2011 Supervising development of a protoype solar water desalination sytem by undergraduate students from SCE-Sami Shamoon College of Engineering, Israel.

2006-2009 Development of an experimental sytem and a theoretical model for predicting the splitting characteristics of an adiabatic two-phase flow in an array of multiple pipes. (1 peer reviewed the paper and another paper is in refereed conference volume).

4.2. Present research and development activities

Since 2017 Development of a theoretical model for the heat driven bubble pump.

Since 2015 Development of a solar driven bubble pump.

Since 2019 Investigation of Thermodynamical properties of binary solutions in diffusion absorption cooling systems.

Since 2019 Thermodynamical analysis of Combined Heat and Power systems (CHP).

5. Grants and awards

5.1. Grants

2020-2022 Gurevich B. Research of a Solar Diffusion Absorption Cooling System. Grant from the Ministry of Energy(2 years),162748 NIS.

2015-2017 Gurevich, B (SCE – Sami Shamoon College of Engineering). Solar Driven Bubble Pump. Grant SCE – Sami Shamoon College of Engineering, 60,000NIS.

5.2. Awards

2008 A prize for excellent achievments given by the Department of Mechanical Engineering, Tel Aviv University. 1000$.

2007 Selim and Rachel Benin Scholarship Fund. 1000$

6. List of publications

6.1. Peer reviewed papers

1. Arav B., Sizov Y. and Gurevich B. The Concept for CHP Systems based on Low-Power Micro Turbine Generators Using Conventional and Inverted Brayton Cycle, Under review. Due to be published during 2020.
2. Gurevich B. Theoretical Prediction of the Mass Flow Rates in the Bubble Pump, International Journal of Thermodynamics; 2019;22:177-182.
3. Gurevich B., Bubble Pump Model Verification Based on Experimental Results, Journal of Energy and Power Engineering 2017;11: 665-669.
4. Gurevich, B., Jelinek, M., Levy, A. and Borde, I., Performance of a set of parallel bubble pumps operating with a binary solution of R134a-DMAC. Applied Thermal Engineering 2015; 75:724-730.
5. Taitel, Y., Gurevich, B. and Barnea, D. Splitting characteristics and flow distribution of gas liquid flow in two parallel pipes. Multiphase Science and Technology 2010; 22 (3): 274-266.

6.2 Books/collective volumes

6.2.1 Books/collective volumes (Authorship or editorship)

6.2.2 Chapters in books

6.2.3 Articles in refereed conference volumes

1. Gurevich B.: Bubble Pump theoretical model with Assumption of Laminar Flow Regime (proceedings of fourth World Congress on Mechanical, Chemical, and Material Engineering (MCM'18); 08/2018.
2. Gurevich B.: Bubble Pump Models Verification Based on the Experimental Results. Heat Transfer and Fluid Flow (proceedings of fourth World Congress on Mechanical, Chemical, and Material Engineering (MCM'17); 06/2017.
3. Bella Gurevich, Michael Jelinek, Irene Borde, Avi Levy: Comparison between the Performances of a Bubble Pump Generator with Inlets Configurations. Proceedings of the third World Congress on Mechanical, Chemical, and Material Engineering; 07/2016, DOI:10.11159/htff16.107.
4. Bella Gurevich, Michael Jelinek, Irene Borde, Avi Levy: Experimental Study of a Bubble Pump Operating with a Set of Parallel Lift Tubes and a Binary Solution of R134a-DMAC. Proceedings of the World Congress on Mechanical, Chemical, and Material Engineering (MCM 2015); 08/2015.
5. Taitel, Y., Gurevich, B. and Barnea, D. Splitting Characteristics and flow distribution of gas liquid flow in two parallel pipes, 5th European-Japanese Two-Phase Flow Group Meeting, Spoleto, Slovenia 2009.

6.3 Papers and abstracts – proceedings of conferences

6.3.1 Invited conference plenary lectures

Gurevich, B. Numerical Research of a Solar Driven Bubble Pump for Diffusion Absorption Cooling Systems, 14th International Conference on Advanced Computational Engineering and Experimenting, Malta, 2020 (postponed to 2021 due to COVID-19).

