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Employment and Positions

2000-2002	CAD Draftsman, KLA Tencor, Migdal Ha'Emek, Israel
2003	CAD Draftsman, Odin Medical Technologies, Yoqneam – Israel
2004	R&D Engineer, CamteK AOI, Migdal Ha'Emek – Israel
2004 - 2009	Adjunct Staff/Lab & Teaching assistant, Technion IIT, Haifa, Israel
2009 - 2014	Teaching assistant/ replacement lecturer, RWTH-Aachen University, Aachen, Germany.
2014 - Present	Senior Lecturer, School of Mechanical Engineering, Tel Aviv University, Tel Aviv, Israel.
2016 - Present	Member of the Multiphase Heat Transfer committee and organizing board, American Society of Mechanical Engineers - ASME K13
2017 - 2018	Member of the Organizing Committee, 35th Israel Mechanical Engineering Conference, Tel-Aviv, Israel
2018 - Present	Member of the Scientific Advisory Board of the *International Center for Heat and Mass Transfer*, international conference organizers
2019 - 2020	Member of the Organizing Committee, 30th ILASS (Institute for Liquid Atomization and Spray Systems) Europe 2020 – Tel Aviv, Israel
2020 - Present	Member of the Editorial Board of the *Experimental Thermal and Fluid Sciences*, Elsevier publishing company, Netherlands; (journal's Impact Factor: 3.49; Q1)

Education

2000 - 2004 B.Sc., *Summa Cum Laude* in Mechanical Engineering, Technion IIT, Haifa, Israel.
2004 - 2009 Direct Ph.D. in Mechanical Engineering, Technion IIT, Haifa, Israel.

Publications

Google Scholar (*h*-index 11; citations 361).

1. H. D. Haustein, A. Gany, E. Elias, Rapid Boiling of a Two-Phase Droplet in an Immiscible Liquid at High Superheat, *ASME J. of Heat Transfer*, **131** (12), 121010, 7 pages, 2009 (Impact Factor: 0.96, Q1, GS – 10 citations, ISI – 7 citations)
2. W. Rohlfs, G.F. Dietze, H. D Haustein, R. Kneer, Two-Phase Simulations of Electrohydrodynamics Using a Volume of Fluids Approach: A Comment, *J. of Computational physics*, **231** (12), pp. 4454-4463, 2012 (Impact factor: 2.14, Q1, GS – 10 citations, ISI – 7 citations)
3. W. Rohlfs, G.F. Dietze, H. D Haustein, Tsvelodub, O. Y., R. Kneer, Experimental Investigations of 3-dimensional Wavy Liquid Films under the Influence of Electrostatic Forces, *Experiments in Fluids*, **53**(4), pp.1045-1056, 2012 (Impact factor: 1.57, Q1, GS – 10 citations, ISI – 8 citations)
4. H. D. Haustein, G. Tebruegge, W. Rohlfs, R. Kneer, Local Heat Transfer Coefficient Measurement through a Visibly-Transparent Heater under Jet-Impingement Cooling, *International J. of Heat and Mass transfer*, **55** (23-24), pp. 6410-6424, 2012 (Impact Factor: 2.32, Q1, GS – 32 citations, ISI – 21 citations)
5. W. Rohlfs, H. D. Haustein, O. Garbrecht, R. Kneer, Insights into the Local Heat Transfer of a Submerged Impinging Jet: Influence of Local Flow Acceleration and Vortex-Wall Interaction

   International J. of Heat and Mass transfer, **55** (25–26), pp.7728-7736, 2012 (Impact Factor: 2.32, Q1, GS – 61 citations, ISI – 39 citations)

6. W. Rohlfs, G.F. Dietze, H. D Haustein, R. Kneer, Experimental Investigation of 3-Dimensional Wavy Liquid Films under the Coupled Influence of Thermo-Capillary and Electrostatic Forces, *European Physical Journal – Special Topics*, **219**, pp. 111-119, 2013 (Impact Factor: 1.76, Q1, GS – 4 citations, ISI – 3 citations)

