


Scott Schoen Jr

He/Him/His

+1 (916) 572-4636
scottsschoenjr@gatech.edu
www.scottsschoenjr.com
 0000-0001-7195-2883

Education

- 2016–2020 **Georgia Institute of Technology Atlanta, GA**
PhD Mechanical Engineering (Acoustics, Mathematics)
Thesis: *Trans-skull Ultrasound for Imaging and Therapy*
Supervisor: Costas D. Arvanitis
- 2011–2013 **The University of Texas at Austin Austin, TX**
MSE Mechanical Engineering (Acoustics)
Thesis: *Acoustic Characterization of Encapsulated Microbubbles at Seismic Frequencies*
Supervisor: Mark F. Hamilton
- 2007–2011 **Tufts University Medford, MA**
BS (magna cum laude) Physics & Music

Research Experience

- 2025–pres. **Research Scientist II Georgia Institute of Technology**
Ultrasound Imaging & Therapeutics Research Lab
Investigating novel ultrasound imaging, modeling, and signal processing approaches to advance pre-clinical applications of shear wave, contrast, and photoacoustic imaging.
- 2023–2025 **Instructor in Radiology**
- 2021–2023 **Postdoctoral Fellow Harvard Medical School & Massachusetts General Hospital**
Center for Ultrasound Research & Translation
Leveraging fundamental acoustics, signal processing, and machine learning techniques to improve diagnostic ultrasound images, with particular emphasis on aberration correction and contrast-enhanced techniques.
- 2016–2021 **Graduate Research Assistant Georgia Institute of Technology**
Ultrasound Biophysics & Bioengineering Lab
Developing fast algorithms to account for the acoustic heterogeneity of skull bone, and techniques to improve resolution and exploit nonlinearity.
- 2013–2016 **Research Associate Trident Research LLC**
Member of team responsible for maintenance and refresh of mandatory impact localization system used during US Navy flight test operations.
- Planned collection of and analyzed acoustic & GPS data to produce final impact scores
 - Created computational models of communications reliability, satellite network availability, and ocean acoustic propagation to aid sensor deployment
 - Served as cybersecurity manager for system IT components

- 2011–2013 **Graduate Research Assistant** *The University of Texas at Austin*
Applied Research Laboratories
Investigating the feasibility of the use of encapsulated microbubbles as low-frequency (sub-resonance) acoustic contrast agents for applications in seismic imaging.
- 2009–2011 **Undergraduate Research Assistant** *Tufts University*
Investigating the crystallization behavior of polymers in the presence of multiwalled carbon nanotubes towards tunable material design.

Service

Journal Referee

Ultrasonic Imaging (Associate Editor)

Frontiers in Acoustics (Review Editor)

Proceedings of Meetings on Acoustics (Associate Editor, Biomedical Acoustics)

AD HOC: *IEEE Transactions on Medical Imaging*, *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, *International Journal of Computer Assisted Radiology and Surgery*, *Journal of the Acoustical Society of America*, *JASA Express Letters*, *Medical Physics*, *Physics in Medicine & Biology*, *Scientific Reports*, *Ultrasonic Imaging*, *Ultrasonics*, and *Ultrasound in Medicine and Biology*

Conference Session Moderator

Therapeutic Monitoring ISTU Symposium 2018 (Nashville, TN USA)

General and Abdominal Ultrasound AIUM 2022 (San Diego, CA USA)

Quantitative Ultrasound Joint ASA/ICA 2025 (New Orleans, LA USA)

Committee Member QIBA *aium.org*

Member of Pulse-Echo Quantitative Ultrasound (PEQUS) committee

ASA Georgia Tech Student Chapter *gt-asa.org*

Vice President (2019), President (2018), Treasurer (2017)

IEEE-UFFC Georgia Tech Student Chapter *ieee-uffc.org*

Treasurer (2019–2020)

