

# Jingfei Liu

Texas Tech University  
Department of Mechanical Engineering  
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## EDUCATION

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Ph.D. Electrical and Computer Engineering	Georgia Institute of Technology	12/2020
Ph.D. Mechanics and Energy	Université de Lorraine, France	6/2014
M.S. Electrical and Computer Engineering	Georgia Institute of Technology	12/2012
M.S. Mechanical Engineering	Clarkson University	5/2009
B.A. English	Dalian University of Technology, China	6/2003
B.E. Process Equipment and Control	Dalian University of Technology, China	6/2002

## POSITIONS

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Assistant Professor	Texas Tech University, ME	2021-present
Graduate Instructor	Georgia Institute of Technology, BME	2018-2019
Graduate Research Assistant	Georgia Institute of Technology, ECE & BME	2017-2020
Postdoctoral Fellow	University of California, Davis, BME	2014-2017
Graduate Research Assistant	Georgia Tech Lorraine, ME & ECE	2009-2014
Graduate Teaching Assistant	Clarkson University, ME	2007-2009
Lecturer	Beijing Polytechnic, ME	2003-2007

## HONORS & AWARDS

### Research

- Cross-Disciplinary Faculty Research Excellence Award, Texas Tech University 2024
- Featured article as the Editor's Pick, Journal of Applied Physics, Volume 136 (16), 164701 2024
- Featured article as the Editor's Pick, Journal of Applied Physics, Volume 136 (10), 105107 2024
- Featured article on the cover of the Journal of Applied Physics, Volume 119, Issue 17 2016
- *Finalist of Student Paper Award in Medical Ultrasonics*, IEEE International Ultrasonics Symposium 2016
- *Postdoc Travel Grant*, Postdoctoral Scholars Association, UC Davis 2015

### Teaching

- *Texas Tech Alumni Association New Faculty Award*, Texas Tech University 2025
- *Follett Bookstore and TTU Libraries OER Adoption Initiative Grant*, Texas Tech 2025
- *Follett Bookstore and TTU Libraries OER Adoption Initiative Grant*, Texas Tech 2024
- *Graduate Student Instructor of the Year*, Department of Biomedical Engineering & Center of Teaching and Learning, Georgia Tech 2019
- *'Thank a Teacher' Award*, Center of Teaching and Learning, Georgia Tech 2019
- *Winston Gandy Fellow Award*, Department of Biomedical Engineering, Georgia Tech 2018-2019
- *Award for Teaching Excellence*, Beijing Polytechnic, Beijing (*Top 5% faculty*) 2006
- *Excellent Instructor Award*, Beijing Polytechnic, Beijing (*Top 10% faculty*) 2005

**Service**

- *Certificate of Reviewing, Results in Physics* 2017
- *Certificate of Reviewing, Ultrasonics* 2016

**Scholarship & Others**

- *Bourse de Doctorat pour Ingénieurs, Centre National de la Recherche Scientifique, France (An honorable scholarship by the French National Scientific Research Center)* 2009–2012
- *Comprehensive Scholarship, Dalian University of Technology (Top 3% of students)* 2000-2002

**GRANTS**

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**External Grants** (Total share of \$120,000)

1. NSF. *EAGER: Dynamic Cell Patterning in Acoustic Array-Assisted 3D Bioprinting*. \$300,000. Changxue Xu (PI); **Jingfei Liu (Co-PI)**, share of \$120,000. 9/1/2025 – 8/31/2027.

