Curriculum Vitae of Marta Lewicka

November 2022

Education

- Ph.D. Mathematical Analysis, Advisor: A. Bressan, SISSA, Italy. 2000
- B.Sc. Engineer Title in Computer Science, Advisor: H. Piech, Polytechnic of Częstochowa, Poland. 1998
- M.Sc. and B.Sc. Mathematics, Advisor: L. Górniewicz, University of Gdańsk, Poland. 1996

Appointments

- Associate Professor, Mathematics, University of Pittsburgh. 2011 - now
- Assistant and Associate Professor, Mathematics, Rutgers University. 2010 - 2011
- Assistant and Associate Professor, Mathematics, University of Minnesota. 2005 - 2011
- L.E. Dickson Instructor, Mathematics and Astrophysics, University of Chicago. 2002 - 2005
- Post-doc, Max Planck Institute for Mathematics, Leipzig, Germany. 2000 - 2002

Recognitions

- Lady Davis Visiting Professorship at the Hebrew University of Jerusalem. 2022
- Fellow of the American Mathematical Society. class of 2021
- Simons Fellow in Mathematics. 2018
- Professor's scientific title, awarded in Poland by the President of the Republic of Poland. 2017
- Howard Rowlee Lecture, University of Nebraska. 2016
- AMS Invited Address at the Joint Mathematics Meetings in Seattle. 2016
- NSF Career Award. 2009
- McKnight Land-Grant Professorship, University of Minnesota. 2007

Visiting positions

- Visiting at Hausdorff Research Institute for Mathematics, Bonn, Germany. 1-3/2023
- Lady Davis Visiting Professor at the Hebrew University of Jerusalem. 3-6/2022
- Visiting Professor at Oxford University and Caltech (courtesy of Simons Fellowship). 10-12/2018
- Visiting Faculty at Courant Institute, NYU. 01-06/2018
- Visiting Researcher at Microsoft Research, Redmond. 08/2016
- Visiting Professor at Institut Henri Poincare, Paris, France. 05-06/2016
- Visiting Scholar, University of California, Berkeley. 09-12/2015
- Visiting Professor at University of Florence, Italy. 05/2015
- Visiting Professor at Okinawa Institute of Science and Technology, Japan. 08/2014
- Visiting Professor at Universite Paris Descartes (Paris 5), France. 05/2014
- Giovanni Prodi Chair in Nonlinear Analysis, University of Wuerzburg, Germany. 05-07/2013
- Long term visitor at Institute for Mathematics and Its Applications, Minneapolis. 2009

Editorial Boards

- *SIAM Journal of Mathematical Analysis* 2011 - now
- *Differential and Integral Equations* 2013 - now
- *Control, Optimisation and Calculus of Variations (CoCV)* 2017 - now
- *Tbilisi Mathematical Journal* 2016 - now

PhD student advising

- Hui Li, PhD 2012 University of Minnesota
- Luca Codenotti, PhD 2017 U. of Pittsburgh
- Michael Lindsey, 2017 - 2020, U. of Pittsburgh
- Pablo Ochoa, PhD 2014 U. of Pittsburgh
- Diego Ricciotti, PhD 2018 U. of Pittsburgh, jointly with Juan Manfredi

Grants

Research awards with the Principal Investigator role

- NSF DMS-2006439 "Dimension Reduction and Singular Limits of Prestrained Structures ", 400,000$, 2020-2023
- NSF DMS-1613153 "Singular Limits with Geometric Effects ", 280,000$, 2016-2020
- NSF DMS-1406730 "Theoretical Models of Shape Formation: Analysis, Geometry and Energy Scaling Laws", 169,000$, 2014-2017
- NSF CAREER DMS-0846996 "Thin Shells - Problems in Nonlinear Elasticity and Fluid Dynamics", 400,000$, 2009-2015
- NSF DMS-070727 "Dynamics and Stable Structures in Nonlinear PDEs", 150,000$, 2007-2012
- NSF DMS-0306201 "Well Posedness of Systems of Conservation Laws Near Solutions Containing Large Waves", 80,000$, 2003-2007
- McKnight Land-Grant Professorship, 90,000$, 2007-2009

Other awards: for conferences organization and grants with secondary investigator role

- NSF DMS-1764156 "Conference on Hyperbolic Problems", 27,000$, 2018, co-PI
- NSF DMS-1446452 "Workshop: Advances in Discrete Networks", 15,000$, 2014, co-PI
- NSF DMS-1400941 "Workshop: Advances in Nonlinear Analysis", 24,500$, 2014, co-PI
- NSF DMS-1266188 "Workshop: Advances in Nonlinear Science", 16,000$, 2013, PI
- NSF PIRE DMS "Science at the Triple Point Between Mathematics, Mechanics and Materials Science", 6 million $, 2010-2015, Senior Investigator
- KBN-N N201 547438 "Aspects of Fluid Mechanics", 400,000 PLN, 2010-2013, co-PI
- IMA conference grant "Strain induced shape formation", 30,000$, 2010, co-PI
- NSF DMS-0801551 "11th Riviere-Fabes Symp. on Analysis and PDE", 19,500$, 2008, co-PI

Lectures at conferences, research talks and seminars in the recent academic years

2023: * Duke University - invited speaker at the conference in honor of P. Constantin
* 87th Midwest PDE Seminar (Notre Dame University) - plenary talk
* "Current challenges in complex materials", Hausdorff Inst, Bonn (Germany) - invited speaker

2022: * Hebrew University in Jerusalem - Analysis seminar
*University of Indiana at Bloomington - colloquium
* University of Indiana at Bloomington - PDE seminar
* Hebrew University in Jerusalem - colloquium
* Hebrew University in Jerusalem - a series of lectures
* Joint Mathematics Meetings 2022, Seattle - a minisymposium talk
* Jyvaskyla University (Finland) - Analysis seminar
* Louisiana State University - Analysis seminar
* "Equilibrium and non-Equilibrium Pattern Formation in Soft Matter" - Banff conference speaker

2021: * North Carolina State University - PDE seminar
* UCLA - Analysis seminar
* Online North East PDE and Analysis Seminar - plenary talk
* Polish Mathematical Society - Online seminar
* 2021 Summer meeting of the Canadian Mathematical Society - a minisymposium talk
* Mathematical Congress of the Americas 2021 - a minisymposium talk
* Kansas State University - Applied Analysis seminar
* Colgate University - Division of Natural Sciences Colloquium
* University of Dresden (Germany) - PDE seminar
* University of Southern California - Applied Math Colloquium
* "Distinguished Women in Mathematics" colloquium series at the University of Nebraska-Lincoln
* University of Nebraska-Lincoln - PDE seminar