Supervision

- 2021–2022 **Harvard University Bioengineering** *seas.harvard.edu*
Senior Thesis Supervisor for James R. Young
Thesis: SoundAI: Machine Learning-Based Correction of Ultrasound Aberration
- 2023–2025 **Harvard Medical School** *curt.mgh.harvard.edu*
Postdoctoral Supervisor: Maryam Dadgar & Ali K.Z. Tehrani
- 2025 **Georgia Tech Bioengineering** *bioengineering.gatech.edu*
Master's Thesis Committee for Camden Kitchen
Thesis: Optimal Galvanic Cell Design for Powering Ingestible Devices in Varying Gastrointestinal Conditions

Professional Affiliations

- 2012–13
2016–pres. **Acoustical Society of America** *acousticalsociety.org*
- 2018–pres. **IEEE Ultrasonics Ferroelectrics and Frequency Control Society** *ieee-uffc.org*

- 2021–pres. **American Institute of Ultrasound in Medicine** *aium.org*
2020–2021 **American Association of Physicists in Medicine** *aapm.org*
2018–2020 **Biomedical Engineering Society** *bmes.org*
2018–2020 **International Society for Therapeutic Ultrasound** *istu.org*

Awards & Achievements

- Second Place, a-MEM Challenge IEEE Joint UFFC Meeting (2024)
Distinguished Reviewer, *IEEE T. Medical Imaging* (2024)
ASA Early Career Travel Award, ASA Sydney (2023)
FV Hunt Postdoctoral Research Fellowship in Acoustics (2022–2023)
Overall Runner-up, ULTRA-SR Challenge at IEEE IUS (2022)
NCAC Travel Award, ASA 179 (2020) & ASA 177 (2019)
Second Place, ASA International Student Challenge Problem (2019)
ASA Travel Subsidy, ASA 178 (2019)
Provost's Award, Georgia Tech CRIDIC Poster Competition (2019)
Session co-moderator & Student Travel Award, ISTU'18 Nashville, TN USA (2018)
Elizabeth & Russell Hallberg Foundation Fellowship in Engineering Acoustics (2011)
Tufts University Dean's List (2007–2011)

Languages

- English (native), Spanish (proficient)

Teaching Experience

- 2011 **Tufts University** *AST 0009*, Teaching Assistant
2019 **Georgia Tech** *ME 6770*, Teaching Assistant
2020 **Georgia Tech** *ME 8873*, Teaching Practicum
2022– **Harvard Medical School** *Ultrasound Physics Short Course*, Lecturer

Grants Prepared

Funded

- 2025 **DARPA MASH** *DARPA*
Role: Co-I
Amount: \$15 755 000
Project Title: "Clinical Autonomy for Resilient Emergencies (CARE)"
2023 **F.V. Hunt Fellowship in Acoustics** *Acoustical Society of America*
Role: PI
Amount: \$50 000
Project Title: "Novel ultrasound arrays and beamforming algorithms to improve the clinical value of diagnostic liver images"

Not Funded/Pending

- 2025 **NIH R21 Trailblazer NIH - NIBIB**
Role: PI
Amount: \$629 600
Project Title: "PUSCHT: Spatiotemporally Maneuverable Ultrasound Hyperthermia for Head and Neck Tumors"
- 2025 **NIH R21 Trailblazer NIH - NIBIB**
Role: PI
Amount: \$629 600
Project Title: "pH-Needle: Functional Guidance of Brachytherapy for Prostate Cancer"
- 2025 **NIH U01 Bioengineering Partnerships with Industry NIH - NIBIB**
Role: Co-investigator
Amount: \$3 281 229
Project Title: "Development of Acoustic Diffraction-resistant Adaptive Profile Technology (ADAPT) for Improved Shear Wave Elastography"
- 2024 **NIH K99/R00 Pathway to Independence NIH - NIBIB**
Role: PI
Amount: \$1 100 594
Project Title: "Fast Spectral Aberration Correction for Enhanced Focal Liver Lesion Detection"

