

CURRICULUM VITAE

• **Personal Details**

Name: Oz Oshri

Date and place of birth: 5/9/1982, Petah-Tikva, Israel.

Address and telephone number at work: Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel. +972-8-6477074.

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• **Education**

B.Sc., *cum laude* – 2000-2004, Tel Aviv University, Mechanical Engineering.

M.Sc., *cum laude* – 2003-2005 (Direct program), Tel Aviv University, Mechanical Engineering.

Name of advisor: Prof. Isaac Goldhirsch.

Title of thesis: Kinetics and hydrodynamics of finite density two dimensional granular gases.

Ph.D.– 2012-2017, Tel Aviv University, Physics.

Name of advisor: Prof. Haim Diamant.

Title of thesis: Pattern formation in thin elastic sheets.

• **Employment History**

2019-present Lecturer, Department of Mechanical Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

2017-2019 Postdoctoral Fellow, Pattern formation in thin elastic sheets and morphogenesis of soft materials, Swanson School of Engineering, University of Pittsburgh, Pennsylvania, USA.

• **Professional Activities**

(a) Positions in academic administration

2019-present Member in the department committee for prizes.

2019-present Member in the department committee for external teachers.

(b) Professional functions outside universities/institutions

(c) Ad-hoc reviewer for journals

Physical Review E, Physical Review Letters, Journal of the Mechanics and Physics of Solids, Biomechanics and Modeling in Mechanobiology, New Journal of Physics, International Journal of Solids and Structures, Proceeding of the royal society A.

• Educational activities

(a) Courses taught

Linear systems, undergraduate level (mandatory) - Ben-Gurion University of the Negev.

Mathematical methods for engineers, graduate level (mandatory) - Ben-Gurion University of the Negev.

Dynamics, undergraduate level (mandatory) - Ben-Gurion University of the Negev.

(b) Research students

Kirill Goncharuk, Ph.D., current student.

Erez Itrater, MSc., current student

(c) Supervision of undergraduate final projects

Avi Ben-Sahel, 2020, Numerical modeling of thin film separation from elastic substrate.

Tomer Mordecovich and Ofir Turgeman, 2020, Pattern formation in thin elastic sheets with negative eigenstrains.

Roei Yossefi, 2021, Pattern formation in a thin elastic sheet that is embedded in a closed liquid medium.

Yoav Gichon, 2021, Characterization of the influence caused by internal stress in a thin layer on the delamination from an adhesive and soft substrate.

Elad shoham, 2022, Pattern formation in a thin elastic sheet that is embedded in a closed liquid medium.

Roei Dadon, 2022, Design and manufacture of an experimental system for examining the dynamic interaction between elastic surfaces and liquid droplets.

Aviad Orkabi and Roei Hezi Birka, 2023, Stability analysis of a thin sheet in a liquid medium that separates. a cell into two parts that are under different pressures.

• Awards, Citations, Honors, Fellowships

Honors, Citation Awards

2005	Tel Aviv University	M.Sc. in Mechanical Engineering with honors (Cum Laude), Tel Aviv University, Israel.
2004	Tel Aviv University	B.Sc. in Mechanical Engineering with honors (Cum Laude), Tel Aviv University, Israel.
2001,2002	Tel Aviv University	Excellence award for academic achievements in the first and second year of undergraduate studies, Tel Aviv University, Israel.

• Scientific Publications

General information

a) H-index (ISI: 6, Google Scholar: 6)

b) Total number of citations of all articles (ISI: 94, Google Scholar: 122)

c) Total number of citations without self-citations (ISI: 65, Google Scholar: N/A)

(a) Authored chapters in books

(b) Refereed chapters in collective volumes, Conference proceedings, Festschrifts, etc.

(c) Refereed articles and refereed letters in scientific journals

(1) **Oshri, O.**, Brau, F., Diamant, H. 2015. Wrinkles and folds in a fluid supported sheet of finite size. Physical Review E, 91, 052408 (51 citations, IF 2.529; 8/55; Q1).