**Internal Grants** (Total share of \$39,628)

6. TTU Office of Research Development and Communications. *Developing Transcranial Focused Ultrasound Transducers for Targeted Deep Brain Neuromodulation in Freely Moving Mice*. \$1,000. **Jingfei Liu (PI)**, share of \$1,000. 5/12/2025 - 8/31/2025
5. TTU Office of Provost-International Affairs. *Developing a functional ultrasound image-guided transcranial therapeutic ultrasound array transducer system for treating brain-related diseases*. \$3,475. **Jingfei Liu (PI)**, share of \$3,475. 2/11/2025 - 8/31/2025
4. TTU College of Health & Human Sciences. *Transcranial ultrasound neuromodulation for obesity treatment*. \$20,000. Andrew Shin (PI); **Jingfei Liu (Co-PI)**, share of \$5,000. 11/1/2024 - 10/31/2025
3. TTU Office of Research & Innovation. *Ultrasonic nondestructive characterization of the health conditions of solid-state batteries*. \$6,750. **Jingfei Liu (PI)**, share of \$6,750. 9/1/2024 - 8/31/2025
2. TTU College of Engineering. *Ultrasonic nondestructive characterization of the health conditions of solid-state batteries*. \$20,403. **Jingfei Liu (PI)**, share of \$20,403; Zeeshan Ahmad (Co-I). 6/1/2024 - 8/31/2024
1. TTU Office of Faculty Success. *Transcranial ultrasound neuromodulation for obesity treatment*. \$6,000. **Jingfei Liu (PI)**, share of \$4,000; Andrew Shin (Co-I). 5/1/2024 - 8/31/2025

**TEACHING**

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<b>Instructor, Department of Mechanical Engineering, Texas Tech University</b>				2021-present
Fall 2025	<i>ME4330 Intro. Medical Imaging</i>	Undergrad.	? students	?/5
Spring 2025	<i>ME6330 Adv. Medical Imaging</i>	Graduate	17 students	4.8/5
Fall 2024	<i>ME4330 Intro. Medical Imaging</i>	Undergrad.	36 students	4.6/5
Spring 2024	<i>ME3370 Fluid Mechanics</i>	Undergrad.	49 students	4.4/5
Fall 2023	<i>ME3370 Fluid Mechanics</i>	Undergrad.	60 students	4.6/5
Summer 2023	<i>Ultrasound Imaging</i>	Professional	17 students	NA
Spring 2023	<i>ME 3370 Fluid Mechanics</i>	Undergrad.	49 students	4.7/5
Fall 2022	<i>ME 3370 Fluid Mechanics</i>	Undergrad.	49 students	4.6/5
Summer 2022	<i>Medical Imaging</i>	Professional	33 students	NA
Spring 2022	<i>ME 3370 Fluid Mechanics</i>	Undergrad.	49 students	4.8/5
Fall 2021	<i>ME 3370 Fluid Mechanics</i>	Undergrad.	48 students	4.8/5
Spring 2021	<i>ME 3370 Fluid Mechanics</i>	Undergrad.	25 students	4.4/5

**Instructor, Department of Biomedical Engineering, Georgia Institute of Technology** 2018-2019

Spring 2019	<i>BMED 3400 Introduction to Biomechanics</i>	Undergrad.	48 students	4.0/5
Fall 2018	<i>BMED 3400 Introduction to Biomechanics</i>	Undergrad.	44 students	4.2/5

**Lecturer, Beijing Polytechnic, China** 2003-2007  
*Mechanical Graphics*  
*Hydraulic and Pneumatic Control Technology*  
*Fundamentals and Applications of Programmable Logic Controller*

## ADVISING

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### Advising at Texas Tech University

#### **Postdoctoral & visiting scholar**

Hyunjo Jeong      PhD, Professor, Department of Mechanical Engineering, 8/2023-present  
 Wonkwang University, Iksan, Jeonbuk 54538, South Korea  
*Topic: Ultrasound medical imaging development.*

#### **Ph.D. students**

##### ***Current***

Meghan Cephus      *Dynamic acoustic patterning of cells for 3D bio-printing* 9/2025-present  
 Azin Nadi      *Ultrasonic guided wave elastography for medical diagnosis* 8/2021-present

\* Awards obtained:

- ***Distinguished Graduate Student Assistantship***, Texas Tech University Graduate School and Department of Mechanical Engineering, 2023-2027.
- ***3<sup>rd</sup> place in the Best Student Presentation Award***, the BioMed Journal Club, College of Engineering, Spring 2024.