Publications

Journal Articles

1. Gupta, J., Candel, I., **Schoen Jr, S.**, Ottensmeyer, M., Pierce, T. T., Telfer, B. & Samir, A. E. Nonlinear Approaches Improve the Sensitivity of Contrast-enhanced Ultrasound to Detect Hemorrhage. *IEEE Transactions on Ultrasonics* (2026).
2. Jakovljevic, M., **Schoen Jr, S.**, Wang, M., Wang, X., Thomenius, K. & Samir, A. E. Power-efficient retrospective transmit beamforming in range-Doppler frequency domain. *IEEE Transactions on Ultrasonics* (2026).
3. Qin, D., Huang, X., **Schoen Jr, S.**, Emelianov, S. & Bouchard, R. R. Accurate Quantification of Photoacoustic Biomarkers Through Unbiased Noise Masking. *Under Review* (2026).
4. **Schoen Jr, S.**, Pierce, T. T., Jakovljevic, M., Jeggari, S. D. R., Ali, A.-R., Tadross, R., Lause, B., Hunt, D., *et al.* Optimized Coherence Masking Improves Ultrasound Imaging of Kidney Cysts. *Journal of Ultrasound in Medicine* (2026).
5. Zhuang, L., **Schoen Jr, S.**, Zebker, H., Dahl, J. & Jakovljevic, M. Adapting the Chirp Scaling Algorithm to Ultrasound Synthetic Aperture Transmit Sequences. *Ultrasonic Imaging* (2026).
6. **Schoen Jr, S.**, Lause, B., Jakovljevic, M., Tadross, R., Washburn, M. & Samir, A. E. Wavefield Correlation Imaging in Arbitrary Media with Inherent Aberration Correction. *Proceedings of Meetings on Acoustics* **26** (2025).
7. Pierce, T. T., Naja, K., **Schoen Jr, S.**, Tadross, R., Wang, M. H., Ozturk, A., Pope, K. R., Hunt, D. T., *et al.* Liver Shear Wave Elastography Using a Mechanical Index Exceeding Regulatory Limits is Safe and Effective. *Radiology Advances* **2**. **Featured on Cover** (Nov. 2025).
8. **Schoen Jr, S.**, Wang, M., Dayavansha, S., Naja, K., Kumar, V., Pope, K., Ling, L., Hunt, D., *et al.* Increased Mechanical Index Improves Shear Wave Elastography: Pilot Study of Signal Enhancement. *Ultrasound in Medicine and Biology* **51** (July 2025).
9. Kafai, A. K., **Schoen Jr, S.**, Candel, I., Gu, Y., Guo, P., Thomenius, K., Pierce, T. T., Wang, M. H., *et al.* Combining Deep Data-driven and Physics-inspired Learning for Shear Wave Speed Estimation in Ultrasound Elastography. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control* **72**, 806–816 (June 2025).
10. **Schoen Jr, S.**, Kumar, V., Gu, Y., Dayavansha, S. K., Tadross, R., Thomenius, K., Washburn, M. & Samir, A. E. Efficient Aberration Correction via Optimal Bulk Speed of Sound Compensation. *Under Review* (2024).