(Highlighted as Editor's suggestion)

(2) **Oshri, O.**, Diamant, H. 2016. Properties of compressible elastica from relativistic analogy. Soft Matter (communication), 12, 664-668 (11 citations, IF 3.889; 9/79; Q1).

(3) **Oshri, O.**, Diamant, H. 2017. Strain tensor selection and the elastic theory of incompatible thin sheets. Physical review E, 95, 053003 (15 citations, IF 2.529; 8/55; Q1).

(4) **Oshri, O.**, Diamant, H. 2017. Pattern transitions in a compressible floating elastic sheet. Physical Chemistry Chemical Physics, 19, 23817-23824 (7 citations, IF 3.676; 8/37; Q1).

(5) **Oshri, O.**, Liu, Y., Aizenberg J., Balazs, A., C. 2018 Delamination of a thin sheet from a soft and adhesive Winkler substrate. Physical Review E. 97, 062803 (12 citations, IF 2.529; 8/55; Q1).

(6) **Oshri, O.**, Biswas S., Balazs, A., C. 2019. Modelling the formation of double rolls from heterogeneously patterned gels. Physical Review E. 99, 033003 (6 citations, IF 2.529; 8/55; Q1).
(Highlighted as Editor's suggestion)

- (7) **Oshri, O.**, Biswas S., Balazs, A., C. 2019. Modelling the behavior of inclusions in circular plates undergoing shape changes from two to three dimensions. *Physical Review E*. 100, 043001 (7 citations, IF 2.529; 8/55; Q1).
- (8) ***Oshri, O.**, Biswas S., Balazs, A., C. 2020. Buckling-induced interaction between circular inclusions in an infinite thin plate. *Physical Review E*. 102, 033004 (5 citations, IF 2.529; 8/55; Q1).
- (9) ***Oshri, O.** 2020. Delamination of open cylindrical shells from soft and adhesive Winkler's foundation. *Physical Review E*. 102, 033001 (4 citations, IF 2.529; 8/55; Q1).
- (10) ***Oshri, O.** 2021. Volume-constrained deformation of a thin sheet as a route to harvest elastic energy. *Physical Review E*. 103, 033001 (2 citation, IF 2.529; 8/55; Q1).
- (11) ***Oshri, O.** 2021. Asymptotic softness of a laterally confined sheet in a pressurized chamber. *Physical Review E*. 104, 055005 (1 citations, IF 2.529; 8/55; Q1).
- (12) ***Oshri, O.** 2022. Modeling the Behavior of an Extensible Sheet in a Pressurized Chamber. *Journal of Elasticity*. (0 citations, IF 2.1; 69/175; Q2).