Sanjay Mahat      *Ultrasound-induced resonance for virus deactivation* 8/2022-present

\* Awards obtained:

- ***J.T. and Margaret Talkington Graduate Fellowship***, Texas Tech University Graduate School, 2022-2026.
- ***3<sup>rd</sup> place in the Best Student Presentation Award***, the 2023 Fall BioMed Journal Club, College of Engineering.

Sadman Labib      *Application of focused ultrasound in cancer immunotherapy* 9/2021-present

\* Awards obtained:

- ***3<sup>rd</sup> place in the Best Student Presentation Award***, the 2023 Spring BioMed Journal Club, College of Engineering.
- ***Doctoral Dissertation Completion Fellowship***, Texas Tech University Graduate School, 2025-2026.

##### ***Completed***

Abdullah Masud      *Surface acoustic wave elastography and its application* 5/2021-5/2024

\* Awards obtained:

- ***Student Transportation Subsidy*** to the 184<sup>th</sup> meeting of the Acoustical Society of America, Chicago, Illinois, May 8-12, 2023.
- ***Graduate Student Research Support Award***, the CH Foundation, Texas Tech University Office of Diversity, Equity & Inclusion, and the Graduate School, Spring 2023.
- ***Doctoral Dissertation Completion Fellowship***, Texas Tech

## University Graduate School, 2023-2024.

**M.S. students****Current**

Ezekiel Anguiano	<i>Ultrasonic nondestructive evaluation of lithium-ion batteries</i>	9/2024-present
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**Completed**

Roshan Sharma	<i>Resonance-informed numerical method for solid material elasticity estimation.</i>	8/2022-5/2024
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\* Awards obtained:

- **Graduate Student Research Support Award**, the CH Foundation, Texas Tech University Office of Diversity, Equity & Inclusion, and the Graduate School, Spring 2023.

**Undergraduate students**

Trenton Wise	<i>Ultrasound nondestructive testing of batteries</i>	Fall 2025
Charles Vancil	<i>Ultrasound for microplastics removal</i>	Summer 2025
Voshita Parvathaneni	<i>Bioacoustics for health monitoring</i>	1/2025-present
Andrew Geter	<i>Acoustic resonance of cancer cells</i>	1/2024-5/2025
Evin Timocin	<i>Design optimization of therapeutic array transducer</i>	Fall 2023, Fall 2024
Luis Acosta	<i>Acoustic emission for health monitoring</i>	8/2023-5/2024
Evin Timocin	<i>Measurement of shear wave in soft tissue</i>	Fall 2023
Ciani Sunderlin	<i>Ultrasound in cancer immunotherapy</i>	Fall 2021
Kabita Khanal	<i>Acoustic field simulation for therapeutic array design</i>	Fall 2021

**Visiting students**

Irene Liang	High school junior from Lubbock High School, Lubbock, TX <i>*Engineering Research Internship Experience, College of Engineering, Texas Tech.</i>	Summer 2024
Eva Vanstavel	Graduate student from Arts et Métiers, France <i>Topic: The effect of element positions on the acoustic field of ultrasound therapeutic array transducer</i>	Spring 2023
Samin Enam	Undergraduate student from Universiti Teknologi Malaysia <i>Topic: The application of focused ultrasound in cancer immunotherapy</i>	Summer 2022

**Advising at Georgia Institute of Technology**

<b>M.S. students</b> , Georgia Institute of Technology, Atlanta, GA		2018-2019
Jurjen Leer	<i>Surface shear wave elasticity imaging</i>	

<b>Undergraduate students</b> , Georgia Tech Lorraine, Atlanta, GA		2017-2020
Gabriela Sánchez	<i>Numerical simulation of shear wave elasticity imaging</i>	2020
Kevin Wang	<i>Acoustic field simulation for therapeutic array design</i> <i>*Won the President's Undergraduate Research Award in 2018.</i>	2017-2020

<b>Undergraduate students</b> , Georgia Tech Lorraine, Metz, France		2010-2013
Chelsea Dyess	<i>Scanning acoustic microscopy of composite materials</i>	2013
Charlsie Lemons	<i>Diffraction of ultrasound waves in a wedge structure</i>	2013
Taylor Breault	<i>High-frequency C-scan on composite structures</i>	2012
Andrew Bolduc	<i>High-frequency C-scan on corrugated surface</i>	2012