11. **Schoen Jr, S.**, Prasov, A., Candel, I., Arshad, S., Ottensmeyer, M., Brattain, L., Telfer, B. & Samir, A. E. Microbubble Contrast Agents Improve Detection of Active Hemorrhage. *IEEE Open Journal of Engineering in Medicine and Biology* (2024).
12. Lerendegui, M., Riemer, K., George, P., Lachlan, A. J. M., Wang, B., Chavignon, A., Ashikuzzaman, M., Couture, O., *et al.* ULTRA-SR: assessment of Ultrasound Localisation and Tracking Algorithms for Super Resolution Imaging. *IEEE Transactions on Medical Imaging* **43**, 2970–2987 (Aug. 2024).
13. Ozturk, A., Pierce, T. T., Li, Q., Baikpour, M., Rosado-Mendez, I., Wang, M. H., **Schoen Jr, S.**, Gu Yuyang and Dayavansha, S. K., *et al.* The Future is Beyond Bright: The Evolving Role of Ultrasound for Liver Disease. *Radiology* **309** (Nov. 2023).
14. Wang, X., Bamber, J. C., Esquivel-Sirvent, R., Ormachea, J., Sidhu, P. S., Thomenius, K. E., **Schoen Jr, S.**, Rosenzweig, S., *et al.* Ultrasonic Sound Speed Estimation for Liver Fat Quantification: A Review by the AIUM-RSNA QIBA Pulse-Echo Quantitative Ultrasound Initiative. *Ultrasound in Medicine and Biology* **49**, 2327–2335 (Nov. 2023).
15. Gu, Y., Kumar, V., Dayavansha, S. K., **Schoen Jr, S.**, Tadross, R., Thomenius, K., Washburn, M. & Samir, A. E. Propagation-invariant acoustic beams for adaptable shear wave imaging. *Science Advances* **9** (Nov. 2023).
16. Zhang, L., Marcus, C., Mejorado, D., **Schoen Jr, S.**, Pierce, T. T., Kumar, V., Fernandez, S. V., Hunt, D., *et al.* Conformable Phased Array Ultrasound Patch for Bladder Volume Monitoring. *Nature Electronics* **7**, 77–90 (Nov. 2023).
17. Song, Z., Wang, S., Li, Q., Ozturk, A., Mittal, V., **Schoen Jr, S.**, Ramaswamy, S., Pierce, T. T., *et al.* Memory-efficient low-compute segmentation algorithms for edge ultrasound devices: continuous bladder monitoring. *Scientific Reports* **13** (Sept. 2023).
18. **Schoen Jr, S.**, Kilnic, M. S., Lee, H., Guo, Y., Degertekin, F. L., Woodworth, G. F. & Arvanitis, C. D. Towards controlled drug delivery in brain tumors with microbubble-enhanced focused ultrasound. *Advanced Drug Delivery Reviews* **180** (2022).
19. **Schoen Jr, S.**, Dash, P. P. & Arvanitis, C. D. Experimental Demonstration of Trans-skull Volumetric Passive Acoustic Mapping with the Heterogeneous Angular Spectrum Approach. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control* **69**, 534–542 (2022).
20. Lee, H., Guo, Y., Ross, J. L., **Schoen Jr, S.**, Degertekin, F. L. & Arvanitis, C. D. Spatially targeted brain cancer immunotherapy with closed loop controlled focused ultrasound and immune checkpoint blockade. *Science Advances* **8** (2022).
21. **Schoen Jr, S.**, Zhao, Z., Huang, C., Chen, S. & Arvanitis, C. D. Morphological Reconstruction Improves Microvessel Mapping and Characterization in Super-Resolution Ultrasound. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control* **68**, 2141–2149 (2021).
22. **Schoen Jr, S.** & Arvanitis, C. D. Acoustic source localization with the angular spectrum approach in continuously stratified media. *The Journal of the Acoustical Society of America* **148**, EL333–EL339 (2020).
23. **Schoen Jr, S.** & Arvanitis, C. D. Heterogeneous Angular Spectrum Method for Trans-skull Imaging and Focusing. *IEEE Transactions on Medical Imaging* **39**, 1605–1614 (2020).
24. Patel, A., **Schoen Jr, S. J.** & Arvanitis, C. D. Closed Loop Spatial and Temporal Control of Cavitation Activity with Passive Acoustic Mapping. *IEEE Transactions on Biomedical Engineering* **66**, 2022–2031. ISSN: 0018-9294 (July 2019).

Invited Talks

1. **Schoen Jr, S. J.** *Microbubble Contrast Agents Improve Detection of Active Hemorrhage in IEEE Engineering in Medicine and Biology Seminar* (Dec. 2024).
2. **Schoen Jr, S. J.** *Diagnostic Ultrasound in the Liver: Challenges and Opportunities in Joint GT-ASA and IEEE IUS Student Chapter Seminar* (Oct. 2023).