2020: * Harvard University - Applied Math seminar
* University of Regensburg (Germany) - colloquium
* University of Bath - PDE seminar
* Fall Western Sectional Meeting (formerly at University of Utah) - minisymposium talk
* Notre Dame University - colloquium

Covid19-Cancelled talks:

* University of Warsaw (Poland) - PDE seminar
* "Stochastic analysis and nonlinear PDEs", Jyvaskyla University (Finland) - plenary speaker
* AMS Spring Southeastern Sectional Meeting (Charlottesville, VA) - a minisymposium talk
* Summer school lectures (5hrs) in Castro Urdiales (Spain)

2019: * Conference "Barcelona Analysis Conference BAC19" (Barcelona, Spain) - plenary speaker
* Conference "Analysis and related subjects" (Levico Terme, Italy) - plenary speaker
* Conference "PDE 2019: Partial Differential Equations in Fluids and Solids", Weierstrass Institute Berlin (Germany) - plenary speaker
* "The Mathematical Design of New Materials" seminar at Cambridge University
* SIAM Great Lakes Section Annual Meeting (University of Michigan) - plenary speaker
* Fourth Northeastern Analysis Meeting (Syracuse University) - plenary speaker
* Temple University - colloquium
* Louisiana State University - colloquium
* University of Minnesota - PDE seminar
* Purdue University "Workshop on advances in analysis" - plenary speaker
* Purdue University - Probability Seminar talk
* Conference "On the Trail of Women in Mathematics" (Krakow, Poland) - plenary speaker
* Special Session at the AWM Research Symposium at Rice University - a talk

2018: * 28th International Federation for Information Processing (IFIP) Conference - plenary speaker
* First meeting of the Polish and Italian Mathematical Societies (Wroclaw, Poland) - plenary speaker

* Women In Mathematics of Materials workshop (University of Michigan, Ann Arbor) - project leader
* Workshop "Mathematics of thin structures" (Dresden, Germany) - plenary speaker
* Workshop "Calculus of Variations" at Oberwolfach
* NYU, Courant Institute for Mathematical Sciences - Analysis seminar
* Rutgers University - Analysis seminar
* Columbia University - Applied math colloquium
* Oxford University (two talks) - Analysis seminar and Applied Math seminar
* Conference "Workshop on nonlinear PDEs" at Columbia University - plenary speaker

2017: * Howard Rowlee Lecture, University of Nebraska
* KUMUNU Conference on PDE, Dynamical Systems, and Applications - plenary speaker
* Conference "Nonconvexity, nonlocality and incompatibility: from materials to biology" in honor of 60th birthday of Lev Truskinovski (University of Pittsburgh) - plenary speaker
* ICERM workshop "Current Developments in Mathematical Fluid Dynamics" - invited talk
* University of Illinois at Chicago - colloquium
* Kansas University - colloquium
* conference "Frontiers of Interdisciplinary Mathematics", Penn State - plenary speaker
* University of Houston - colloquium and a PDE seminar
* Trondheim University (Norway) - Analysis seminar
* Oberwolfach workshop "Materials Science Theories"

2016: * AMS Invited Address at the Joint Mathematics Meetings, Seattle WA
* 78th Midwest PDE Seminar (Loyola University, Chicago) - plenary speaker
* Conference "4th Workshop on Thin Structures", Naples, Italy - plenary speaker
* University of Lincoln, NE - colloquium and an invited lecture
* Vanderbilt University - colloquium
* Brown University - colloquium
* UCLA - PDE and Analysis seminar
* Texas A&M University - PDE seminar
* Meeting in honor or 60th birthday of Alberto Bressan (SISSA, Italy) - plenary speaker
* Conference "Emerging trends in Applied Mathematics" (Perpignan, France) - invited speaker
* Conference "Women and Research in Mathematics" (SISSA, Italy) - invited speaker and a panelist
* Winter School on Mathematical Analysis (Benin) - invited speaker
* University of Southern California - colloquium
* Schroedinger Institute, Vienna, Austria - PDE seminar
* Paris 7 - Calculus of Variations seminar

2015: * University of Pennsylvania - colloquium
* University of Tennessee (Knoxville) - colloquium
* Temple University - PDE seminar
* NSF-SIAM Symposium on Mathematical Aspects of Materials Science, Salt Lake City
* Cornell University - Analysis seminar
* University of Florence, Italy - Analysis seminar
* KAUST, Saudi Arabia - three seminars
* conference "Recent Developments in Continuum Mechanics and PDEs" (Lincoln NE) - plenary speaker
* conference "Mathematical Fluid Mechanics" (Bedlewo, Poland) - plenary speaker
* SIAM Conference on Analysis of Partial Differential Equations - two minisymposium talks
* Berkeley University - Analysis seminar

2014: * 52nd meeting of the Society for Natural Philosophy, Rio de Janeiro, Brazil - plenary lecture
* conference "Between Theory and Applications: Mathematics in Action", Będlewo - 2 invited lectures
* Okinawa Institute of Technology, Japan
* Seminaire du Laboratoire Jacques-Louis Lions, Paris, France - colloquium
* Universitè Paris 5, France - colloquium
* Courant Institute, New York University
* University of Florence, Italy
* conference "Advances in Nonlinear Science", University of Pittsburgh
* Penn State University

2013: * SIAM Conference on Analysis of Partial Differential Equations, Orlando FL - tutorial
* Young Mathematicians Conference, Columbus OH - plenary lecture
* SIAM Conference on Mathematical Aspects of Materials Science, Philadelphia - a minisymposium talk
* AMS meeting, Louisville KE - a minisymposium talk
* University of Wuerzburg, Germany - colloquium
* Northwestern University - colloquium
* IMA 2013 Summer Graduate Program (15.07 - 2.08.2013) "Flow, Geometric Motion, Deformation and Mass Transport in Physiological Processes"
* conference "Differential Geometry and Continuum Mechanics", Edinburgh - plenary lecture
* Penn State - colloquium
* Department of Mechanical Engineering, Carnegie Mellon University
* Uniwersytet Gdański - colloquium

2012: * University of California in Santa Barbara
* Stanford University
* University of Virginia
* ICERM Semester Program Workshop: "Heterostructured Nanocyrstalline Materials", Brown University
* University of Lincoln NE - colloquium
* GAMM workshop invited speaker, Essen, Germany

