

RESUME

1. PERSONAL DETAILS

Full Name: Gal Shmuel

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Website: <http://solidmech.net.technion.ac.il>

2. ACADEMIC DEGREES

- 2009-2012 PhD. Mechanical Engineering, Ben-Gurion University, Beer-Sheva, Israel
- 2007-2009 MSc. *Magna cum Laude*, Mechanical Engineering, Ben-Gurion University, Beer-Sheva, Israel (Degree via the “direct program” in which excellent undergraduate students start their M.Sc. degree in their senior year and complete it within one year after)
- 2004-2008 BSc., *Summa cum Laude*, Mechanical Engineering, Ben-Gurion University, Beer-Sheva, Israel

3. ACADEMIC APPOINTMENTS

- 7/2020-to
date Associate Professor. Faculty of Mechanical Engineering, Technion—Israel Institute of Technology, Haifa, Israel
- 2014-
7/2020 Assistant Professor. Faculty of Mechanical Engineering, Technion—Israel Institute of Technology, Haifa, Israel
- 2012-2014 Postdoctoral scholar. Division of Engineering and Applied Science, Caltech—California institute of Technology, Pasadena, CA, USA
- 3/2010-
9/2010 Visiting scientist. Department of Mechanical and Structural Engineering, University of Trento, Trento, Italy

4. PROFESSIONAL EXPERIENCE (outside academia)

- 2009 External consultant, SigNexT Wireless Ltd. Project: kinematic analysis of adjustable antennas, upon which software, hardware, and a model were built

5. RESEARCH INTERESTS

Mechanics of dielectric elastomers; wave propagation in composites; effective and metamaterial properties of composites in elastodynamics

6. TEACHING EXPERIENCE

Design of new courses

036071 Dynamics and homogenization of composites and metamaterials (graduate level)

Lecturer in other courses

034010 Dynamics (undergraduate level)

035043 Introduction to the theory of elasticity (undergraduate level)

036003 Introduction to continuum mechanics (graduate level)

Additional teaching experience in the academia

Mentor Summer Undergraduate Research Fellows (SURF) program at Caltech

7. TECHNION ACTIVITIES

N/A

8. DEPARTMENTAL ACTIVITIES

2019 Research day awards committee

2019-to date Faculty representative in the council meetings of the Faculty of Education in Science and Technology

2016-to date Head of the Material Mechanics and MEMS Program, Faculty of Mechanical Engineering, Technion

9. PUBLIC PROFESSIONAL ACTIVITIES

Reviewer for research proposals

Israel Science Foundation (ISF), Applications for grant, Bi-National Science Foundation (BSF), Application for travel grant

Journal refereeing

Journal of the Mechanics and Physics of Solids, Mechanics of Materials, Mathematics and Mechanics of Solids, International Journal of Solids and Structures, Nonlinear Dynamics, Wave motion, Journal of Applied Physics, The Journal of the Acoustical Society of America, Mechanics Research Communications, Extreme Mechanics Letters, Quarterly Journal of Mechanics and Applied Mathematics, Mechanical Systems and Signal Processing, Nature Communications, International Journal of Non-linear Mechanics, International Journal of Engineering Science

Thesis examining

Faculties of Mechanical Engineering (2) and Chemical Engineering (1), Technion; department of Mechanical Engineering, Ben Gurion University (3); School of Mathematics, Statistics and Applied Mathematics, NUI Galway, Ireland (1)

10. MEMBERSHIP IN PROFESSIONAL SOCIETIES

ISTAM - The Israel Society for Theoretical and Applied Mechanics (branch of IUTAM)

11. FELLOWSHIP, AWARDS AND HONORS

- | | |
|------|--|
| 2016 | Citation for excellence in teaching (top 12% of Technion) |
| 2012 | The 32 nd Israeli Conference on Mechanical Engineering award for outstanding oral presentation by a PhD student