3. **Schoen Jr, S. J.** *Ultrasound through the Skull: Seeing and Treating Noninvasively* in *University of Texas at Austin Acoustics Seminar* (Virtual, Nov. 2021).
4. **Schoen Jr, S. J.** *Towards Efficient Methods for Transcranial Ultrasound Monitoring & Control* in *2020 Joint AAPM | Comp Meeting* (Virtual, July 2020).

Theses

1. **Schoen Jr, S. J.** *Trans-skull Ultrasound for Imaging and Therapy* PhD Dissertation (Georgia Institute of Technology, Dec. 2020).
2. **Schoen Jr, S. J.** *Acoustic characterization of encapsulated microbubbles at seismic frequencies* MS Thesis (The University of Texas at Austin, Dec. 2013).

Patents

1. **Schoen Jr, S. J.**, Ali, A.-R., Pierce, T. T., Samir, A. E., Wang, M. & Washburn, M. *Automated Conditionally Increased Acoustic Output Algorithm* Patent Application. Dec. 2024.
2. Arvanitis, C. D., Patel, A., **Schoen Jr, S. J.** & Zhao, Z. *Systems and Methods for Ultrasound Imaging and Focusing* US Patent Pending PCT/US2019/060217. Nov. 2019.

Conference Presentations

1. Gupta, J., Candel, I., **Schoen Jr, S.**, Arshad, S., Telfer, B., Pierce, T. T. & Samir, A. E. *Improving Contrast Enhanced Ultrasound Sensitivity for Active Hemorrhage in a High-Fidelity Phantom* in *2025 IEEE International Ultrasonics Symposium* (Utrecht, Netherlands, Sept. 2025).
2. Tehrani, A. K., Rivaz, H., **Schoen Jr, S.**, Candel, I., Wang, M., Washburn, M., Thomenius, K. & Samir, A. E. *Particle Velocity Tracking in Shear Wave Elastography Using a Mamba-Based Spatiotemporal Network* in *2025 IEEE International Ultrasonics Symposium* (Utrecht, Netherlands, Sept. 2025).
3. Gupta, J. F., Arshad, S., Candel, I., **Schoen Jr, S.**, Ottensmeyer, M., Pierce, T. T., Samir, A. E. & Telfer, B. *Contrast-Enhanced Ultrasound for Localizing Active Hemorrhage in Military Health Research Symposium* (Kissimmee, FL, Aug. 2025).
4. Manohara, M. H., **Schoen Jr, S.**, Yildirim, D. U., Garacha, P., Samir, A. E., Bahai, A. & Chandrasakan, A. P. *An Analog Front-End for Bladder Ultrasound Monitoring: Achieving 75% Reduction in RX Power Consumption through Power Gating for Intra-Image Sparsity* in *International Conference of the IEEE Engineering in Medicine and Biology Society* (Copenhagen, Denmark, July 2025).
5. **Schoen Jr, S.**, Lause, B., Jakovljevic, M., Tadross, R., Washburn, M. & Samir, A. E. *Wavefield Correlation Imaging in Arbitrary Media with Inherent Aberration Correction* in *Journal of the Acoustical Society of America* (New Orleans, LA USA, May 2025).
6. **Schoen Jr, S.**, Pierce, T. T., Jakovljevic, M., Jeggari, S. D. R., Hunt, D., Pope, K., Lause, B., Tadross, R., *et al.* *Combined Speed of Sound Correction and Coherence Masking Improves Ultrasound Imaging of Renal Cysts* in *Journal of the Acoustical Society of America* (New Orleans, LA USA, May 2025).
7. Manohara, M. H., **Schoen Jr, S.**, Yildirim, D. U., Samir, A. E., Perrot, M. H., Garacha, P. & Chandrasakan, A. P. *An Analog Front End for Bladder Ultrasound using Power Gating for Intra-Image Sparsity* in *2025 IEEE Custom Integrated Circuits Conference* (Boston, MA USA, Apr. 2025).
8. Pierce, T. T., Naja, K., **Schoen Jr, S.**, Tadross, R., Wang, M. H., Pope Kathleen, T., Hunt, D. T., Ling, L. A., *et al.* *Acoustic Output Exceeding Regulatory Limits is Safe and Decreases Shear Wave Elastography Measurement Variability* in *2024 Radiological Society of North America* (Chicago, IL, Dec. 2024).
9. Jakovljevic, M., **Schoen Jr, S.**, Wang, M., Zhuang, L. & Samir, A. E. *Efficient Retrospective Transmit Focusing with Range-Doppler Algorithm* in *2024 IEEE International Ultrasonics Symposium* (Taipei, Taiwan, Sept. 2024).