2011: * IMA Hot Topics Workshop "Strain Induced Shape Formation: Analysis, Geometry and Materials Science"
* Universitè Pierre et Marie Curie, Paris, France
* Workshop "Pattern Formation and Multiscale Phenomena in Materials", Oxford University
* Max Planck Institute for Mathematics, Leipzig, Germany
* AMS Special Session "PDE's and Control", Lincoln NE - a minisymposium talk
* AMS Special Session "Asymptotic Behavior for Nonlinear Evolution Equations", Lincoln NE - a minisymposium talk
* SIAM Conference on Analysis of Partial Differential Equations, San Diego - 3 minisymposium talks
* University of Duisburg, Essen, Germany

2010: * Joint PDE seminar of Brown and Boston University
* University of Michigan at Ann Arbor
* Rutgers University
* Workshop "Some mathematical problems of material science: effect of multiple scales and extreme aspect ratios", Banff International Research Station (Canada)
* AMS Special Session "Nonlinear Analysis and Geometry", Syracuse - a minisymposium talk
* University of Arizona
* AIMS Conference on Dynamical Systems, Diff. Equations and Applications, Dresden, Germany - 2 minisymposium talks
* Aerospace Engineering and Mechanics Seminar, University of Minnesota
* Uniwersytet Warszawski
* Indiana University
* BCAM - Basque Center for Applied Mathematics, Bilbao, Spain

2009: * Workshop "Material Theories", Oberwolfach, Germany
* University of Chicago
* SISSA, Trieste, Italy
* Universitè Paris 11 (Orsay)
* Universitè Paris 6 (Pierre et Marie Curie)
* Iowa State University
* University of Houston
* AMS meeting, Worcester MA - a minisymposium talk
* University of Indiana
* Conference "Energy-Driven Systems", Carnegie Mellon University
* Conference "Nonlinear Parabolic Problems", Bedlewo (Poland)
* University of Pittsburgh
* Instituto de Matematicas y Fisica Fundamental CSIC, Madrid, Spain
* IMA Summer Program on Conservation Laws and Applications, Minneapolis

* 63rd Midwest PDE seminar, Purdue - plenary lecture
* Conference SIAM PDE, Miami - a minisymposium talk

2008: * Czech Academy of Sciences, Prague, Czech Republic
* University of Wisconsin
* CNA Summer School, Pittsburgh
* Georgia Tech
* Fields Institute, Toronto
* University of Pittsburgh
* Vanderbilt University
* Uniwersytet Warszawski

2007: * University of Pittsburgh,
* First Joint AMS-PTM Meeting, Warszawa - a minisymposium talk

2006: * Workshop "Reaction-Diffusion and Free Boundary Problems", Banff, Canada
* University of Florence, Italy

2005: * University of Indiana
* Northwestern University
* University of California at Davis

2004: * University of Minnesota
* North Carolina State University
* Trinity College, Dublin, Ireland
* Uniwersytet Warszawski
* AMS meeting, Houston - a minisymposium talk

2003: * University of Houston
* University of British Columbia, Vancouver, Canada
* Conference "Leggi di conservazione", SISSA (Trieste, Italy)
* First Chicago Area PDE Workshop
* Northwestern University

2002: * University of Chicago
* University of Houston
* University of California at Davis
* Tulane University
* Northwestern University
* Georgetown University

2001: * Max Planck Institute, Leipzig, Germany
* University of Freiburg, Germany
* University of Darmstadt, Germany

2000: * Max Planck Institute, Leipzig, Germany
* Ecole Normale Superieur Lyon, France
* 8th International Conference on Hyperbolic Problems, Magdeburg, Germany - a minisymposium talk

Organizational activities

(1) *Minisymposium: "Nonlocal and fractional problems in Analysis and PDEs"*
5.01-8.01.2022, Seattle, WA
This is a special AMS-SIAM featured session at the 2022 Joint Mathematics Meetings. It focuses on recent developments in the analysis of nonlocal systems where solutions may exhibit discontinuous, singular, or irregular behavior. The participants will present new results in the well-posedness and regularity theory, the nonlocal decompositions properties, and connections with classical theories.
role in the project: organizer (together with P. Radu)

(2) *Pitt Association of Women in Mathematics Student Seminar Series*
02.2021 - now, online, University of Pittsburgh
The University of Pittsburgh AWM Chapter hosts the Pitt AWM Student Seminar Series. Every meeting features two 30 minute long talks by female PhD students, each presenting the speaker's research outcomes. Our seminar is hoped to give a platform to female students-researchers, to promote the spirit of collegiality and collaboration, and to recognize the hard work of students during the pandemic time. Talks are video-recorded and made available on our Youtube Channel.
url: `https://www.mathematics.pitt.edu/content/pitt-awm-student-seminar-series`
url Youtube: `https://www.youtube.com/channel/UCtbXkHiM0NS_cS2kTR0uNwg`
role in the project: organizer and faculty sponsor of Pitt chapter of AWM

(3) *PolWoMaths Seminar*
09.2020 - 02.2022, online, Polish Women in Mathematics Society
Meetings are held via Zoom, each featuring two 30-minute lectures delivered in Polish or English. The goal of the seminar is to provide a forum for women researchers in different areas of mathematics, statistics and applications, to introducing themselves, their research topics and their achievements. The seminar promotes interaction between PTKM and women in mathematics working Poland and in the world.
url: `http://www.math.pitt.edu/~lewicka/PTKWM/polwomaths.html`
url Youtube: `https://www.youtube.com/channel/UCNzMuvGchLfazQxYBjzE62Q`
role in the project: organizer (together with S. Kanas and U. Foryś), maintaining the Youtube channel.