The "Ehud Ben-Amitay" prize for leading graduate students whose research is related to aerospace engineering |
| 2010 | The European Erasmus Mundus external cooperation window scholarship (EM ECW) for excellent PhD students

The Negev scholarship: "The Paran fellowship" for outstanding PhD students |

12. GRADUATE STUDENTS:

MSc Students: (name, honors, and current place of employment; years; title; publications)

Completed PhD theses N/A

Completed MSc theses [3]:

- | | | | |
|--|-----------|--|----------|
| 1. Roey Getz | 2015-2017 | Tunable Band-Gaps In Soft Electroactive Composites | J12, J14 |
| <p>“Brakim” excellence program¹.
MSc graduated <i>Summa cum Laude</i>. Awarded the Sandy and Beatrice Wahlberg excellence prize.
Currently: officer in IDF.</p> | | | |
| 2. Yotam Zisser | 2015-2018 | Experimental Slowing of Flexural Waves in Dielectric Elastomer film by voltage | J15 |
| <p>Currently: MBA Candidate at Mannheim Business School, Germany.</p> | | | |
| 3. Ben Lustig | 2017-2019 | Metamaterial Wave Phenomena in Laminates | J18, J22 |
| <p>“Brakim” excellence program¹.
MSc graduated <i>Summa cum Laude</i>.
Awarded the Yehuda Moneheit excellence award.
Awarded the Miles Rubin excellence prize. Currently: officer in IDF.</p> | | | |

PhD Theses in progress N/A

MSc Theses in progress [3]:

- | | | | |
|---|-------|---|---------------|
| 4. Ron Ziv | 2018- | Non-linear Wave Propagation in Soft Materials | J20, J25, J26 |
| <p>“Brakim” excellence program¹.</p> | | | |
| 5. Guy Elbaz | 2019- | Encirclement of Exceptional Points in Passive Elastic | J22 |

¹A special B.Sc. & M.Sc. program for distinguished students, collaborative with the IDF.

<p>“Reamim” excellence program². Gutwirth scholarship fellow. Awarded the Eli Altus excellence prize.</p>		<p>Laminates</p>	
<p>6. Alan Muhafra</p> <p>“Reamim” excellence program². Sherman scholarship fellow. Awarded the Sandy and Beatrice Wahlberg excellence prize.</p>	<p>2019-</p>	<p>The Electro-Momentum Coupling in Piezoelectric Metamaterials</p>	<p>J22</p>
<p>7. Majd Costa</p> <p>Primary supervisor: Assoc. Prof. Oded Amir</p>	<p>2020-</p>	<p>Topology optimization for maximizing electro-momentum coupling in piezoelectric composites</p>	

13. SPONSORED LONG-TERM VISITORS AND POST-DOCTORAL ASSOCIATES

Former post-docs [3]:

<p>1. Dr. Eliana Bortot</p> <p>Currently: lecturer in Northumbria University Newcastle, UK</p>	<p>2016-2017</p>	<p>Lady Davies scholarship fellow</p>	<p>J13, J16, J17</p>
<p>2. Dr. Yipin Su</p> <p>Currently: postdoc at NUI Galway.</p>	<p>8/2018</p>	<p>Visiting scholar, funded by the Irish Research Council</p>	
<p>3. Dr. Atul Kumar Sharma</p> <p>Co-advisor: Assoc. Prof. Oded Amir. Currently: Assist. Prof. in IIT Jodhpur.</p>	<p>2019-2020</p>		

²A special program for elite students aiming to expedite integration of honor students in research.