10. **Schoen Jr, S.**, Dayavansha, S. K., Wang, M., Tadross, R., Washburn, M. & Samir, A. E. *Increased Mechanical Index Safely Enhances Shear Wave Elastography Quality in 2024 IEEE International Ultrasonics Symposium* (Taipei, Taiwan, Sept. 2024).
11. Tehrani, A. K., Rivaz, H., **Schoen Jr, S.**, Gu, Y., Candel, I., Wang, M., Washburn, M., Thomenius, K., et al. *Improved Shear Wave Estimation using Optimization-based Tracking and Adaptive Physics-inspired Deep Neural Network in 2024 IEEE International Ultrasonics Symposium* (Taipei, Taiwan, Sept. 2024).
12. Gu, Y., Dayavansha, S., **Schoen Jr, S.**, Feleppa, E., Wang, M. H., Tadross, R., Candel, I., Jakovljevic, M., et al. *Shear wave elasticity imaging via propagation invariant acoustic beams in 2024 Ultrasound Imaging and Tissue Characterization Conference* (Arlington, VA, June 2024).
13. **Schoen Jr, S.**, Tehrani, A. K. Z. & Samir, A. E. *Deep Learning-Based Microbubble Localization towards Improved Super-resolution Ultrasound in Journal of the Acoustical Society of America* (Sydney, NSW Australia, Dec. 2023).
14. Pierce, T. T., Ottensmeyer, M., Som, A., Brattain, L., Weblin, J. S., Sutphin, P. D., **Schoen Jr, S.**, Johnson, M. R., et al. *Individualized Ultrasound-Guided Intervention Phantom Development, Fabrication, and Proof of Concept in IEEE Engineering in Medicine and Biology Conference* (Sydney, Australia, July 2023).
15. Telfer, B., **Schoen Jr, S.**, Candel, I., Arshad, S., Ottensmeyer, M., Brattain, L. & Samir, A. E. *Contrast-Enhanced Ultrasound To Detect Active Bleeding in IEEE Engineering in Medicine and Biology Society* (Sydney, NSW Australia, July 2023).
16. **Schoen Jr, S.**, Jakovljevic, M. & Samir, A. E. *Plane Wave Imaging in Arbitrary Media via Efficient Phase Compensation in International Symposium on Ultrasound Imaging and Tissue Characterization* (Arlington, VA, June 2023).
17. **Schoen Jr, S.** & Samir, A. E. *Fast Spectral Approach for Delay Correction in Heterogeneous Media in Journal of the Acoustical Society of America* (Chicago, IL, May 2023).
18. Lee, H., Guo, Y., Ross, J. L., **Schoen Jr, S.**, Degertekin, F. L. & Arvanitis, C. D. *Spatially targeted immunotherapy in glioma with closed-loop microbubble enhanced focused ultrasound control in International Society for Therapeutic Ultrasound* (Lyon, France, Apr. 2023).
19. **Schoen Jr, S. J.**, Kumar, V., Brattain, L., Telfer, B. & Samir, A. E. *Contrast-enhanced ultrasound to detect active bleeding in Journal of the Acoustical Society of America* (Nashville, TN, Dec. 2022).
20. **Schoen Jr, S.**, Kumar, V., Gu, Y., Dayavansha, S. K., Tadross, R., Thomenius, K., Washburn, M. & Samir, A. E. *Optimal Abdominal Imaging with Bulk Speed of Sound Beamforming in 2022 IEEE International Ultrasonics Symposium* (Venice, Italy, Oct. 2022).
21. **Schoen Jr, S.**, Samir, A. E. & Kumar, V. *MR for ULTRA-SR: Improved Localization with Morphological Image Processing in 2022 IEEE International Ultrasonics Symposium* (Venice, Italy, Oct. 2022).
22. Young, J. R., **Schoen Jr, S.**, Kumar, V. & Samir, A. E. *SoundAI: Aberration Correction from Learned Sound Speed Maps in 2022 IEEE International Ultrasonics Symposium* (Venice, Italy, Oct. 2022).
23. **Schoen Jr, S.**, Heidari, F., Parameswaran, M., Cheah, E., Ozturk, A., Martin, M., Kumar, V., Pierce, T. T., et al. *Accurate Fibrosis Staging from Unstructured Data with Natural Language Processing in American Institute of Ultrasound in Medicine* (San Diego, CA, Mar. 2022).
24. Dash, P. P., **Schoen Jr, S.** & Arvanitis, C. D. *Experimental Demonstration of 3D Transcranial Passive Acoustic Mapping with the Heterogeneous Angular Spectrum Approach in 2021 IEEE International Ultrasonics Symposium* (Xi'an, China, Sept. 2021).
25. Lee, H., Schoen Jr, S., **Guo, Y.**, Kim, C., Degertekin, F. L. & Arvanitis, C. *Acoustic Emission Based Closed-Loop Focused Ultrasound System for Targeted and Controlled BBB-Opening in Rodents in 2021 IEEE International Ultrasonics Symposium* (Xi'an, China, Sept. 2021).