(4) *Conference "Laczy nas nauka - sympozjum nauki polskiej w swiecie"*
9-11.12.2021, Stowarzyszenie Wspolnota Polska – postponed due to Covid19
The aim of the "Symposium of Polish Science in the World" is to showcase contemporary scientists of Polish origin who, with their work promote Polish science, culture and art in the world. In this important event, co-sponsored by various governmental, academic and NGO organizations, presents innovative scientific achievements to a wider audience, as well as features sessions in the natural sciences from mathematics, engineering to technology, as well as in the humanities, social sciences and arts. In addition to scientific sessions, there are discussion panels with the participation of representatives of Polish research organizations and institutions supporting the development of science.
url: `http://www.wspolnotapolska.org.pl/sympozjumnauki/`
role in the project: member of the Organizing and Scientific Committee

(5) *Event: "Infinite possibilities: What can I do with a PhD in mathematics?"*
09.12 2020, online. This special even takes place in the framework of "Women in Tech Summit" (Dec 8-9, 2020) which is a large international conference for women in Tech&IT and STEM. This years edition brings together over 7 000 participants from 50 countries.
The purpose of the event is to showcase five successful female mathematicians who either transitioned to different STEM-, industry- and educational- related careers or pursue such careers along their traditional university tenured appointments. We will discuss concrete avenues to promote, educate, encourage, and support women in mathematics, as informed by the speakers personal and professional experience. These goals are at large consistent with the commitment of the organizations represented by the speakers, which are: Polish-, European-, American- Women in Mathematics Associations, the European Mathematical Society, and the National Science Foundation, towards recognizing the outstanding scholarship and the pursuit of excellence and innovation by women, across the mathematical and statistical sciences.
role in the project: organizer (together with S. Kanas)

(6) *Three minisymposia: "From Variational Models in Nonlinear Elasticity to Evolutionary Problems of Elastodynamics"* 11.12 - 14.12.2019, La Quinta, CA
The scope of these minisymposia is to bring together scientists with background in diverse fields involving elasticity: from dimension reduction, through quasi-static evolution, to free boundary problems; to investigate connections between these problems and to discuss challenges from different perspectives.
role in the project: organizer (together with D. Harutyunyan)

(7) *Two minisymposia: "Singular solutions to geometric problems in continuum and discrete mechanics"* 11.12 - 14.12.2019, La Quinta, CA
These minisymposia concern geometric ideas in the analysis of PDEs, including, but not limited to an understanding of PDEs as in terms of rigidity/flexibility through an investigation of geometric structures in solutions, and the quest for methods that respect/exploit the natural geometric features that are intrinsic to the PDE. In our mini-symposium, we bring together scientists studying multi-scale solutions to various (geometric, variational, integrable, etc) PDEs using geometrical ideas. The goal is to encourage interactions among different mathematical communities, to organize a forum for investigating connections between problems and techniques and to discuss advances and challenges from different perspectives. The mini-symposium will be organized around the following interrelated topics: (1) Discrete geometry and "structure-preserving" methods for PDEs; (2) Rough solutions and convex integration constructions for elasticity, fluids and transport equations; (3) Variational problems and the geometry of defects.
role in the project: organizer (together with S. Venkataramani)

(8) *Workshop: "Convex Integration in PDEs, Geometry, and Variational Calculus"*
11.08 - 16.08.2019, Banff International Research Station, Canada
This 5-day workshop brought together experts from geometry, variational calculus and mathematical fluid dynamics to share knowledge of the recent developments and technical ideas, as well as to open up new perspectives on the application of convex integration. The program included three keynote lectures of 90 minutes each, introducing every participant to convex integration in geometry, variational calculus, and fluid dynamics.
role in the project: organizer (together with E. Feireisl and E. Wiedemann)

(9) *SIAM conference on Mathematical Aspects of Materials Science*
9.07 - 13.07.2018, Portland, Oregon; held jointly with 2018 SIAM Annual Meeting
Since 1994, every 2 to 4 years the SIAM Materials Activity Group organizes the SIAM Conference on Mathematical Aspects of Materials Science. This conference focuses on interdisciplinary approaches that bridge mathematical and computational methods to the science and engineering of materials. The conference provides a forum to highlight significant advances as well as critical or promising challenges in mathematics and materials science and engineering.
url: `http://www.siam.org/meetings/ms18/`
role in the project: member of the Scientific Committee

(10) *Three minisymposia: "Geometry and Elasticity"* 9.07 - 13.07.2018, Portland, Oregon
The minisymposia concerned the analytical and applied questions emerging from the study of elastic bodies that exhibit geometric incompatibilities. From the physics perspective, these are due to incompatibilities with the ambient space, manifested by residual stresses that may be caused by inhomogeneous growth, thermal expansion or defects. From the mathematics perspective, they involve a study of isometric immersions of Riemannian manifolds, the non-Euclidean version of the classical nonlinear elasticity, and the variational problems of the energy-driven pattern formation.
role in the project: organizer (together with C. Mayor)

(11) *XXVII International Conference on Hyperbolic Problems: Theory, Numerics, Applications*
25.06 - 29.06.2018, Penn State University
This is the largest international meeting on analysis of hyperbolic PDEs. It has been held bi-annually since 1986; in the last decade it took place in: Pasadena, Osaka, Lyon, College Park, Beijing, Padova.
url: `http://www.hyp2018.psu.edu/`
role in the project: organizer (with A. Bressan, A. Mazzucato, D. Wang and Y. Zheng)

(12) *Special session: "Problems in geometry and design of materials"* at the AMS Joint Mathematical Meetings, 6.01 - 9.01.2015, Seattle
A 12 hours long series of mini-symposia, associated with M. Lewicka AMS Invited Address, featuring 20

invited speakers.
role in the project: main organizer (with P. Radu)

(13) *Minisymposium: "Convex integration and degenerate solutions to nonlinear pdes in geometry and physics"* at the SIAM Conference on Analysis of Partial Differential Equations
7.12 - 10.12.2015, Scottsdale, Arizona
The minisymposium concerned the questions of flexibility and rigidity of solutions in nonlinear pdes with a focus on degenerate (flexible) weak solutions which can be obtained through methods of convex integration. The recent advances regarding existence of Holder continuous dissipative solutions to Euler equations have renewed the interest in applying these methods to wider range of problems, including the Monge-Ampere and transport equations. Similar efforts have also lead to new progress regarding the flexibility and rigidity of isometric immersions.
role in the project: main organizer (with R. Pakzad)

(14) *2014 Theme Semester on Discrete Networks: Geometry, Dynamics and Applications at the University of Pittsburgh*
This was a semester-long program, consisting of 5 invited mini-courses at a PhD level and an international conference. It encompassed a variety of research directions involving discrete geometrical structures, networks, and dynamics of such.
program period: 09 - 12.2014
url: `http://www.math.pitt.edu/~lewicka/Semester_DiscrNetw_14/Semester_Networks.html`
role in the project: main organizer (with B. Doiron, B. Ermentrout and J. Rubin)

(15) *International Workshop "Advances in Nonlinear Networks"*
12.12 - 14.12.2014, University of Pittsburgh
The workshop was held in the framework of 2014 Fall Theme Semester on Discrete Networks: Geometry, Dynamics and Applications at the University of Pittsburgh. This interdisciplinary event brought together researchers to present their recent results in this broad, rapidly emerging mathematical area.
url: `http://www.math.pitt.edu/~lewicka/Semester_DiscrNetw_14/adv_disc_netw_workshop.html`
role in the project: main organizer (with B. Doiron, B. Ermentrout and J. Rubin)