7. H. D Haustein, A. Gany, G.F Dietze, E. Elias, R. Kneer, The Dynamics of Bubble Growth at High Superheat: Boiling in an Infinite Medium and on a Wall, *ASME J. of Heat Transfer*, **135** (7), 071501, 2013 (Impact Factor: 2.055, Q1, GS – 7 citations, ISI – 5 citations)

8. W. Rohlfs, C. Ehrenpreis, H. D Haustein, R. Kneer, Influence of viscous flow relaxation time on self-similarity in free-surface jet impingement, *International J. of Heat and Mass transfer*, **78**, pp.435-446, 2014 (Impact Factor: 2.38, Q1, GS – 19 citations, ISI – 16 citations)

9. H. D. Haustein, B. Gövert, T. Kreitzberg, A. Massmeyer, R. Kneer, Establishment of Kinetic Parameters of Particle Reaction from a Well-Stirred Fluidized Bed Reactor, *Fuel*, **158**, pp. 263–269, 2015 (Impact Factor: 3.61, Q1, GS – 22 citations, ISI – 20 citations)

10. A. Mueller, H. D. Haustein, P. Stoesser, T. Kreitzberg, R. Kneer, T. Kolb, Gasification Kinetics of Biomass-and Fossil-Based Fuels: Comparison Study Using Fluidized Bed and Thermogravimetric Analysis, *Energy & Fuels*, **29**(10), 6717-6723, 2015 (Impact Factor: 2.84, Q1, GS – 19 citations, ISI – 17 citations, featured in Energy Weekly News, NewsRX, Atlanta, Nov 20, 2015, p.690)

11. Seel, K., Reddemann, M.A., Verbaere, V., Mathieu, F., Cardenas, M., Rohlfs, W., H. D. Haustein, and Kneer, R., A spin coating device for the investigation of spray-film interactions under engine relevant conditions, *Atomization and Sprays*. 26(11), 2016. (Impact Factor: 1.29, Q1, GS – 3 citations, ISI – 2 citations, featured in *Journal of Technology & Science*; Atlanta, 01 Jan 2017, p.148)

12. T. Kreitzberg, H. D. Haustein, B. Gövert, R. Kneer, Investigation of gasification reaction of pulverized char under N2/CO2 atmosphere in a small-scale fluidized bed reactor, *ASME J. Energy Resource Tech.*, 138(4):042207,1-7, 2016 (Impact Factor: 1.67, Q2/ Q1 on submission date, GS – 17 citations, ISI – 13 citations)

13. H. D. Haustein, R. Harnik*, W. Rohlfs, A simple hydrodynamic model of a laminar free-surface jet in horizontal or vertical flight, *Physics of Fluids*, 29(8):082015,1-17, 2017 (Impact Factor: 2.28, Q1, GS – 6 citations, ISI – 5 citations)

14. B Kashi*, H. D. Haustein, Dependence of Submerged Jet Heat Transfer on Nozzle Length, *International J. of Heat and Mass transfer*, 121, pp. 137–152, 2018 (Impact Factor: 4.35, Q1, GS – 8 citations, ISI – 6 citation)

15. H. D. Haustein, A Kinetics-Based Universal Model for Single Bubble Growth and Departure in Nucleate Pool Boiling, *International J. of Multiphase flow*, 105, pp. 15-31, 2018 (Impact Factor: 2.83, Q1; nominated **key scientific article** by *Advances in Engineering*, April 9, 2019)

16. B Kashi*, E Weinberg*, H. D. Haustein, Analytical Reexamination of the Submerged Laminar Jet's Velocity Evolution, *Physics of Fluids*, 30(6), 063604, 2018 (Impact Factor: 2.63, Q1, GS – 4 citations, ISI – 4 citations)

17. M. Dahan, E.P. Komarala, L. Fadeev, A.K Chinnam, A. Shlomovich, S. Lipstman, H. D. Haustein, M. Gozin, and B.A. Rosen, Methane Dry Reforming Catalyst Prepared by the Co-deflagration of High-nitrogen Energetic Complexes, *J. of Materials Chemistry A*, 7 (1), pp. 141–149, 2019 (Impact Factor: 10.73, Q1, GS – 2 citations, ISI - 2 citations)