Cherish Weiler	<i>Sound interaction with periodic surfaces</i>	2011
Surabhi Dosi	<i>Sound interaction with anisotropic disks</i>	2011
Luis Balderrama	<i>Ultrasonic characterization of anisotropic periodic structure</i>	2011
Vicky Prince	<i>Ultrasonic investigation on anisotropy of materials</i>	2010

## SERVICES

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### Editorial Board

Topic Editor, *Novel Approaches in Biomedical Ultrasound Imaging*, Frontiers in Acoustics, 2025-2026.  
 Topical Advisory Panel, Bioengineering, 2024-present.  
 Reviewer Editor, Frontiers in Acoustics, 2023-present.  
 Member, Topical Advisory Panel, Signals, 2020-2021.

### Committee Service in Professional Societies

Acoustical Society of America, member of the technical committees: Physical Acoustics; Signal Processing in Acoustics, 7/2023-6/2026.  
 Acoustical Society of America, member of the administrative committees: Education in Acoustics, 7/2023-6/2026.

### Reviewer of Federal Funding Agencies

National Institutes of Health (NIH), Reviewer, NINC, 2025.  
 National Institutes of Health (NIH), Reviewer, EITN, 2024.  
 National Science Foundation (NSF), Reviewer, GRFP, 2024.  
 National Science Foundation (NSF), Reviewer, GRFP, SBIR/STTR, 2023.

### Reviewer of Overseas Funding Agencies

The Government of the Hong Kong Special Administrative Region of China, Reviewer, Innovation and Technology Commission (ITC), 2024.

### Reviewer of Selected Academic Journals

*IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control* | *Ultrasonics* | *Sensors* | *Energies* | *IEEE Transactions on Medical Imaging* | *Journal of Ultrasound in Medicine* | *Results in Physics* | *Journal of the Acoustical Society of America* | *Smart Materials and Structures* | *AIP Advances* | *Journal of Applied Physics* | *Applied Physics Letter* | *Journal of Testing and Evaluation* | *Materials* | *Current Medical Imaging Reviews* | *Applied Sciences* | *Sustainability* | *Smart Materials and Structures* | *Machines* | *Metals* | *Diagnosis* | *Waves in Random and Complex Media* | *Symmetry* | *Journal of Zhejiang University Science A* | *IEEE Access*

### Reviewer of International Conferences

IEEE Ultrasonics Ferroelectrics and Frequency Control (UFFC) Society, International Ultrasonics Symposium 2025, 4/2025.  
 Biomedical Engineering Society (BMES) Annual Meeting, 6/2021, 8/2022, 5/2023.

### Ph.D. Thesis Committee

Gabriel Cação, Department of Industrial, Manufacturing and Systems Engineering, Texas Tech University, 6/2025.  
 Sandeep Puri, Department of Physics and Astronomy, Texas Tech University, 6/2025.  
 Md Nayeem Hasan Kashem, Department of Chemical Engineering, Texas Tech University, 10/2024.  
 Harsh Shah, Department of Nutritional Sciences, Texas Tech University, 6/2023.  
 Karl Gardner, Department of Chemical Engineering, Texas Tech University, 3/2023.

Justin Pippy, Department of Biomedical Engineering, University of Houston, 4/2022.

### **Institute Service at Texas Tech University**

#### Department service

Member of PhD qualifying exam committee, Vikram Sawant, 7/2024.  
 Faculty Advisor, Red Raider Racing, 8/2023-present.  
 Advisor for undergraduate internship/co-op (ME 4000), 3 students, 5/2023-8/2023.  
 Member of the PhD qualifying exam committee for Mechanics of Materials, 2/2023.  
 Advisor for undergraduate internship/co-op (ME 4000), 1 student, 1/2023-5/2023.  
 Member of the faculty search committee, 2022-2023.  
 Advisor for undergraduate internship/co-op (ME 4000), 5 students, 6/2022-8/2022.  
 Ph.D. qualifying exam committee member for Mechanics of Materials, 9/2021.  
 Undergraduate career advising (21 students), 2021-present.