Current post-docs [2]:

- | | | | |
|----------------------------|-------|---|------------------|
| 4. Dr. René Pernas-Salomón | 2017- | Technion scholarship fellow | J11, J19,
J23 |
| 5. Dr. Prabhat Kumar | 2020- | Letter of appointment since July
1. Arrival delayed due to
Covid-19. Primary advisor:
Assoc. Prof. Oded Amir | |

14. RESEARCH GRANTS:

Competitive

- | | |
|-----------|--|
| 2015-2019 | Israel Science Foundation , \$203k, Wave Localization in Disordered Dielectric Elastomers |
| | Bi-national Science Foundation , \$108k, Tunable Stop-Bands in Soft Electroactive Composites, PI, with Prof. Dennis Kochmann ³ as co-PI |
| 2019-2022 | Ministry of Science and Technology , \$134k, Topology Optimization of Soft Dielectrics for Dynamic Metamaterials, with Assoc. Prof. Oded Amir (Technion) as co-PI |
| 2020-2024 | Israel Science Foundation , \$280k, Electro-momentum coupling in piezoelectric composites |

Industrial and other sources N/A

15. PUBLICATIONS

Theses

- | | |
|------|--|
| 2009 | MSc, Anisotropic composites in finite elasticity, Mechanical Engineering, Ben-Gurion University. Supervisor: Prof. Gal deBotton. |
| 2012 | PhD, Wave propagation in multi-phase finitely deformed dielectric elastomers, Mechanical Engineering, Ben-Gurion University. Supervisor: Prof. Gal deBotton. |

³ Then Asst. Prof. at Caltech, currently Prof. at ETH.

Refereed papers in professional journals

Published papers

- J1. deBotton, G., **Shmuel, G.**, Mechanics of composites with two families of finitely extensible fibers undergoing large deformations, *J. Mech. Phys. Solids*, 57:1165-1181, 2009
- J2. deBotton, G., **Shmuel, G.**, A new variational estimate for the effective response of hyperelastic composites, *J. Mech. Phys. Solids*, 58:466-483, 2010
- J3. **Shmuel, G.**, deBotton G., Out-of-plane shear of fiber composites at moderate stretch level, *J. Eng. Math.*, 68:85-97, 2010 (special issue: mechanics of fibre-reinforced materials: theory and applications)
- J4. **Shmuel, G.**, Gei, M., deBotton, G., The Rayleigh-Lamb wave propagation in dielectric elastomer layers subjected to large deformations, *Int. J. Nonlinear Mech.*, 47:307-316, 2012 (special issue dedicated to R. W. Ogden)
- J5. **Shmuel, G.**, deBotton, G., Band-gaps in electrostatically controlled dielectric laminates subjected to incremental shear motions, *J. Mech. Phys. Solids*, 60:1970-1981, 2012
- J6. **Shmuel, G.**, deBotton, G., Axisymmetric wave propagation in finitely deformed dielectric elastomer tubes, *Proc. R. Soc. A*, 469, 2013 (16 pages)
- J7. **Shmuel, G.**, Electrostatically tunable band gaps in finitely extensible dielectric elastomer fiber composites, *Int. J. Solids Struct.*, 50:680-686, 2013
- J8. **Shmuel, G.**, Thorgeirsson, A.T.⁴, Bhattacharya, K., Wavelets analysis of microscale strains, *Acta Mater.*, 76:118-126, 2014

(Henceforth appear my publications at Technion. Throughout, my group's graduate students and postdocs are underlined.)

- J9. **Shmuel, G.**, Manipulating torsional motions of soft dielectric tubes, *J. Appl. Phys.*, 117, 174902, 2015 (8 pages)

⁴ Summer undergraduate exchange student at Caltech.