18. A. Gorodesky*, T. Rozenfeld, H. D. Haustein, G. Ziskind, Flow and heat transfer analysis of hybrid cooling schemes: Adding micro-jets to a micro-gap, *Int. J. of Thermal Sciences* 138, pp. 367–383, 2019 (Impact Factor: 3.49, Q1, GS – 2 citations, ISI – 2 citations)

19. R. Nimmagadda*, H. D. Haustein, L. G. Asirvatham, S. Wongwises, Effect of Uniform/Non-uniform Magnetic Field on the Conjugate Heat Transfer Performance of Nanofluids in Direct and Transverse Jet Impingement, *J. Magnetism and Magnetic Materials*, 479, pp. 268-281, 2019 (Impact Factor: 2.68, Q2/ Q1 on submission date, GS – 2 citation, ISI - 2 citation)

20. B Kashi*, H. D. Haustein, Microscale sets a Fundamental Limit to Heat Transfer, *Int. Comm. in Heat and Mass Trans.*, 104, pp.1-7, 2019 (Impact Factor: 4.13, Q1, GS – 2 citations, ISI - 2 citations, nominated **key scientific article** by *Advances in Engineering*, July 14, 2019)

21. H. D. Haustein, B Kashi*, Distortion of Pipe-Flow Development by Boundary Layer Growth and Unconstrained Inlet Conditions**,** *Physics of Fluids* 31, 063602, 2019 (Impact Factor: 2.63, Q1, GS – 2 citations, ISI – 2 citations)

22. B Kashi*, H. D. Haustein, The Stagnation Point Heat Transfer Under Partially-Developed Submerged Jets, *Int. J. Heat Mass Transfer*, 146, 118804, 2020 (Impact Factor: 4.35, Q1)

Proceedings

1. H. D. Haustein , A. Gany, Rapid Boiling of a Droplet, at Partial-Superheat, *ASME-JSME Summer Heat Transfer Conf.*, Vancouver, Canada, July 2007
2. H. D. Haustein, A. Gany, E. Elias, Experimental Parametric Study of Droplet Rapid Boiling in Immiscible Liquid, *9th biennial European ASME conference ESDA*, Haifa, Israel, July 2008
3. H. D. Haustein , G.F. Dietze, R. Kneer, A New Empirical Model for Bubble Growth: Boiling in an Infinite Medium and on a Wall at High Superheat, *AJTEC (ASME-JSME) Summer Heat Transfer Conf.*, Honolulu, Hawaii, March 2011
4. H. D. Haustein , A. Gany, E. Elias, Study of Two-Phase Underwater Ramjet Propulsor Employing Liquefied Gas Boiling, *Second International Symposium on Marine Propulsors*, Hamburg, June 15-17, 2011 (GS - 4 citations, ISI – 3 citations)
5. W. Rohlfs, H. D Haustein, G.F. Dietze, R. Kneer, Experimental and Numerical Investigations of Falling Liquid Films Influenced by the Presence of Electric Fields, *6th International Berlin Workshop of Transport Phenomena with Moving Boundaries*, Berlin, Germany, 24-25 November, 2011, (GS – 1 citation)
6. H. D. Haustein , G. Tebruegge, W. Rohlfs, R. Kneer, Experimental Investigation of the Evolution and Stability of Excited Two-Dimensional Wavy Falling Films of Water (abstract at https://ima6.net.technion.ac.il/files/2015/11/BookOfAbstracts.pdf) , *International Fluid Dynamics and Processes* - 6th Conference of the International Marangoni Association (IMA6), Haifa, Israel, 18-21 June, 2012
7. H. D. Haustein, W. Rohlfs, F. Al-Sibai, R. Kneer, Evaluation of the Sensitivity and Response of IR Thermography from a Transparent Heater in the Case of liquid Jet Impingement, *6th European Thermal Sciences Conference – Eurotherm*, Poitiers-Futuroscope, France, September 04-07, in: *Journal of Physics: Conference Series*, Vol. 395, 2012 (GS – 1 citation)
8. H. D. Haustein, W. Rohlfs, F. Al-Sibai, R. Kneer, Development of Heat Transfer in a Two-Dimensional Wavy Falling Film of Water and its Influence on Wave Stability, (Paper HT2013-17453), *ASME Summer Heat Transfer Conference*, Minneapolis, MN, USA, July 14-19, 2013