#### College service

College of Engineering Research Strategic Planning Committee, 2024.

#### University service

Judge, Student Poster Competition, Obesity Research Institute's 9th Annual Meeting, TTU& TTUHSC, 5/2024.  
 Judge, TTU Graduate School Poster Competition, 3/2024.  
 Reviewer, Graduate School General Fellowship, 2/2024.  
 Judge, Graduate School Poster Competition, March 3, 2023.  
 Judge, The 14<sup>th</sup> Annual Undergraduate Research Conference, March 29-30th, 2022  
 Judge, Graduate School Poster Competition, March 3, 2022.  
 Member, Texas Tech STEM Center for Outreach, Research & Education, 2021-present.

### **Institute Service at Georgia Tech**

Reviewer, Research proposal for President's Undergraduate Research Award	2018-2019
Judge, 13th Annual Undergraduate Research Spring Symposium	2018-2019

### **PROFESSIONAL SOCIETIES**

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Member	American Heart Association (AHA)	2025-present
Member	American Institute of Ultrasound in Medicine (AIUM)	2024-present
Member	International Society of Therapeutic Ultrasound (ISTU)	2022-present
Member	Biomedical Engineering Society (BMES)	2018-present
Member (elected)	Acoustical Society of America (ASA)	2011-present
Member	Institute of Electrical and Electronics Engineers (IEEE)	2011-present
Member	American Society of Mechanical Engineers (ASME)	2007-present

### **PUBLICATIONS**

#### **Journal Articles Submitted/Under Review**

- Sadman Labib, **Jingfei Liu**, "Machine Learning-based Optimization of a Single-element Transcranial Focused Ultrasound Transducer for Deep Brain Neuromodulation in Mice," *Ultrasonics*.
- Abdulla A Masud, Paul F Egan, **Jingfei Liu**, Karl A Fisher, "A Stochastic Approach for Calculating Elastic Constants of Polymer Lattice Structures based on Spectral Ultrasonic Data," *Ultrasonics*.

2. Sanjay Mahat, William Renter, Ezekiel Anguiano, Paul Egan, **Jingfei Liu**, “An Acoustic Approach for Effectively Measuring the Dynamic Elastic Properties of 3D-Printed Nylon 11 Structures,” *Progress in Additive Manufacturing*.
1. Roshan Sharma, Sanjay Mahat, **Jingfei Liu**, “Nondestructive Evaluation of Elastic Properties in Irregularly Shaped Solid Structures,” *Acta Acustica*.