(16) *2014 Theme Semester on Convex Integration and Analysis at the University of Pittsburgh*
This was a semester-long program, consisting of 5 invited mini-courses at a PhD level and an international conference. It concerned some modern questions in Mathematical Analysis.
program period: 01 - 05.2014
url: `http://www.math.pitt.edu/~lewicka/Semester_ConvInt_14/semester_Convex_Int_Analysis.html`
role in the project: main organizer (with P. Hajłasz, J. Manfredi and R. Pakzad)

(17) *International Workshop "Advances in Nonlinear Analysis"*
13.03 -15.03.2014, University of Pittsburgh
The workshop was held in the framework of 2014 Theme Semester on Convex Integration and PDEs at the University of Pittsburgh. The topics ranged from PDEs, geometric analysis, geometric measure theory, to harmonic analysis, potential theory, and nonlinear analysis.
url: `http://www.math.pitt.edu/~lewicka/Semester_ConvInt_14/adv_non_anal_workshop.html`
role in the project: main organizer (with P. Hajłasz, J. Manfredi and R. Pakzad)

(18) *SIAM Conference on Analysis of Partial Differential Equations*
7.10 - 10.10.2013, Orlando, FL
url: `http://www.siam.org/meetings/pd13/index.php`
role in the project: member of the Scientific Committee

(19) *Four minisymposia From Microscopic to Continuum: Variational Multiscale Methods* at the SIAM Mathematical Aspects of Materials Science meeting
9.06 - 12.06.2013, Philadelphia
The mini-symposia featured talks of 16 invited speakers.
url: `http://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=16333`
role in the project: main organizer (with A. Schloemerkemper)

(20) *2013 Theme Semester on Game Theory and PDEs at the University of Pittsburgh*
This was a semester-long program, consisting of 4 invited mini-courses at a PhD level and an international conference. It concerned the relation between Game Theory and PDES.
program period: 01 - 05.2013
url: `http://www.math.pitt.edu/~lewicka/Semester_GamesPDE_13/semester_GamesPDE.html`
role in the project: main organizer (with J. Manfredi, R. Pakzad and D. Wang)

(21) *International Workshop "Advances in Nonlinear Science"*
14.03 - 16.03.2013, University of Pittsburgh
The workshop was held in the framework of 2013 Theme Semester on Game Theory and PDEs at the University of Pittsburgh. The topics ranged from the classical regularity theory, to the deterministic game theoretic interpretation of motion by mean curvature and other PDE, to random tug-of-war games, stochastic homogenization, viscosity solutions, numerical solutions of non-linear PDE, and symmetrization. There were about 40 participants.
url: `http://www.math.pitt.edu/~lewicka/Semester_GamesPDE_13/adv_non_sci_workshop.html`
role in the project: main organizer (with J. Manfredi, R. Pakzad and D. Wang)

(22) *The First PIRE Summer School: "Science at the Triple Point Between Mathematics, Mechanics and Materials"*
This was a 2-week program consisted of four 5hr tutorials (plus 2 exercise sessions for each segment) and invited lectures. There were more than 100 participants.
program period: 21.06 - 29.06.2012, Institute for Mathematics and Its Applications, Minneapolis
url: `http://www.ima.umn.edu/2011-2012/SW6.21-29.12/`
role in the project: main organizer (with R. Kohn, M. Luskin and S. Muller)

(23) *Minisymposium: "Geometric and quantitative rigidity"* at the 6th European Congress of Mathematics
2.07 - 7.07.2012, Kraków, role in the project: main organizer

(24) *IMA Hot Topics Workshop "Metric induced shape formation: analysis and geometry"*
This one week long workshop was devoted to analytical aspects of morphogenesis, arising as a consequence of the inelastic effects associated with growth, swelling, shrinkage or plasticity. There are about 50 participants and we hoped to stimulate interactions between applied mathematicians, physicists and geometers.
program period: 16.05 - 20.05.2011, Institute for Mathematics and Its Applications, Minneapolis
url: `http://www.ima.umn.edu/2010-2011/SW5.16-20.11/`
role in the project: main organizer (with S. Venkataramani)

(25) *IMA Summer Program on Conservation Laws and Applications*
This is a 3-week program consisting of lecture series and exercise sessions. It brought together some of the world's leading experts in the field of conservation laws. There were more than 120 participants
program period: 13.07 - 31.07.2009
url: `http://www.ima.umn.edu/2008-2009/SP7.13-31.09`
role in the project: main organizer (with A. Bressan, G.Q. Chen and D. Wang)

(26) *Rivere-Fabes Symposium, University of Minnesota*
`http://www.math.umn.edu/conferences/riv_fabes/`
The Symposiums take place each April since 1998. The organizers invite distinguished leaders in diversified areas of Math Analysis to present two-hour lectures, and other renowned specialists alongside with young researchers to give one-hour lectures.
role in the project: organizing committee member in years 2007 - 2011.

Undergraduate and masters courses taught

Fall 2022: Abstract Algebra, Math 430 (Pittsburgh)

Fall 2021: Calculus 3, Math 240 and Calculus 2, Math 230 (Pittsburgh)

Fall 2020: Calculus 3, Math 240 (Pittsburgh)

Spring 2019: Introduction to Analysis, Math 420 (Pittsburgh)

Spring 2018: Abstract Algebra (NYU, New York)

Fall 2017: Differential Equations, Math 290 (Pittsburgh)

Fall 2017: Introduction to Number Theory, Math 1020 (Pittsburgh)

Spring 2017: Introduction to Analysis, Math 413 (Pittsburgh)

Fall 2016: Introduction to Analysis, Math 420 (Pittsburgh)

Spring 2016: Introduction to Analysis, Math 413 (Pittsburgh)

Fall 2015: Combinatorics, Math 1050 (Pittsburgh)

Spring 2015: Calculus 3, Math 240 (Pittsburgh)

Fall 2014: Introduction to Differential Geometry, Math 1350 (Pittsburgh)

Spring 2014: Topology, Math 1700 (Pittsburgh)

Fall 2013: Introduction to Number Theory, Math1020 (Pittsburgh)

Spring 2013: Introduction to Analysis, Math 420 (Pittsburgh)

Fall 2010: Calculus I for Mathematical and Physical Sciences, Math 151 (Rutgers) - 6 sections

