Date:11/1/2023

R E S U M E

1. PERSONAL DETAILS

Full Name: Gal Shmuel
E-mail: meshmuel@technion.ac.il
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
9/2014-7/2020	Assistant Professor. Faculty of Mechanical Engineering, Technion—Israel Institute of Technology, Haifa, Israel
10/2012-9/2014	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, non-Hermitian elastodynamics

6. TEACHING EXPERIENCE

Design of new courses

036097	Dynamics and homogenization of composites and metamaterials (graduate level)

Instructor 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. DEPARTAMENTAL ACTIVITIES

2022-2023	Vice dean for teaching affairs
2019	Research day awards committee
2019-to date	Faculty representative in the council meetings of the Faculty of Education in Science and Technology
2016-2022	Head of the Material Mechanics and MEMS Program, Faculty of Mechanical Engineering, Technion

9. PUBLIC PROFESSIONAL ACTIVITIES

Associate editor, Wave Motion, 2022-

Member, ISF grant committee for mechanics (date withheld)

Member, BSF grant committee for travel grant (date withheld)

Member, PAZI grant committee (date withheld)

Referee, ISF, (date withheld)

Referee, 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; Physical Review Applied; Physical Review E; Physical Review Letters; Journal of applied Mechanics; Philosophical Transaction of the Royal Society A

PhD/MSc theses committees, Faculties of Mechanical Engineering (4) and Chemical Engineering (1), Technion; department of Mechanical Engineering, Ben Gurion University (5); 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 32nd 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 [5]:

1. Roey Getz "Brakim" excellence program[1]. MSc graduated *Summa cum Laude*. Awarded the Sandy and Beatrice Wahlberg excellence prize. Currently: officer in IDF.	2015-2017	Tunable Band-Gaps In Soft Electroactive Composites	J12, J14
2. Yotam Zisser Currently: MBA Candidate at Mannheim Business School, Germany.	2015-2018	Experimental Slowing of Flexural Waves in Dielectric Elastomer film by voltage	J15
3. Ben Lustig "Brakim" excellence program[1]. MSc graduated *Summa cum Laude.*	2017-2019	Metamaterial Wave Phenomena in Laminates	J18, J22

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

Awarded the Yehuda Moneheit excellence award. Awarded the Miles Rubin excellence prize. Currently: officer in IDF.			
4. Ron Ziv "Brakim" excellence program[1]. MSc graduated *Summa cum Laude.* Awarder the Miles Rubin prize for excellent MSc thesis. Currently: officer in IDF.	2018-2020	Non-linear Wave Propagation in Soft Materials	J20, J25, J26
5. Majd Kosta Primary supervisor: Assoc. Prof. Oded Amir (Technion)	2020-2022	Applications of topology optimization in electroelastodynamics	J29, J30, J32

PhD Theses in progress [2]:

1. Akhil Pratap Singh Primary supervisor: Asst. Prof. Atul Kumar Sharma (IIT Jodhpur)	2021-	Generalized Willis Materials: Finite Element Modeling	
2. Eran Ben-Haim Primary supervisor: Assoc. Prof. Amir Gat (Technion)	2018-	Leveraging Bi-Stability for Minimalistic Control of Fluid Based Soft Actuators: Theoretical and Experimental Investigation	

MSc Theses in progress [5]:

1. Guy Elbaz "Reamim" excellence program[2]. Gutwirh scholarship fellow. Awarded the Eli Altus excellence prize.	2019-	Encirclement of Exceptional Points in Passive Elastic Laminates	J22, J31
2. Alan Muhafra "Reamim" excellence program[2]. Sherman scholarship fellow. Awarded the Sandy and Beatrice Wahlberg excellence prize.	2019-	The Electro-Momentum Coupling in Piezoelectric Metamaterials	J22, J29, J32
3. Ariel Fishman	2021-	Waves in anisotropic layered media	
4. Kevin Muhafra	2021-	Asymptotic analysis of generalized piezoelectric media	
5. Tal Goldstein	2021-	Scattering properties of non-Hermitian elastic media	S1

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

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

Former post-docs [5]:

1. Dr. Eliana Bortot	2016-2017	Lady Davies scholarship fellow	J13, J16, J17
2. Dr. Yipin Su Currently: postdoc at USC	8/2018	Visiting scholar, funded by the Irish Research Council	
3. Dr. Atul Kumar Sharma Currently: Asst. Prof. at IIT Jodhpur	2019-2020	Co-advisor: Assoc. Prof. Oded Amir. Currently: Assist. Prof. in IIT Jodhpur.	J30
4. Dr. Prabhat Kumar	2020-2021	Main advisor: Assoc. Prof. Oded Amir	
5. Dr. René Pernas-Salomón Currently: CONEX-Plus fellow at Universidad Carlos III de Madrid	2017-2021	Technion scholarship fellow	J11, J19, J23, J27, J28, J29, J32