### Peer-Reviewed Journal Articles

27. **Jingfei Liu**, Stanislav Y. Emelianov, “A Dual-Transducer Approach for High-Sensitivity and High-Resolution Shear Wave Elasticity Imaging,” *Sensors*, 25(17) 5532 (2025).
26. Sadman Labib, Robert K. Bright, **Jingfei Liu**, “Focused Ultrasound in Cancer Immunomodulation: A Review of Mechanisms and Applications”, *Ultrasound in Medicine and Biology*, 51 (1), 1-14 (2025).
25. Abdulla A Masud, **Jingfei Liu**, “Numerical Simulation of Impulse-induced Surface Acoustic Waves for Elastography Purposes Using k-Wave Simulation Toolbox,” *Journal of Applied Physics*, 136 (16), 164701 (2024). (This article was selected by the journal as “Editor’s Picks”)
24. **Jingfei Liu**, Daniella Corporan, Don Vanderlaan, Muralidhar Padala, Stanislav Y. Emelianov. “A Pilot Study of Cardiac Guided Wave Elastography: An *ex vivo* Testing in A Rodent Model with Mechanical Testing Validation,” *Frontiers in Acoustics*, 2 (2024).
23. Sanjay Mahat, Roshan Sharma, Hyunjo Jeong, **Jingfie Liu**, “Natural Frequency Informed Finite Element Modal Analysis Method for Estimating Elastic Properties of Solid Materials,” *Journal of Applied Physics*, 136 (10), 105107 (2024). (This article was selected by the journal as “Editor’s Picks”)
22. Abdulla A Masud, **Jingfei Liu**, “Ultrasonic Surface Acoustic Wave Elastography: A Review of Theories, Technical Developments, and Medical Applications,” *Medical Physics*, 51 (5), 3220-3244 (2024).
21. **Jingfei Liu**, Jurjen Leer, Salavat Aglyamov, Stanislav Y. Emelianov, “A Scholte Wave Approach for Ultrasound Surface Wave Elasticity Imaging”, *Medical Physics*, 50 (7), 4138-4150 (2023).
20. **Jingfei Liu**, Heechul Yoon, Stanislav Y. Emelianov, “Noninvasive Ultrasound Assessment of Tissue Internal Pressure Using Dual Mode Elasticity Imaging: A Phantom Study,” *Physics in Medicine and Biology*, 68, 015012 (2022).
19. Lynda Chehamia\*, **Jingfei Liu\***, Pascal Pomarède, Paul Lohmuller, Boris Pittrowskic, Fodil Meraghnich, Nico F. Declercq, “Ultrasonic Investigation of the Effect of Compressive Strains on 3D Periodic Bi-material Structures”, *Acta Acustica*, 6 (26) (2022). (\**Contributed equally*)
18. Lingyi Zhao, Don Vanderaan, Heechul Yoon, **Jingfei Liu**, Stanislav Y. Emelianov, “Ultrafast Ultrasound Imaging of Surface Acoustic Waves Induced by Laser Excitation Compared with Acoustic Radiation Force,” *Optics Letters*, 45 (7), 1790-1793 (2020).
17. **Jingfei Liu**, Kevin Wang, Nico F. Declercq, “New perspectives on the physical origin of acoustic Wood anomalies,” *Acta Acustica united with Acustica*, 105 (2), 265-272 (2019).
16. Yu Liu\*, **Jingfei Liu\***, Brett Z. Fite, Josquin Foiret, Asaf Ilovitsh, J. Kent Leach, Erik Dumont, Charles F. Caskey, Katherine W. Ferrara, “Supersonic Transient Magnetic Resonance Elastography for Quantitative Assessment of Tissue Elasticity”, *Physics in Medicine and Biology*, 62 (10), 408 (2017). (\**Contributed equally*)
15. Hua Zhang, Elizabeth S. Ingham, M. Karen J. Gagnon, Lisa M. Mahakian, **Jingfei Liu**, Josquin L. Foiret, Juergen K. Willmann, Katherine W. Ferrara, “In Vitro Characterization and In Vivo Ultrasound Molecular Imaging of Nucleolin-Targeted Microbubble”, *Biomaterials*, 118, 63-73 (2017).