Fall 2009: Differentiation and Applications, Math 1371 (U of Minnesota) - 3 sections

Fall 2005: Dynamical Systems and Chaos, Math 5535 (U of Minnesota)

Spring 2005: Functional Analysis, Math 272 (U of Chicago)

Fall 2004: Topics in Mathematical Biology, Math 215 (U of Chicago)

Fall 2001: Mathematical Analysis III (University of Leipzig, Germany)

Spring 2001: Mathematical Analysis II (University of Leipzig, Germany)

Fall 2000: Mathematical Analysis I (University of Leipzig, Germany)

Science popularization: Undergraduate research talks and courses

- Ohio State University: Young Mathematicians Conference
- Penn State; Rutgers; Duquesne University; University of Lincoln; University of Pittsburgh
- Stevens Institute of Technology; Montclaire State University; University of St. Thomas
- University of Minnesota Duluth; University of Minnesota Talented Youth Mathematics Program
- Putnam and North-Central Competition training sessions at the University of Minnesota
- Research Experience for Undergraduates courses (University of Chicago):

  Control Theory and Hamilton-Jacobi Equations;

  Topological Degree and Applications

Other professional activities and organizational efforts

(1) *University of Pittsburgh Department of Mathematics Colloquium*: Colloquium Chair 2012 – 2015
http://www.math.pitt.edu/~lewicka/COLLOQUIUM_14/Coll_2014.html

(2) *University of Pittsburgh PDE and Analysis Seminar*
organizer (with D. Wang and P. Hajłasz) 2011 – 2015

(3) *University of Minnesota PDE Seminar*: Chair of the organizing committee in year 2007.

PhD courses taught

Fall 2022: Calculus of Variations (Pittsburgh)

Spring 2020: Graduate Real Analysis 4 / Probability (Pittsburgh)

Fall 2020: Graduate Real Analysis 3 (Pittsburgh)

2019-20: Graduate Real Analysis 1 and 2 (Pittsburgh)
http://www.math.pitt.edu/~lewicka/2301/real.html
Topics in PDEs (Pittsburgh)

Fall 2016: Differential Geometry, Math 2800 (Pittsburgh)
http://www.math.pitt.edu/~lewicka/2800/DiffGeo.html

Spring 2016: Partial Differential Equations (Pittsburgh)
http://www.math.pitt.edu/~lewicka/3600/PDE1.html
Symplectic Geometry (Pittsburgh)
http://www.math.pitt.edu/~lewicka/3600/SymplecticGeometry.html

Fall 2012: Graduate Real Analysis 3 (Pittsburgh)
http://www.math.pitt.edu/~lewicka/2303/Real.html

Spring 2012: Topics in Calculus of Variations (Pittsburgh)
http://www.math.pitt.edu/~lewicka/3020/calcvar_topics_2012.html

Fall 2011: Graduate Real Analysis (Pittsburgh)

2007-08: Functional Analysis, Math 8801-02, (Minnesota)
http://www.math.umn.edu/~lewicka/8801-2/functional.html

2006-07: Real Analysis, Math 8601-02 (Minnesota),
http://www.math.umn.edu/~lewicka/8601-2/real.html

Participation in committees

- *NSF Division of Mathematical Sciences - various panels* 2008-present
- *Simons Foundation Collaboration Grants Review* 2021
- *AMS Eastern Section Programs Committee* 2015-2017, Chair for 2016-2017
- *AAAS* 2015
- *AWM Programs Committee* 2012-2013
- *Rustaveli National Science Foundation* (research funding agency in Georgia) 2011-2018
- *Fonds Quebecois de la Recherche* (research funding agency in Quebec) 2003

Refereeing for professional journals

I referee for: Archives for Rational Mechanics and Applications, SIAM Journal of Mathematical Analysis, SIAM Journal of Applied Mathematics, SIAM Journal Control and Optimization, Indiana Univ. Math. Journal, Communications in Mathematical Physics, Communications in PDE, Journal of Differential Equations, Memoirs of AMS, Nonlinearity, Physica D., Proceedings of the Royal Society A.

I refereed approximately 150 papers.

List of publications

(1) J. Andres, L. Gorniewicz and M. Lewicka: *Partially dissipative periodic processes*, Banach Center Publications, Warszawa 1996.

(2) A. Bressan and M. Lewicka: *Shift differentials of maps in BV Spaces*, in: "Nonlinear Theory of Generalized Functions – Proceedings of the Workshop Nonlinear Theory of Nonlinear Functions, Vienna 1997", Chapman&Hall.

(3) M. Lewicka: *Locally lipschitzian guiding function method for ODEs*, Nonlinear Analysis 33 (1998), 747-758.

(4) M. Lewicka and M. Spadini: *On the genericity of the multiplicity results for forced oscillations on compact manifolds*, Nonlinear Diff. Equ. Appl., 6 (1999), 357–369.

(5) M. Lewicka: *On the well posedness of a system of balance laws with L^∞ data*, Rend. Sem. Mat. Univ. Padova, 102 (1999), 319–340.

(6) A. Bressan and M. Lewicka: *A uniqueness condition for hyperbolic systems of conservation laws*, Discrete and Continuous Dynamical Systems, 6 no. 3 (2000), 673–682.

(7) M. Lewicka: *L^1 stability of patterns of non-interacting large shock waves*, Indiana Univ. Math. J., 49 (2000), 1515–1537.

(8) M. Lewicka: *On the L^1 stability of multi-shock solutions to the Riemann problem*, International Series of Numerical Mathematics, **141** (2001), 653–662.

(9) M. Lewicka: *Stability conditions for patterns of non-interacting large shock waves*, SIAM J. Math. Anal., 32 no. 5 (2001), 1094–1116.

(10) M. Lewicka and K. Trivisa: *On the L^1 well posedness of systems of conservation laws near solutions containing two large shocks*, J. Differential Equations, 179 (2002), 133–177.

(11) M. Lewicka and M. Spadini: *A remark on the genericity of multiplicity results for forced oscillations on manifolds*, Annali di Mat. Pura ed Applicata, 181 (2002), 85–94.

(12) M. Lewicka and S.J. Watson: *Temporal asymptotics for the p'th power Newtonian fluid in one space dimension*, Z. Angew. Math. Phys., 54 (2003), no. 4, 633–651.

(13) M. Lewicka and P.B. Mucha: *On temporal asymptotics for the p'th power viscous reactive gas*, Nonlinear Anal. 57 (2004), no. 7-8, 951–969.