• Lectures and Presentations at Meetings and Invited Seminars

Presentation of papers at conferences/meetings

- (1) **Oshri O.**, Brau, F., Diamant, H. 2013. Wrinkles and folds in a fluid supported sheet of finite size. The 59th annual meeting of the Israel Physical Society, The Weizmann Institute, Israel.
- (2) **Oshri O.**, Diamant, H. 2014. Transitions in a compressible finite elastic sheet on a fluid substrate. American Physical Society March Meeting. Denver, Colorado USA.
- (3) **Oshri O.**, Brau, F., Diamant, H. 2014. Wrinkles and folds in a fluid supported sheet of finite size. CECAM workshop: Friction and interface dynamics at the nano- and mesoscale, Tel Aviv, Israel. (Poster presentation).
- (4) **Oshri O.**, Diamant H. 2015. From compressible elastica to relativistic dynamics. Statistical physics and mechanics of forms and shapes, Mariehamn, Aland.
- (5) **Oshri O.**, Diamant, H. 2015. Properties of compressible elastica from relativistic analogy. The 61st annual meeting of the Israel Physical Society, Bar-Ilan University, Israel.
- (6) **Oshri O.**, Diamant, H. 2016. Properties of compressible elastica from relativistic analogy. British Applied Mathematics Colloquium, Oxford University, UK.
- (7) **Oshri O.**, Brau, F., Diamant, H. 2014. Wrinkles and folds in a fluid supported sheet of finite size. The 81st annual meeting of the Israel Chemical Society, Tel Aviv, Israel. (Poster presentation)
- (8) **Oshri O.**, Biswas, S., Balazs, A. C. 2018. On the delamination of thin elastic sheet from soft adhesive substrate. American Physical Society March Meeting, Los Angeles, USA.
- (9) **Oshri O.**, Biswas, S., Balazs, A. C. 2019. Modeling the formation of double rolls from heterogeneously patterned gels. American Physical Society March Meeting, Boston, USA.
- (10) ***Oshri O.**, Biswas, S., Balazs, A. C. 2020. Modeling the formation of double rolls from heterogeneously patterned gels. The 65th annual meeting of the Israel Physical Society, Tel Aviv, Israel. (Poster presentation)
- (11) ***Oshri O.**, 2020. Delamination of open cylindrical shells from soft and adhesive Winkler's foundation. The 66th annual meeting of the Israel Physical Society, online conference. (Poster presentation).
- (12) ***Oshri O.**, Biswas, S., Balazs, A. C. 2021. Modeling the behavior of inclusions in circular plates undergoing 2D-to-3D shape changes, American Physical Society March meeting, online conference.
- (13) ***Oshri O.**, 2022. Delamination of open cylindrical shells from soft and adhesive Winkler's foundation. The 67th annual meeting of the Israel Physical Society (IPS), Ben-Gurion University.
- (14) ***Oshri O.**, 2022. Delamination of open cylindrical shells from soft and adhesive Winkler's foundation. American Physical Society March Meeting (APS), Chicago, USA.

- (15) ***Oshri O.**, 2022. Asymptotic softness of a laterally confined sheet in a pressurized chamber. European solid mechanics conference (ESMC), Ireland.
- (16) ***Oshri O.**, 2022. Fluttering-induced flow in a closed chamber. Bifurcations and instabilities in fluid dynamics (BIFD), Netherland.
- (16) ***Oshri O.**, 2022. Fluttering-induced flow in a closed chamber. Israel Society for Theoretical and Applied Mechanics (invited talk), Israel.

Seminar presentations at universities and institutions

- (1) **Oshri O.**, Diamant, H. 2016. Biological and soft matter physics seminar, Tel Aviv University. Strain tensor selection and the elastic theory of incompatible thin sheets.
- (2) **Oshri O.**, Diamant, H. 2016. Department of mechanical engineering, Tel Aviv University. Strain tensor selection and the elastic theory of incompatible thin sheets.
- (3) ***Oshri O.**, Biswas, S., Balazs, A. C. 2020. Soft Matter and Biomaterials Seminar Series at the Weizmann Institute. Modeling the behavior of inclusions in circular plates undergoing 2D-to-3D shape changes.

• **Present Academic Activities**

Research in progress

- (1) ‘Snap-through’ of thin solid bodies in viscous media. Expected date of completion: 2025.
- (2) Delamination of thin sheets from adhesive surfaces. Expected date of completion: 2025.

Books and articles to be published

- (1) Goncharuk K., Feldman Y. and ***Oshri O.**, Fluttering induced flow in a closed chamber (submitted to the Journal of Fluid Mechanics).
- (2) Goncharuk K., ***Oshri O.** and Feldman Y., The Immersed Boundary Method: A SIMPLE Approach (submitted to the Journal of Computational Physics)

• **Research Grants**

- (1) Israel Science Foundation (950/22, 4 years): Personal research grant. ‘Snap-through’ of thin solid bodies in viscous media.
- (2) Israel Science Foundation (1081/22): Equipment research grant for a new faculty member. High performance computing (HPC) nodes for numerical simulations of fluid-structure interaction.