14. **Jingfei Liu**, Nico F. Declercq, “Acoustic Wood Anomaly in Transmitted Diffraction Field”, *Journal of Applied Physics*, 121 (11), 114902 (2017).
13. **Jingfei Liu**, Nico F. Declercq, “Pulsed Ultrasonic Comb Filtering Effect and Its Applications in the Measurement of Sound Velocity and Thickness of Thin Plates”, *Ultrasonics*, 75, 199-208 (2017).
12. **Jingfei Liu**, Josquin Foiret, Douglas N. Stephens, Olivier Le Baron and Katherine W. Ferrara, “Development of A Spherically Focused Phased Array Transducer for Ultrasonic Image-Guided Hyperthermia”, *Physics in Medicine and Biology*, 61 (14), 5275-5296 (2016).
11. **Jingfei Liu**, Nico F. Declercq, “Experimental Investigation of the Dispersion of Scholte-Stoneley Waves on a Periodically Corrugated Surface”, *Applied Physics Letters*, 109 (26), 261603 (2016).
10. Anurupa Shaw, **Jingfei Liu**, Suk Wang Yoon and Nico F. Declercq, “Characterization of the Geometry of Microscale Periodic Structures Using Acoustic Microscopy”, *Ultrasonics*, 70, 258-265 (2016).
- \*9. **Jingfei Liu**, Nico F. Declercq, “A Secondary Diffraction Effect and the Generation of Scholte-Stoneley Acoustic Wave on Periodically Corrugated Surface”, *Journal of Applied Physics*, 119 (17), 174901 (2016). (\**This article is featured on the cover of the Journal of Applied Physics.*)
8. **Jingfei Liu**, Nico F. Declercq, “Investigation of the origin of acoustic Wood anomaly”, *Journal of the Acoustical Society of America*, 138 (2), 1168-1179 (2015).
7. Rayisa Moiseyenko, **Jingfei Liu**, Sarah Benchabane, Nico Declercq, and Vincent Laude, “Excitation of Surface Waves on One-dimensional Solid-fluid Phononic Crystals and the Beam Displacement Effect”, *AIP Advances*, 4 (12), 124202 (2014).
6. **Jingfei Liu**, Nico F. Declercq, “Experimental Observation of Acoustic Sub-harmonic Diffraction by a Grating”, *Journal of Applied Physics*, 115 (24), 244902 (2014).
5. **Jingfei Liu**, Nico F. Declercq, “Ultrasonic Geometrical Characterization of Periodically Corrugated Surfaces”, *Ultrasonics*, 53 (4), 853-861 (2013)
4. Rayisa P. Moiseyenko, **Jingfei Liu**, Nico F. Declercq and Vincent Laude, “Blazed Phononic Crystal Grating”, *Applied Physics Letters*, 102 (3), 034108 (2013).
3. **Jingfei Liu**, Nico F. Declercq, “Air-Coupled Ultrasonic Investigation of Staked Cylindrical Rods”, *Journal of the Acoustical Society of America*, 131 (6), 4500-4507 (2012).
2. **Jingfei Liu**, James D. Stephens, Brian R. Kowalczyk, Cetin Cetinkaya, “Real-time In-die Compaction Monitoring of Dry-coated Tablets”, *International journal of pharmaceutics*, 414, 171-178 (2011).
1. **Jingfei Liu**, Cetin Cetinkaya, “Mechanical and Geometric Property Characterization of Dry-Coated Tablets with Contact Ultrasonic Techniques”, *International Journal of Pharmaceutics*, 392, 148-155 (2010).

### Conference Proceedings

13. Sadman Labib, **Jingfei Liu**, “Machine Learning-Guided Design of t-FUS Transducers for Deep Brain Neuromodulation in Obesity Treatment in a Mouse Model,” *2025 IEEE International Ultrasonics Symposium (IUS)* (2025).
12. Yu Liu, **Jingfei Liu**, Brett Z. Fite, Josquin Foiret, J. Kent Leach, Katherine W. Ferrara, “Quantitative MR-guided Transient Shear Wave Imaging for Tissue Elasticity Assessment”, *2016 IEEE International Ultrasonics Symposium (IUS)* (2016).
11. **Jingfei Liu** and Nico Declercq, Anurupa Shaw, “The Phenomenon of Secondary Diffraction of Sound on Periodically Corrugated Surface”, *Physics Procedia* 70, 249-252 (2015)