- J10. **Shmuel, G.**, Band, R.⁵, Universality of the frequency spectrum of laminates, *J. Mech. Phys. Solids*, 92:127-136, 2016
- J11. **Shmuel, G.**, Pernas-Salomón, R., Manipulating motions of elastomer films by electrostatically-controlled aperiodicity, *Smart Mater. Struct.*, 25(12):125012, 2016 (13 pages)
- J12. Getz, R., Kochmann, D. M.³, **Shmuel, G.**, Voltage-controlled complete stopbands in two-dimensional soft dielectrics, *Int. J. Solids Struct.*, 113:24–36, 2017
- J13. Bortot, E., **Shmuel, G.**, Tuning sound with soft dielectrics, *Smart Mater. Struct.* 26:045028, 2017 (10 pages)
- J14. Getz, R., **Shmuel, G.**, Band gap tunability in deformable dielectric composite plates, *Int. J. Solids Struct.*, 128:11–22, 2017
- J15. Zisser, Y., **Shmuel, G.**, Experimental slowing of flexural waves in dielectric elastomer films by voltage, *Mech. Res. Commun.*, 85, 64-68, 2017
- J16. Bortot, E., **Shmuel, G.**, Prismatic bifurcations of soft dielectric tubes, *Int. J. Eng. Sci.*, 124:104-114, 2018
- J17. Bortot, E., Amir, O.⁶, **Shmuel, G.**, Topology optimization of dielectric elastomers for wide tunable band gaps, *Int. J. Solids Struct.*, 143:262-273, 2018
- J18. Lustig, B., **Shmuel, G.**, On the band gap universality of multiphase laminates and its applications, *J. Mech. Phys. Solids*, 117:37-53, 2018
- J19. Pernas-Salomón, R., **Shmuel, G.**, Dynamic homogenization of composite and locally resonant flexural systems, *J. Mech. Phys. Solids*, 119:43-59, 2018
- J20. Ziv, R., **Shmuel, G.**, Smooth waves and shocks of finite amplitude in soft materials, *Mech. Mat.*, 135:67-76, 2019
- J21. Morini, L.⁷, Tetik, Z. G.⁷, **Shmuel, G.**, Gei, M.⁷, On the universality of the frequency spectrum and band-gap optimization of quasicrystalline-generated structured rods, *Philos. Trans. R. Soc. A*, 378, 2020 (22 pages)
- J22. Lustig, B., Elbaz, G., Muhafrá, E., **Shmuel, G.**, Anomalous energy transport in laminates with exceptional points, *J. Mech. Phys. Solids*, 103, 103719, 2019 (18 pages)

⁵ Then Asst. Prof., currently Assoc. Prof. at the department of mathematics, Technion.

⁶ Then Asst. Prof., currently Assoc. Prof. at the Faculty of Civil and Environmental engineering, Technion.

⁷ Research collaborators from Cardiff University, UK, led by Prof. M. Gei.

- J23. Pernas-Salomón, R., Shmuel, G., Symmetry breaking creates electro-momentum coupling in piezoelectric metamaterials, *J. Mech. Phys. Solids*, 103770, 2020 (17 pages)
- J24. Shmuel, G., Moiseyev, N.⁸, [Linking scalar elastodynamics and Non-Hermitian quantum mechanics](#), *Phys. Rev. Applied*, 13, 024074, 2020 (11 pages)
- J25. Ziv, R., Shmuel, G., [Observation of vector solitary waves in soft laminates using a finite volume-method](#), *Int. J. Nonlinear Mech.*, 124, 103502, 2020 (10 pages)
- J26. Ziv, R., Shmuel, G., [Oscillating vector solitary waves in soft laminates](#), *J. Mech. Phys. Solids*, 143, 104058, 2020 (14 pages)

Accepted (or in press) papers N/A

Submitted papers N/A

Review papers N/A

Books N/A

Chapters in books N/A

Refereed papers in conference proceedings

1. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Applications of wavelets in the representation and prediction of transformation in shape-memory polycrystals, *TMS 2014 143rd Annual Meeting and Exhibition: Supplemental Proceedings*, 527-534, 2014, TMS 2014 143rd annual meeting and exhibition, San Diego, California, USA, 2014

Patents granted N/A

Research reports and other publications N/A

16. CONFERENCES

(Speaker is underlined)

Plenary, keynote or invited talks

11. Shmuel, G., deBotton, On the propagation and manipulation of waves in soft electroactive tubes, SES 50th Annual Technical Meeting and ASME-AMD Annual Summer Meeting (SES/ASME-AMD 2013), in the session “Mechanics of Phase Transforming and Multifunctional Materials”, Brown University, Providence, USA, 2013, **keynote lecture**

⁸ Prof. Emeritus, Faculty of Chemistry & Faculty of Physics & Solid-State Institute, Technion.