9. H. D. Haustein, J. Joerg, W. Rohlfs, R. Kneer, Influence of micro-scale aspects and jet-to-jet interaction on free-surface liquid jet impingement for micro-jet array cooling, *IEEE Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems* (ITherm), (pp. 904-911). May 2014. (GS – 9 citations, ISI – 3 citations)
10. W. Rohlfs, C. Ehrenpreis, H. D. Haustein, O. Garbrecht, R. Kneer, Influence of local flow acceleration on the heat transfer of submerged and free-surface jet impingement, *15th International Heat Transfer Conference*, IHTC-15, July 2014, Kyoto, Japan (GS – 5 citations, ISI – 4 citations)
11. R. Kneer, H. D Haustein, C. Ehrenpreis, W. Rohlfs, Flow Structures and Heat Transfer in Submerged and Free Laminar Jets, *15th International Heat Transfer Conference (IHTC)*, Keynote KN28 (IHTC15-8378), Kyoto, Japan, July 2014 (GS – 8 Citations, ISI – 4 Citations)
12. H.D. Haustein, Modular Prediction of Heat Transfer under Free-Jets: Single Jet, Jet Array, and the Influence of Gravity, *11th Int. Conf. on Heat Transfer, Fluid Mechanics and Thermodynamics* (HEFAT2015), 20-23 July, 2015, Kruger National Park, South-Africa
13. W. Rohlfs, J. Jörg, C. Ehrenpreis, M. Rietz, H. D. Haustein, R. Kneer, Flow structures and heat transfer in submerged laminar jet impingement, *1st Thermal and Fluids Engineering Summer Conference*, TFESC-1, August 9-12, 2015, New York City, NY, USA (GS – 1 citation, ISI – 1 citation)
14. H.D. Haustein, Modular Prediction of Flow and Heat Transfer in Free-Surface Jet Arrays: Inter-Jet Liquid Extraction and its Influence on the Hydraulic Jump Location, Paper HT2016-7400*, ASME Summer Heat Transfer Conference*, Washington D.C., MD, USA, July 10-14, 2016
15. R. Harnik*, H.D. Haustein, First-order Model of Free-Jet Hydrodynamic Evolution for Heat Transfer Prediction, Including Nozzle and Flow Rate Effects, Paper HT2016-7388*, ASME Summer Heat Transfer Conference*, Washington D.C., MD, USA, July 10-14, 2016
16. A. Gorodesky*, H.D. Haustein, Vortex Laden Flows in A Micro-gap For Enhanced Direct Chip Cooling, ICNMM2016-8047, *ASME International Conference on Nanochannels, Microchannels and Minichannels*, Washington D.C., MD, USA, July 10-14, 2016
18. B. Kashi*, H.D. Haustein, The Importance of Nozzle Length and Issuing Profile in Submerged Impinging Jet Heat Transfer, CHT-17-307, *ICHMT International Symposium on Advances in Computational Heat Transfer*, May-June, 2017, Napoli, Italy (GS – 1 citation, ISI – 1 citation)
19. H.D. Haustein, B. Kashi*, The Importance of Viscous Dissipation in Micro-Tube and Micro-Gap Flows, ICNMM2018, *ASME 2018 International Conference of Nano, Micro and Minichannels* , June 8-10, 2018, Dubrovnik, Slovakia
20. T. Bar-Kohany, H.D. Haustein, E. Elias, Lifetime of a Tensioned Liquid Following an Impulse

    ICLASS 2018, International Conference on Liquid Atomization and Spray Systems, 22-26 July, Chicago, IL, USA

Presentations

1. **12.06.2010** *"Rapid Boiling of Two-phase Droplets Ascending in an Immiscible Liquid - Flow, Boiling curve and Propulsion Application"*, Faculty of Aerospace Eng., Technion, Haifa Israel
2. **28.10.2010** "*A Universal Empirical Model for Single Bubble Growth and Departure, within the Nucleate Boiling Regime"*, Faculty of Mech. Eng., Technion, Haifa, Israel