26. Lee, H., **Schoen Jr, S.**, Guo, Y., Kim, C. & Arvanitis, C. *A Closed-loop Focused Ultrasound System for Controlled and Targeted Antibody Delivery in Central Nervous System in American Institute of Ultrasound in Medicine* (Virtual, Apr. 2021).
27. **Schoen, S.** & Arvanitis, C. Spatial characterization of high intensity focused ultrasound fields in the brain. *The Journal of the Acoustical Society of America* **148**, 2560–2560. eprint: <https://doi.org/10.1121/1.5147103> (2020).
28. **Schoen Jr, S.**, Zhao, Z., Huang, C., Chen, S. & Arvanitis, C. D. *Computationally Efficient Methods for Vascular Characterization with Super-resolution Ultrasound in Biomedical Engineering Society 2020 Annual Meeting* (Virtual, Oct. 2020).
29. Lee, H., **Schoen Jr, S.**, Guo, Y., Kim, C. & Arvanitis, C. D. *Autonomous Ultrasound System for Targeted Drug Delivery in Central Nervous System with Sub-millimeter Targeting Accuracy in 2020 IEEE International Ultrasonics Symposium* (Las Vegas, NV USA, Sept. 2020).
30. **Schoen Jr, S.**, Zhao, Z., Huang, C., Chen, S. & Arvanitis, C. D. *Super-Resolution Ultrasound with Morphological Image Reconstruction and Local Projection for Microvascular Characterization in 2020 IEEE International Ultrasonics Symposium* (Las Vegas, NV USA, Sept. 2020).
31. **Schoen Jr, S.** & Arvanitis, C. Heterogeneous angular spectrum method for trans-skull imaging and focusing. *The Journal of the Acoustical Society of America* **146**, 2813–2813 (2019).
32. **Schoen Jr, S. J.**, Zhao, Z. & Arvanitis, C. D. Efficient sub-diffraction passive cavitation imaging. *The Journal of the Acoustical Society of America* **145** (2019).
33. **Schoen Jr, S. J.**, Zhao, Z., Guo, Y. & Arvanitis, C. D. *Spectrally Resolved Super-Resolution Ultrasound for Microvascular Imaging and Quantification in 2019 IEEE International Ultrasonics Symposium* (Glasgow, Scotland, Oct. 2019).
34. **Schoen Jr, S. J.**, Patel, A. & Arvanitis, C. D. *Real-Time Closed-Loop Spatiotemporal Control of Cavitation Activity with Passive Acoustic Mapping in 2018 IEEE International Ultrasonics Symposium* (Kobe, Japan, Oct. 2018).
35. **Schoen Jr, S. J.**, Zhao, Z. & Arvanitis, C. D. *Super-Resolution Passive Acoustic Imaging of Microbubbles in Biomedical Engineering Society 2018* (Atlanta, GA USA, Oct. 2018).
36. **Schoen Jr, S. J.**, Patel, A. & Arvanitis, C. D. *A Real-Time Passive Acoustic Mapping–Based Cavitation Controller in 18th Meeting of the International Society for Therapeutic Ultrasound* (Nashville, TN USA, May 2018).
37. **Schoen Jr, S. J.** & Arvanitis, C. D. Passive acoustic mapping in aberrating media with the angular spectrum approach. *The Journal of the Acoustical Society of America* **141**, 3459 (2017).
38. **Schoen Jr, S. J.** & Arvanitis, C. D. *Passive Acoustic Mapping with the Angular Spectrum Approach and Methods for Aberration Correction in 2017 Joint IEEE ISAF–IWATMD–PFM Conference* (Atlanta, Georgia, June 2017).
39. Copenhaver, B. J., **Schoen Jr, S.** & Haberman, M. R. Toward reliable metrics for Sacred Harp singing spaces. *The Journal of the Acoustical Society of America* **134**, 3969–3969 (2013).
40. **Schoen Jr, S.**, Ilinskii, Y. A., Zabolotskaya, E. A. & Hamilton, M. F. Low-frequency measurement of encapsulated bubble compressibility. *The Journal of the Acoustical Society of America* **132**, 2039 (2012).
41. Georgiev, G., Cabrera, Y., Wielgus, L., **Schoen Jr, S.**, Ivy, D. & Cebe, P. *Melt-Quench Formed Smectic Phase in iPP/CNT Nanocomposites and its Re-Crystallization in Symposium HH/II/JJ: Polymer-Based Materials and Composites – Synthesis, Assembly and Applications* **1312** (2011).
42. Georgiev, G., **Schoen Jr, S.**, Ivy, D., Wielgus, L., Cabrera, Y. & Cebe, P. *Crystallization Kinetics in Isotactic Polypropylene Films with Carbon Nanotubes in Symposium HH/II/JJ: Polymer-Based Materials and Composites – Synthesis, Assembly and Applications* **1312** (2011).
43. Georgiev, G., **Schoen Jr, S.**, Cabrera, Y., Wielgus, L. & Cebe, P. *Carbon Nanotubes Speed Crystallization of Polymers in Nanotech 2011 Conference and Expo* (June 2011).