- I2. Shmuel, G., A New Variational Method for Bounding the Effective Behavior of Soft Composites, Mathematics of novel materials, Mittag-Leffler Institute, Stockholm, Sweden, 2015, **invited (and funded) lecture**
- I3. Shmuel, G., Lustig, B., On the Band Gap Universality of Multiphase Laminates and its Applications, 18th U.S. National Congress for Theoretical and Applied Mechanics, in the symposium “Phononics and Metamaterials”, Chicago, Illinois, USA, 2018, **keynote lecture**
- I4. Shmuel, G., Stimulus-Momentum Coupling in Active Metamaterials with Broken Symmetry, RAM3-Recent Advances in Mechanics and Mathematics of Materials, Rome, Italy, 2019, **invited (and funded) lecture**
- I5. Shmuel, G., Stimulus-Momentum Coupling in Active Metamaterials with Broken Symmetry, SIAM Conference on Mathematical Aspects of Materials Science), 2021, **invited lecture** (postponed to May 2021)

Contributed talks and posters

- C1. Shmuel, G., deBotton, G., Homogenization of nonlinear fiber-reinforced composites in finite deformations, Modeling and Computation in Biomechanics (workshop), Graz University of Technology, Austria, 2008
- C2. deBotton, G., Shmuel, G., Nonlinear composites with one and two families of fibers, The 45th Annual Technical Meeting of the Society of Engineering Science (SES08), University of Illinois at Urbana-Champaign, USA, 2008
- C3. deBotton, G., Shmuel, G., Rudykh, S., Fiber composites in finite elasticity, The 4th International Symposium on Defect and Material Mechanics (ISDMM09), University of Trento, Trento, Italy, 2009
- C4. deBotton, G., Shmuel, G., Hyperelastic fiber composites - homogenization and application to biological tissues, International workshop on Continuum Biomechanics of Biological Tissue, Castro Urdiales, Spain, 2009
- C5. Shmuel, G., deBotton, G., Mechanics of composites with two families of finitely extensible fibers undergoing large deformations, The 2009 Joint ASCE-ASME-SES Conference on Mechanics and Materials, Virginia, 8USA, 2009
- C6. deBotton, G., Shmuel, G., A new variational procedure for estimating the macroscopic behavior of soft collagenous tissues, The 16th US National Congress on Theoretical and Applied Mechanics (USNCTAM), State College, PA, USA, 2010

- C7. deBotton, G., Shmuel, G., Oren, T., A new variational procedure for estimating the behaviors of soft composites, SES 2010 conference, Iowa state university, USA, 2010
- C8. deBotton, G., Shmuel, G., Oren, T., Goldenberg, Y., Soft composites attaining the Hashin-Shtrikman bounds at the referential state, ISTAM Symposium 25, Tel Aviv University, Israel, 2011
- C9. Shmuel, G., Gei, M., deBotton, G., Generalized Rayleigh-Lamb wave propagation in finitely deformed dielectric elastomers, EuroEAP 2011 First International conference on Electromechanically Active Polymer (EAP) transducers and artificial muscles, Pisa, Italy, 2011 (oral and poster presentation, in conference proceeding)
- C10. Shmuel, G., deBotton, G., Adjustable band-gaps in dielectric elastomer laminates subjected to finite strains, EuroEAP 2011 First International conference on Electromechanically Active Polymer (EAP) transducers and artificial muscles, Pisa, Italy, 2011 (oral and poster presentation, in conference proceeding)
- C11. Shmuel, G., Gei, M., deBotton, G., Finitely strained dielectric elastomer layers as waveguides for electroelastic waves, 48th Annual Technical Conference of Society of Engineering Sciences (SES11), Northwestern University Evanston, Illinois, USA, 2011
- C12. Shmuel, G., deBotton, G., Tunable band-gaps in finitely deformed periodic laminates composed of dielectric elastomers, 48th Annual Technical Conference of Society of Engineering Sciences (SES11), Northwestern University Evanston, Illinois, USA, 2011
- C13. Shmuel, G., Electrostatically controlled band-gaps in fiber-reinforced dielectric elastomers, EuroEAP 2012, Second International conference on Electromechanically Active Polymer (EAP) transducers and artificial muscles, Potsdam, Germany, 2012 (oral and poster presentation, in conference proceeding)
- C14. deBotton, G., Shmuel, G., Oren, T., A micromechanics approach for estimating the behavior of soft collagenous tissues, the 8th European Solid Mechanics Conference (ESMC 2012), Graz, Austria, 2012
- C15. deBotton, G., Shmuel, G., Rudykh, S., Electroactive polymer composites - mechanical response, stability, wave propagation and band-gap, The XXIII ICTAM, Beijing, China, 2012
- C16. Shmuel, G., deBotton, G., On the thickness vibrations and stop-bands in actuated dielectric elastomer laminates, the 32nd Israeli Conference on Mechanical Engineering (ICME 2012), Tel-Aviv, Israel, 2012