3. **05.01.2012** "*Direct local convective heat transfer coefficient measurement in a visibly-transparent setup for steady and transient jet-impingement cooling"*, Dpt. of Mech. Eng., Ben-Gurion University, Beer-Sheva, Israel
4. **09.01.2012,** *High sensitivity IR thermal measurements for establishment of the heat transfer coefficient in impinging jets*, Department of Mechanical Engineering, Tel – Aviv University, Tel-Aviv, Israel
5. **02.05.2012,** *Frequency Response of Quasi-2D Waves on Falling Films and Their Effect on Heat Transfer,* School of Mech. Eng., Tel Aviv University, Tel Aviv, Israel
6. **18.06.2012** "*Methods for Enhancement of Single-Phase Cooling by Impinging Liquid Jets"*, Faculty of Mech. Eng., Technion, Haifa, Israel
7. **21.06.2012** "*Evolution and Stability of Waves on Falling Films of Water"*, Dpt. of Mech. Engineering, Ben-Gurion University, Beer-Sheva, Israel
8. **2012-2013** "*Particle kinetics of char gasification in a micro fluidized bed*" 1st -3rd HVI Gastech workshop, Karlsruhe Institute of Tech., Juelich Institute of Tech., Clausthal Technical University, Clausthal, Germany
9. **28.03. 2013,** "*Enhancement of Multi-scale Cooling Methods through Deeper Understanding of Physical Mechanisms: Falling Films, Nucleate Boiling and Impinging Jets",* General Electric Global Research Center, Niskayuna, NY, USA
10. **13.2.2015,** "*Prediction of Nucleate boiling – is it even possible?",* Open-day lecture, Tel Aviv University, Tel Aviv, Israel
11. **19.5.2015** *"From Generalization to Specialization, from Multidisciplinary to Similarity, or what we do when we get stuck",* Excellence scholarship ceremony lecture, Tel Aviv University, Tel Aviv, Israel
12. **12.5.2016** "*Multiphase Dynamics in Rapid Vaporization of an Immiscible Droplet Rising in a Water Column – from Equilibrium to Explosive Boiling*", Droplet Dynamics workshop, EMN Meeting on Droplets 2016, San Sebastian, Spain

13. **11.6.2017** "*Multiphase Dynamics Studies at MyFET lab – An Overview Related to Nuclear Reactor Cooling Applications*", NRCN, Beer Sheba, Israel

14. **14.2.2018** **"***The Importance of Microscale Considerations: Single Phase Dissipation and Phase Transfer Interface-Kinetics***",** Nuclear Science and Engineering department seminar, Massachusetts institute of Technology, Boston, Massachusetts, USA

15. **15.2.2018** **"***Review of recent progress in free and submerged impinging jet theory, experiments and simulation***",** Fluid Dynamics Research Consortium seminar series, Penn State University, College State, Pennsylvania, USA

16. **16.2.2018** **"***A novel solution, to the age old problem of a flow over a sphere",* Mechanical Engineering Department Seminar series, University of Maryland, College Park, Maryland, USA
17. **11.4.2018** **"***Microscale Considerations: Single Phase Flow Dissipation and Phase Change Interface-Kinetics",* School of Mech. Eng., Tel Aviv University, Tel Aviv, Israel

Graduate students at TAU (completion year)

1. **Barak Kashi,** Ph.D., Controlled μ-jet arrays for hot-spots elimination in elec. cooling (2019)
2. **Amir Gorodesky,** M.Sc., Pulsed impinging jets for microchip cooling enhancement (2019)
3. **Elad Weinberg,** M.Sc., Microelectronics cooling with submerged micro- jet array (2019)
4. **Sol Fine,** M.Sc., Micro-designed multiphase flows for electronics cooling (2019)
5. **Ron Harnik,** M.Sc., Modelling of Heat transfer under a single free-surface jet (2020)
6. **Nitzan Dahan,** M.Sc., Nucleate boiling under high pressure and rapid depressurization (2021)
7. **Ben Uziel,** M.Sc., Inertial flow-focusing Microbubbles generation (2022)
8. **Avishai Oved,** M.Sc., Re-Examination of Sub-Jet Theory, application to Heat Transfer (2022)
9. Supervision and Co-supervision of 4 additional M.E. students