(14) M. Lewicka: *The well posedness for hyperbolic systems of conservation laws with large BV data*, Arch. Rational Mech. Anal. 173 (2004), 415–445.

(15) M. Lewicka: *Lyapunov functional for solutions of systems of conservation laws containing a strong rarefaction*, SIAM J. Math. Anal. 36 (2005), no. 5, 1371–1399.

(16) M. Lewicka: *Stability conditions for strong rarefaction waves*, SIAM J. Math. Anal. 36 (2005), no. 4, 1346–1369.

(17) P. Constantin, M. Lewicka and L. Ryzhik: *A note on traveling waves in the 2D Navier-Stokes-Boussinesq system with the no-slip boundary condition*, Nonlinearity, 19 (2006), 2605–2615.

(18) M. Lewicka and K. Zumbrun: *Spectral stability conditions for shock wave patterns*, Journal of Hyperbolic Equations, 4 (2007), no. 1, 1–16.

(19) M. Lewicka: *Existence of traveling waves in the Stokes-Boussinesq system for reactive flow*, J. Differential Equations, 237 (2007), no. 2, 343–371.

(20) M. Lewicka and M. Spadini: *Branches of forced oscillations in degenerate systems of second order ODEs*, Nonlinear Analysis 68 (2008), 2623–2628.

(21) M. Lewicka and P.B. Mucha: *On the existence of traveling waves in the 3D Boussinesq system*, Commun. Math. Phys. 292 (2009), 417–429.

(22) M. Lewicka, M.G. Mora and R. Pakzad: *A nonlinear theory for shells with slowly varying thickness*, C.R. Acad. Sci. Paris, Ser I 347 (2009), 211–216.

(23) M. Lewicka, M.G. Mora and R. Pakzad: *Shell theories arising as low energy Γ-limit of 3d nonlinear elasticity*, Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5) Vol. IX (2010), 1–43.

(24) M. Lewicka, M.G. Mora and R. Pakzad: *The matching property of infinitesimal isometries on elliptic surfaces and elasticity of thin shells*, Arch. Rational Mech. Anal. (3) Vol. 200 (2011), 1023–1050.

(25) M. Lewicka: *Morphogenesis by growth and non-Euclidean elasticity: scaling laws and thin film models*, in: Parabolic Problems: Progress in Nonlinear Differential Equations and Their Applications, Vol. 60, (2011) 433–445, Springer Basel AG.

(26) B. Barker, M. Lewicka and K. Zumbrun: *Existence and stability of viscoelastic shock profiles*, Arch. Rational Mech. Anal. Volume 200, Number 2, (2011) 491–532.

(27) M. Lewicka: *A note on the convergence of low energy critical points of nonlinear elasticity functionals, for thin shells of arbitrary geometry*, ESAIM: Control, Optimisation and Calculus of Variations, 17 (2011), 493–505.

(28) M. Lewicka: *Reduced theories in nonlinear elasticity*, in: "Nonlinear Conservation Laws and Applications" IMA Volume 153 in Mathematics and its Applications, Springer (2011) 393–404.

(29) M. Lewicka and R. Pakzad: *Scaling laws for non-Euclidean plates and the $W^{2,2}$ isometric immersions of Riemannian metrics*, ESAIM: Control, Optimisation and Calculus of Variations, Vol. 17, no 4 (2011), 1158–1173.

(30) M. Lewicka and S. Muller: *The uniform Korn-Poincarè inequality in thin domains*, Annales de l'Institut Henri Poincare (C) Non Linear Analysis, Volume 28, Issue 3, (May-June 2011) 443–469.

(31) M. Lewicka, L. Mahadevan and R. Pakzad: *The Foppl-von Karman equations for plates with incompatible strains*, Proceedings of the Royal Society A 467 (2011), 402–426.

(32) M. Lewicka and R. Pakzad: *The infinite hierarchy of elastic shell models; some recent results and a conjecture*, Infinite Dimensional Dynamical Systems, Fields Institute Communications 64, 407–420 (2013).

(33) P. Hornung, M. Lewicka and R. Pakzad: *Infinitesimal isometries on developable surfaces and asymptotic theories for thin developable shells*, Journal of Elasticity, Volume 111, Number 1 (2013), 1–19.

(34) M. Lewicka and M. Raoofi: *A stability result for the Stokes-Boussinesq equations in infinite 3d channels*, Communications on Pure and Applied Analysis, Vol 12, Issue 6, 2615 - 2625 (2013).

(35) M. Lewicka and P.B. Mucha: *A local existence result for a system of viscoelasticity with physical viscosity*, AIMS: Evolution Equations and Control Theory, Vol 2, Issue 2, 337 - 353 (2013).

(36) M. Lewicka, L. Mahadevan and R. Pakzad: *Models for elastic shells with incompatible strains*, Proceedings of the Royal Society A 470 (2014), 21–65.

(37) M. Lewicka and J.J. Manfredi: *Game theoretical methods in PDEs*, Bollettino dell'Unione Matematica Italiana: Volume 7, Issue 3, (2014), 211–216.

(38) M. Lewicka and H. Li: *Convergence of equilibria for incompressible elastic plates in the von Karman regime*, Communications on Pure and Applied Analysis, Vol 14, Issue 1 (January 2015), doi: 10.3934/cpaa.2014.14.

(39) M. Lewicka, P. Ochoa and R. Pakzad: *Variational models for prestrained plates with Monge-Ampere constraint*, Diff. Int. Equations, Vol. 28, no 9-10 (2015), 861–898.

(40) M. Lewicka and P. Ochoa: *On the variational limits of lattice energies on prestrained elastic bodies*, in: "Differential Geometry and Continuum Mechanics" Editors Gui-Qiang G. Chen, Michael Grinfeld and R.J. Knops, ISBN: 978-3-319-18572-9 (2015), 281–306.

(41) M. Lewicka and S. Muller: *A note on the optimal constants in Korn's and geometric rigidity estimates in bounded and unbounded domains*, Indiana Univ. Math. J. 65 No. 2 (2016), 377–397.

(42) K. Bhattacharya, M. Lewicka and M. Schaffner: *Plates with incompatible prestrain*, Arch. Rational Mech. Anal. 221 (1), (2016) 143–181.

(43) M. Lewicka and P. Mucha: *A local and global well-posedness results for the general stress-assisted diffusion systems*, Journal of Elasticity, Vol 123, Issue 1 (2016) 19–41.