- C17. Shmuel, G., Electroelastic wave annihilation via actuation of 2D dielectric elastomer composites, the 32nd Israeli Conference on Mechanical Engineering (ICME 2012), Tel-Aviv, Israel, 2012
- C18. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Wavelet analysis for modeling the behavior of polycrystals, ICMR Summer School on Materials in 3D: Modeling and Imaging at Multiple Length Scales (poster presentation), University of California, Santa Barbara, USA, 2013
- C19. deBotton, G., Shmuel, G., Rudykh, S., Oren, T., Hyperelastic fiber composites - homogenization and macroscopic stability, SES 50th Annual Technical Meeting and ASME-AMD Annual Summer Meeting (SES/ASME- AMD 2013), Brown University, Providence, USA, 2013
- C20. Shmuel, G., deBotton, G., On the propagation and manipulation of waves in soft electroactive tubes, SES 50th Annual Technical Meeting and ASME-AMD Annual Summer Meeting (SES/ASME-AMD 2013), Brown University, Providence, USA, 2013
- C21. Shmuel, G., Bhattacharya, K., Adaptive wavelet-based approach for predicting the mechanical behavior of polycrystals, SES 50th Annual Technical Meeting and ASME-AMD Annual Summer Meeting (SES/ASME-AMD 2013), Brown University, Providence, USA, 2013
- C22. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Applications of wavelets in the representation and prediction of transformation in shape-memory polycrystals, TMS 2014 143rd annual meeting and exhibition, San Diego Convention Center, San Diego, California, USA, 2014
- C23. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Wavelet analysis of microscale strains, Continuum Models Discrete Systems (CMDS) 13, University of Utah, USA, 2014
- C24. Shmuel, G., deBotton, G., A New Variational Method for Bounding the Effective Behavior of Soft Composites, Mathematics of Novel Materials, Mittag-Leffler Institute, Stockholm, Sweden, 2015
- C25. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Wavelets in Microstructure Data Reduction, Construction, and Analysis, CERMODEL 2015, University of Trento, Italy, 2015
- C24. Shmuel, G., deBotton, G., A New Variational Method for Bounding the Effective Behavior of Soft Composites, Mathematics of Novel Materials, Mittag-Leffler Institute, Stockholm, Sweden, 2015