6.3.2 Contributed conference presentations

1. Gurevich, B. Bubble Pump Theoretical Model with the Assumption of Laminar Flow Regime, Israeli Conference of Mechanical Engineering ICME 15, Beer Sheva, Israel,2018.
2. Gurevich, B. Bubble Pump Theoretical Model with the Assumption of Laminar Flow Regime, Heat Transfer and Fluid Flow HTFF' 18, Madrid, Spain,2018.
3. Gurevich, B. Bubble Pump Models Verification Based on the Experimental Results, Heat Transfer and Fluid Flow HTFF' 17, Rome, Italy,2017.
4. Gurevich, B. Comparison between the Performances of a Bubble Pump Generator with Inlets Configurations, Heat Transfer and Fluid Flow HTFF' 16, Budapest, Hungary,2016.
5. Gurevich, B. Experimental Study of a Bubble Pump Operating with a Set of Parallel Lift tubes and a Binary Solution of R134a-DMAC, Heat Transfer and Fluid Flow HTFF 15, Barcelona, Spain,2015.
6. Gurevich, B. Investigation of Parallel Bubble Pumps Operating with a Binary Organic Working, Israeli Conference of Mechanical Engineering ICME 15, Tel Aviv, Israel,2015.

6.3.3 Seminar presentations

1. Gurevich, B. Performance of a set of parallel bubble pumps operating with a binary solution of R134a-DMAC, Ben Gurion University, Beer Sheva, Israel, 2013.
2. Gurevich, B. Splitting Characteristics and flow distribution of gas liquid flow in two parallel pipes Tel Aviv University, Tel Aviv, Israel, 2009.

6.4 Patents

6.5 Other publications/reports

7 Academic roles

Since 2017 Head of Natural Gas Program. SCE - Sami Shamoon College of Engineering, Israel.

Since 2016 Final Projects Coordinator. SCE - Sami Shamoon College of Engineering, Israel.

Since 2016 Member of the Academic Council. SCE - Sami Shamoon College of Engineering, Israel.

8 Preparation of academic programs

1. Gurevich, B. B.Sc. program for natural gas engineering. SCE - Sami Shamoon College of Engineering, Israel. Submitted for approval to the Israeli Council of Higher Education, 2017.

9 Courses taught

Since 2019 B.Sc. program. Heat and Power Systems. SCE - Sami Shamoon College of Engineering, Israel.

Since 2017 B.Sc. program. Gas Flow Design with Finite Element. SCE - Sami Shamoon College of Engineering, Israel.

Since 2016 B.Sc. program. Heat transfer. SCE - Sami Shamoon College of Engineering, Israel.

Since 2014 B.Sc. program. Thermodynamics. SCE - Sami Shamoon College of Engineering, Israel.

Since 2014 B.Sc. program. Fluid Mechanics I and II. SCE - Sami Shamoon College of Engineering, Israel.

2014-2016 B.Sc. program. Robotics. SCE - Sami Shamoon College of Engineering, Israel.

2014-2016 B.Sc. program. Introduction to Control. SCE - Sami Shamoon College of Engineering, Israel.

Since 2009 B.Sc. program. Manufacturing engineering. SCE - Sami Shamoon College of Engineering, Israel.

2010-2014 B.Sc. program. Signal control. SCE - Sami Shamoon College of Engineering, Israel.

2012-2014 B.Sc. program. Introduction to robotics lab. SCE - Sami Shamoon College of Engineering, Israel.

2009-2013 B.Sc. program. Mechanics of materials lab. Ben Gurion University of the Negev, Israel.

2009-2011 B.Sc. program. Manufacturing engineering. Ben Gurion University of the Negev, Israel.

2006-2009 B.Sc. program. Heat transfer lab. Tel Aviv University, Israel.

10 Editorial roles

10.2 Editor/member of editorial board of journal

10.3 Editorship in journals/collective volumes

10.4 Manuscripts reviewer

Since 2017 Journal of Fluid Flow, Heat and Mass Transfer.

Since 2017 International Journal of Refrigeration and air conditioning.

11 Positions in conferences

1. Member of the Conference Council. The 5th Conference and Exhibition on Test Engineering,Tel Aviv , Israel , 2020 (was postponded due to COVID-19).
2. Member of the Conference Council. 7th International Conference on Heat Transfer and Fluid Flow (HTFF'20),Prague, Szech Republic , 2020 (was postponded due to COVID-19).
3. Member of the Conference Council. 5th International Conference on Heat Transfer and Fluid Flow (HTFF'18),Madrid, Spain, 2018.
4. Member of the Conference Council. 4th International Conference on Heat Transfer and Fluid Flow (HTFF'17),Rome, Italy, 2017.

12 Membership in professional/scientific societies

Since 2006 Member. The Association of Engineers, Architects and Academics in Technological Professions in Israel

13 Additional activities