10. Nico F. Declercq, Peter McKeon, Yaacoubi Slash, **Jingfei Liu**, Anurupa Shaw, “Ultrasonic Imaging of Materials under Unconventional Circumstances”, *AIP Conference Proceeding* 1650, 24 (2015).
9. **Jingfei Liu** and Nico F. Declercq, “A Search for the Physical Origin of Acoustic Wood Anomaly”, *7th Forum Acusticum*, September 7-12, 2014, Kraków, Poland.
8. **Jingfei Liu**, Nico F. Declercq, “Time-Frequency Analysis of Wood Anomalies in Acoustics”, *Proceedings of Meetings on Acoustics (POMA)*, 19, 055075 (2013).
7. **Jingfei Liu**, Nico F. Declercq, “The Effects of the Transducer Beam Properties on the Ultrasonic Geometrical Characterization of Periodically Corrugated Surfaces”, *POMA*, 19, 030082, (2013).
6. **Jingfei Liu**, Nico F. Declercq, “Spectral Analysis of the Impact Defects in Composite Plates”, *Proceedings of the 2013 International Congress on Ultrasonics (ICU2013)*, 543-548 (2013).
5. Rayisa P. Moiseyenko, **Jingfei Liu**, Nico F. Declercq, Vincent Laude, “Plane Wave Diffraction on Blazed Phononic Crystal Gratings”, Abstract P0474, *ICU2013*, (2013).
4. Rayisa P. Moiseyenko, **Jingfei Liu**, Sarah Benchabane, Nico F. Declercq, Vincent Laude, “Scholte–Stoneley Waves on 2D Phononic Crystal Gratings,” *International Conference Days on Diffraction*, 178-182 (2012).
3. Rayisa P. Moiseyenko, **Jingfei Liu**, Sarah Benchabane, Nico F. Declercq, Vincent Laude, “Scholte–Stoneley Waves on Corrugated Surfaces and on Phononic Crystal Gratings”, *Proceedings of the Acoustics 2012 Nantes Conference*, 3671-3675, (2012).
2. **Jingfei Liu**, Nico F. Declercq, “Comparison of Different Approaches in Characterization of Impact Defects of Composite Plates”, *Proceedings of the Acoustics 2012 Nantes Conference*, 2659-2663, (2012).
1. **Jingfei Liu**, Nico F. Declercq, “Air-Coupled Ultrasonic Investigation of Stacked Cylindrical Rods”, International Congress on Ultrasonics (Gdansk 2011), *AIP Conference Proceedings*, 1433, 323-326 (2012)

## Patents

1. Yang Cao, Jingfei Liu, Haitao Ran, Zhigang Wang, Pan Li, “Digitally Controlled Low-intensity Focused Ultrasound Medical Imaging System”, CN201811014215.3, 2018.

## PRESENTATIONS

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### Invited Talks

6. **Jingfei Liu**, “Biomedical Acoustics: Harnessing Sound and Vibration for Medical Diagnosis and Therapy,” a talk to the Malawi University of Science & Technology Delegation, invited by STEM CORE, Texas Tech University, May 15, 2025.
5. **Jingfei Liu**, “Developing Ultrasound-based Elastography Techniques for Medical Diagnosis,” Georgia Tech Europe, March 14, 2025, Metz, France.
4. **Jingfei Liu**, “Surface and Guided Wave Elastography: Ultrasound Elastography Beyond Shear Wave Elastography”, *The 15th International Conference on Ultrasound Engineering for Biomedical Applications*, July 19-21, 2023, Los Angeles, California, USA.
3. **Jingfei Liu**, “Acoustics and Its Medical Applications: Three Examples”, Department of Electrical and Computer Engineering, Texas Tech University, Lubbock, Texas, April 14, 2023.
2. **Jingfei Liu**, “Interaction of ultrasound with periodic structures and composite materials”, University College VIVES, KU Leuven Association, Kortrijk, Belgium, June 13, 2014.
1. **Jingfei Liu**, Rayisa P. Moiseyenko, Sarah Benchabane, Nico F. Declercq, Vincent Laude, “Scholte–Stoneley Waves on Corrugated Surfaces and on Phononic Crystal Gratings”, *XV*

*International Conference for Young Researchers: Wave Electronics and its Applications in the Information and Telecommunication System, St. Petersburg, Russia, September 5-10, 2012.*

### Conference Presentations

38. Sadman Labib, Jingfei Liu. "Machine Learning-Guided Design of t-FUS Transducers for Deep Brain Neuromodulation in Obesity Treatment in a Mouse Model," 2025 IEEE International Ultrasonics Symposium, aka. IUS 2025, September 15-18, 2025, Utrecht, Netherlands.
37. Sadman Labib, Jingfei Liu. "Developing Transcranial Focused Ultrasound Transducers for Targeted Deep Brain Neuromodulation in Freely Moving Mice," 24th Annual International Symposium on Therapeutic Ultrasound, aka. ISTU 2025, June 21 - 24, 2025, Banff, Canada.
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