44. Georgiev, G., **Schoen Jr, S.**, Ivy, D. & Cebe, P. *Crystallization effects of carbon nanotubes on semicrystalline isotactic polypropylene* in *Bulletin of the American Physical Society* **56** (American Physical Society, Dallas, TX, Mar. 2011).
45. Georgiev, G., **Schoen Jr, S.**, Ivy, D., Wielgus, L., Cabrera, Y. & Cebe, P. *Crystal Nanostructuring in Isotactic Polypropylene-carbon Nanotubes Films* in *Symposium JJ: Nanostructured Polymeric Materials – Synthesis and Assembly* (Dec. 2010).
46. Georgiev, G., **Schoen Jr, S.**, Ivy, D., Gombos, E., McIntyre, M. & Cebe, P. *Smectic phase and crystallization of multiwalled carbon nanotubes/isotactic polypropylene formed through melt-quenching* in *Division of Polymeric Materials: Science and Engineering, Sci-Mix* (Boston, MA, Aug. 2010).
47. Georgiev, G., Judith, R., Gombos, E., McIntyre, M., **Schoen Jr, S.**, Cebe, P. & Mattera, M. *Isotactic polypropylene carbon nanotube composites – crystallization and ordering behavior* in *Bulletin of the American Physical Society* **55** (American Physical Society, Portland, OR, Mar. 2010).