- C25. Shmuel, G., Thorgeirsson, A., Bhattacharya, K., Wavelets in Microstructure Data Reduction, Construction, and Analysis, CERMODEL 2015, University of Trento, Italy, 2015
- C26. Shmuel, G., Electrostatic Tuning of Band-gaps in Fibrous Deformable Dielectrics, 9th European Solid Mechanics Conference (ESMC Carlos III University, Leganés, Madrid, Spain, 2015
- C27. Getz, R., Shmuel, G., Complete band-gaps in soft dielectric fiber-composites ISTAM 2015 Annual Symposium, Tel-Aviv University, Tel-Aviv, Israel, 2015
- C28. Shmuel, G., Band, R., The Universality of the Band Structure of Layered Composites, 24th International Congress of Theoretical and Applied Mechanics (ICTAM 2016), Palais des congres, Montréal, Canada, 2016
- C29. Getz, R., Shmuel, G., Actuation of soft dielectric films for tunable band-gaps, ISTAM 2017 Annual Symposium, Tel-Aviv University, Tel-Aviv, Israel, 2017
- C30. Shmuel, G., Band, R., Universality of the Frequency Spectrum of Laminates, ISTAM 2017 Annual Symposium, Tel-Aviv University, Tel-Aviv, Israel, 2017
- C31. Bortot, E., Shmuel, G., Manipulating sound propagation with soft dielectric tubes, ISTAM 2017 Annual Symposium, Tel-Aviv University, Tel-Aviv, Israel, 2017
- C32. Shmuel, G., Band, R., Characterizing the tunability of the frequency spectrum of nonlinear laminates through unveiled universality, International Conference on Plasticity, Damage, and Fracture 2018, San Juan, Puerto Rico, USA, 2018
- C33. Shmuel, G., Lustig, B., On the band gap universality of multiphase laminates and its applications, 18th U.S. National Congress for Theoretical and Applied Mechanics, Chicago, Illinois, USA, 2018
- C34. Lustig, B., Shmuel, G., Universality of the frequency spectrum of laminates, 10th European Solid Mechanics Conference, Bologna, Italy, 2018
- C35. Pernas-Salómon, R., Shmuel, G., Dynamic homogenization of composite and locally resonant flexural systems, SES meeting 2018, Madrid, Spain, 2018
- C36. Lustig, B., Shmuel, G., On the band gap universality of multiphase laminates and its applications, SES meeting 2018, Madrid, Spain, 2018
- C37. Lustig, B., Shmuel, G., Characterizing the band-gap tunability of soft multiphase laminates through unveiled universality, SES meeting 2018, Madrid, Spain, 2018
- C38. Ziv, R., Shmuel, G., Smooth waves and shocks of finite amplitude in soft materials, The multiscale spectrum of constitutive modeling in solid mechanics, Castro Urdiales, Spain, 2019

- C39. Pernas-Salómon, R., Shmuel, G., Emergence of new Willis couplings in responsive metamaterials, The multiscale spectrum of constitutive modeling in solid mechanics, Castro Urdiales, Spain, 2019
- C40. Shmuel, G., Pernas-Salómon, R., Symmetry breaking creates electro-momentum coupling in piezoelectric metamaterials, the 69th Symposium of the Israel Society for Theoretical and Applied Mechanics (ISTAM 2019), Haifa, Israel, 2019
- C41. Shmuel, G., Lustig, B., Elbaz, G., Muhafra, A., Anomalous energy flow in passive elastic layers with exceptional points, Control of Quantum and Classical Waves in Complex Media workshop, Ein Gedi, Israel, 2020

Participation in organizing conferences

- 2019 Co-organizer & co-chairman, The 69th Symposium of the Israel Society for Theoretical and Applied Mechanics (ISTAM 2019), Haifa, Israel
- 2018 Co-organizer & co-chairman, Phononics and Metamaterials symposium in 18th U.S. National Congress for Theoretical and Applied Mechanics, Chicago, Illinois, USA
- 2015 Co-organizer, From nitinol in coffee to now: a twenty-seven year journey of active materials, Symposium in honor of Prof. Kaushik Bhattacharya on the occasion of his 50th birthday, Caltech, USA
- 2013 Co-chairman, Mechanics of phase transforming and multifunctional materials session *in* SES 50th annual technical meeting and ASME-AMD annual summer meeting (SES/ASME-AMD 2013), Brown University, Providence, USA