Current post-docs N/A

14. RESEARCH GRANTS:

Competitive

2015-2019 **Israel Science Foundation (ISF)**, $203k, Wave Localization in Disordered Dielectric Elastomers

Bi-national Science Foundation (BSF), $108k, Tunable Stop-Bands in Soft Electroactive Composites, PI, co-PI: Prof. Dennis Kochmann[3] (ETH)

2019-2022 **Ministry of Science and Technology (MOST)**, $134k, Topology Optimization of Soft Dielectrics for Dynamic Metamaterials, co-PI: Assoc. Prof. Oded Amir (Technion)

2020-2024 **Israel Science Foundation (ISF)**, $280k, Electro-momentum coupling in piezoelectric composites

2022-2027 **European Research Council (ERC)**, $1.75M, EXCEPTIONAL: non-Hermitian Elastodynamics

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.

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)

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

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)

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

[4] Summer undergraduate exchange student at Caltech.
[5] Then Asst. Prof., currently Assoc. Prof. at the department of mathematics, Technion.

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., Muhafra, E., **Shmuel, G.**, Anomalous energy transport in laminates with exceptional points*, J. Mech. Phys. Solids*, 103, 103719, 2019 (18 pages)

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)

J27. Pernas-Salomón, R., **Shmuel, G.**, Fundamental principles for generalized Willis metamaterials, *Phys. Rev. Applied,* 14 (6), 064005, 2020 (19 pages)

J28. Pernas-Salomón, R., Haberman, R. M., Norris, N. A, **Shmuel, G.**, The electromomentum effect in piezoelectric Willis scatterers**,** *Wave Motion, 106, 102797,* 2021, Invited paper for the special issue of on Willis Materials (23 pages)

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

J29. Muhafra, A., Kosta, M., Torrent, D., Pernas-Salomón, R., **Shmuel, G**., Homogenization of piezoelectric planar Willis materials undergoing antiplane shear, *Wave Motion, 108, 102833*, 2022, Invited paper for the special issue of on Willis Materials (19 pages)

J30. Sharma, A. K, Kosta, M., **Shmuel, G**., Amir., O., Gradient-based topology optimization of dielectric elastomers as tunable phononic crystals*, Compos. Struct. 280, 114846*, 2022 (17 pages)

J31. Elbaz, G., Pick, A., Moiseyev, N., **Shmuel, G***,* Encircling exceptional points of Bloch waves: mode conversion and anomalous scattering, *Journal of Physics D: Applied Physics,* 55 235301, 2022 (15 pages)

J32. Kosta, M., Muhafra, A., Pernas-Salomón, R., **Shmuel, G**., Amir, O., Maximizing the electromomentum coupling in piezoelectric laminates, *Int. J. Solids Struct.,* 254-255, 111909 2022 (13 pages)

Submitted papers

S1. Goldstein, T., **Shmuel, G**.., Oblique scattering from non-Hermitian optical waveguides, *under revision*

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

I1. 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**

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., Lustig, B., Elbaz, G., Muhafra, A., Anomalous energy flow in passive elastic layers with exceptional points, XIV workshop on physics of condensed and molecular matter, Cuernavaca Morelos, Mexico, 2020 (virtual) **invited lecture**

I6. Shmuel, G., Pernas-Salomón, R., Muhafra, A., Kosta, M., Haberman, Torrent, D., R. M., Norris, N. A, The electromomentum coupling in generalized piezoelectric media, SIAM Conference on Mathematical Aspects of Materials Science), 2021, **invited lecture** (virtual)

I7. Shmuel, G., Pernas-Salomón, R., Muhafra, A., Kosta, M., Haberman, Torrent, D., R. M., Norris, N. A, The electromomentum coupling in generalized piezoelectric media, The Acoustical Society of America's spring meeting "Acoustics in Focus", **invited lecture** (virtual)

I8. Shmuel, G., Pernas-Salomón, R., Muhafra, A., Kosta, M., Haberman, Torrent, D., R. M., Norris, N. A, The International Conference on Recent Advances in Mechanical Engineering 2022, Jodhpur, India, **keynote lecture** (virtual)

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 I6th 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 confer- ence 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

C42. Shmuel, G., Pernas-Salomón, R., Muhafra, A., Kosta, M., Haberman, Torrent, D., R. M., Norris, N. A, The Electromomentum Effect in Piezoelectric Willis Media, The 19th U.S. National Congress on Theoretical and Applied Mechanics, Austin, Texas, USA, 2022

C43. Shmuel, G., Pernas-Salomón, R., Muhafra, A., Kosta, M., Haberman, Torrent, D., R. M., Norris, N. A, Trianisotropy and the Electromomentum Effect, The 12th International Conference on Elastic, Electrical, Transport, and Optical Properties of Inhomogeneous Media,, Besancon, France, 2022

Participation in organizing conferences

2022 Co-organizer, Minisymposium "New Metamaterial Concepts", 19th USNC/TAM, Austin, Texas, USA

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