(44) A. Acharya, M. Lewicka and R. Pakzad: *A note on the metric-restricted inverse design problem*, Nonlinearity, Vol 29 (2016), 1769–1797.

(45) M. Lewicka and R. Pakzad: *Prestrained elasticity: curvature constraints and differential geometry with low regularity*: an invited paper in the Notices of the AMS, January 2016.

(46) M. Lewicka, L. Mahadevan and R. Pakzad: *The Monge-Ampere constraint: matching of isometries, density and regularity, and elastic theories of shallow shells*, Annales de l'Institut Henri Poincare (C) Non Linear Analysis, Volume 34, Issue 1, January/February 2017, 45–67.

(47) M. Lewicka and J.J. Manfredi: *The obstacle problem for the p-Laplacian via Tug-of-War games*, Probability Theory and Related Fields, February 2017, Volume 167, Issue 1-2, 349–378.

(48) L. Codenotti, M. Lewicka and J.J. Manfredi: *Discrete approximations to the double-obstacle problem, and optimal stopping of Tug-of-War games*, Trans. Amer. Math. Soc. 369 (2017), 7387–7403.

(49) P. Bella, E. Feireisl, M. Lewicka and A. Novotny: *A rigorous justification of the Euler and Navier-Stokes equations with geometric effects*, SIAM J. Math. Anal. 48(6), 3907–3930 (2017).

(50) M. Lewicka, A. Raoult and D. Ricciotti: *Plates with incompatible prestrain of higher order*, Annales de l'Institut Henri Poincare (C) Non Linear Analysis, Volume 34, Issue 7, December 2017, 1883–1912

(51) M. Lewicka and R. Pakzad: *Convex integration for the Monge-Ampere equation*, Analysis and PDE, Vol. 10 (2017), No. 3, 695–727.

(52) A. Bressan and M. Lewicka: *A model of controlled growth*, Archive for Rational Mechanics and Analysis Volume 227, Issue 3 (2018), 1223–1266.

(53) M. Lewicka and A. Raoult: *Thin structures with imposed metric*, ESAIM: Proceedings and Surveys Volume 62 (2018), 79–90.

(54) L. Codenotti and M. Lewicka: *Visualization of the convex integration solutions to the Monge-Ampère equation*, AIMS: Evolution Equations and Control Theory, Volume 8, Issue 2 (2019), 273–300.

(55) M. Lewicka and Y. Peres: *Which domains have two-sided supporting unit spheres at every boundary point?*, Expositiones Mathematicae, Volume 38, Issue 4, December 2020, Pages 548-558.

(56) M. Lewicka and D. Lucic: *Dimension reduction for thin films with transversally varying prestrain: the oscillatory and the non-oscillatory case*, Communications on Pure and Applied Mathematics, Volume 73, Issue 9 (2020), 1880–1932.

(57) M. Lewicka, J. Manfredi and D. Ricciotti: *Random walks and random Tug of War in the Heisenberg group*, Mathematische Annalen, Volume 377 (2020), 797-846.

(58) M. Lewicka: *Quantitative immersability of Riemann metrics and the infinite hierarchy of prestrained shell models*, Archive for Rational Mechanics and Analysis, Volume 236, (2020), 1677–1707.

(59) M. Lewicka and Y. Peres: *The Robin mean value equation I: A random walk approach to the third boundary value problem*, to appear in: Potential Analysis.

(60) M. Lewicka and Y. Peres: *The Robin mean value equation II: Asymptotic Hölder regularity*, to appear in: Potential Analysis.

(61) J. Calder, N. Garcia Trillos and M. Lewicka: *Lipschitz regularity of graph Laplacians on random data clouds*, SIAM J. Math. Anal., Volume 54 (1), 1169–1222, (2022).

(62) F. del Teso, J. Endal and M. Lewicka: *On asymptotic expansions for the fractional infinity Laplacian*, Asymptotic Analysis, Volume 127 (3), 201–216 (2022).

(63) M. Lewicka: *Non-local Tug-of-War with noise for the geometric fractional p-Laplacian*, Advances in Differential Equations, Volume 27 (1-2) January/February 2022.

(64) S. Jimenez-Bolanos and M. Lewicka: *Dimension reduction for thin films prestrained by shallow curvature*, Proceedings of the Royal Society A. (March 2021), Volume 477, Issue 2247.

(65) M. Lewicka: *Random Tug of War games for the p-Laplacian:* $1 < p < \infty$, to appear in: Indiana Math Univ Journal.

(66) M. Lewicka and L. Mahadevan: *Geometry, Analysis and Morphogenesis: Problems and Prospects*, Bull. Amer. Math. Soc., Volume 59, (2022), 331–369

(67) Q. Han, M. Lewicka and L. Mahadevan: *Geodesics and isometric immersions in kirigami*, submitted.

(68) G. Chaudhary, L. Niu, M. Lewicka, Q. Han and L. Mahadevan: *Geometric mechanics of random kirigami*, submitted.

(69) J. Babadjian, G. Difratta, I. Fonseca, G. Francfort, M. Lewicka and C. Muratov: *The mathematics of thin structures*, to appear in Quarterly of Applied Mathematics.

(70) M. Lewicka: *The Monge-Ampere system: convex integration in arbitrary dimension and codimension*, submitted.

Books

(1) *A course on Tug of War games with noise. (Introduction and basic constructions).* Marta Lewicka. 254 pp, Springer Universitext (2020).

(2) *Calculus of variations on thin prestressed films.* Marta Lewicka. 506 pp, Birkhauser (2022).

Collected works and proceedings

(1) *IMA Volume in Mathematics and its Applications: Nonlinear Conservation Laws and Applications.* (153) Springer Science and Business Media, LLC, New York, NY. Editors: A. Bressan, GQ. Chen, M. Lewicka and D. Wang, (2011).

(2) *Nonlinear Conservation Laws and Applications: Proceedings of XVII International Conference on Hyperbolic Problems Theory, Numerics, Applications.* Editors: A. Bressan, M. Lewicka, D. Wang and Y. Zheng. American Institute of Mathematical Sciences, (2020).

(3) *Proceedings of 2019 Association for Women in Mathematics Research Symposium.* Springer series "Advances in Mathematical Sciences". Editors: B. Acu, D. Donatelli, M. Lewicka, A. Pati, Saraswathy RV and M. Teboh Ewungkem, (2020).

(4) *Research in the Mathematics of Materials Science*. Springer "Association for Women in Mathematics Series". Editors: M. Espanol, M. Lewicka, L. Scardia and A. Schloemerkemper, (2022).