
BIOGRAPHICAL SKETCH

NAME KETTERLING, JEFFREY A. jketterling@riversideresearch.org	POSITION TITLE ASSOCIATE RESEARCH DIRECTOR
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EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Washington, Seattle, WA	B.S.E.E.	1994	Electrical Engineering
Yale University, New Haven, CT	Ph.D.	1999	Mechanical Engineering

Positions and Honors

Professional Positions Held

- 2012- Associate Director, Lizzi Center for Biomedical Engineering, Riverside Research, NY, NY
- 2012-2015 Senior Technical Expert, Riverside Research,
- 2008-2012: Research Manager, Lizzi Center for Biomedical Engineering, Riverside Research, NY, NY
- 2006-2007: Principal Member of the Research Staff, Lizzi Center for Biomedical Eng, Riverside Research
- 1999-2005: Member of the Research Staff, Biomedical Engineering Laboratories, Riverside Research
- 1994-1999: Doctoral Student, Yale University, New Haven, CT
- 1992-1994: Student Assistant, Applied Physics Laboratory, University of Washington, Seattle, WA

Other Experience and Professional Memberships

- 1992- Acoustical Society of America (ASA)
- 2009-2011 Chair of Biomedical Ultrasound Technical Committee (ASA)
- 2011-2014 Member of the Technical Committee to Biomedical Acoustics (ASA)
- 2001-2011 American Institute of Ultrasound in Medicine (AIUM) Senior Member
- 2001-2011 Member (AIUM)
- 2011- IEEE Senior Member
- 2004-2011 Member IEEE Ultrason. Ferroelect. Freq. Contr (UFFC)
- 2009- Technical Program Committee, International Ultrasonics Symposium, Group 1 (IEEE UFFC)
- 2012- Associate Editor – Transactions UFFC
- 2012 (Feb) NIH Biomedical Imaging Technology (BMIT)-B Study Section
- 2011 (Nov) NIH SBIB-W (56) Early Phase Clinical Trials in Imaging and Image-guided Interventions
- 2009 (June) NIH Challenge Grants Panel ZRG1 (mail in reviewer)
- 2008 (Feb) NIH ZRG1 SBIB-U (91) Innovative Ultrasound and Imaging
- 2006 (June) NIH ZRG1 SBMI-S (10) Small Business Medical Imaging
- 2005 (June) BMIT Study Section
- 1999- Manuscript Reviewer - Acta Acoustica united with Acoustica; IEEE-TMI; IEEE-TUFFC; JASA; Molecular Imaging; Physical Review (PRL and PRE); UMB; Ultrasonic Imaging; Ultrasonics

Publications

Ketterling, J.A. and Filoux, E., "Synthetic-focusing strategies for annular arrays," IEEE Trans. Ultrason. Ferroelect. Freq. Contr., (in press).

Lethiecq, M., Lou-Moeller, R., **Ketterling, J.A.**, Levassort, F., Tran-Huu-Hue, L.P. Filoux, E., Silverman, R.H., and Woln, W.W., "Non-planar pad-printed thick-film focused high-frequency ultrasonic transducers for imaging and HIFU applications," IEEE Trans. Ultrason. Ferroelect. Freq. Contr. (in press).

Chitnis, P., Koppolu, S., Mamou, J., Chlon, C., and **Ketterling, J.**, "Influence of shell properties on high-frequency ultrasound imaging and drug delivery using polymer-shelled microbubbles," IEEE Trans Ultrason Ferroelectr Freq. Control (in press).

Silverman, R.H., **Ketterling, J.A.**, Mamou, J., Lloyd, H.O., Filoux, E., and Coleman, D.J., "Pulse-encoded ultrasound imaging of the vitreous with an annular array," Ophthalmic Surgery, Lasers & Imaging **43** 82-86 (2012) PMID: 21902166

Aristizábal, O., Sampathkumar, A., Mamou, J., Filoux, E., Turnbull, D.H., **Ketterling, J.A.**, and Chitnis, P.V., "Simultaneous photoacoustic and high-frequency ultrasound in vivo imaging of the mouse embryonic vasculature," in *Proc. 2011 IEEE-Int. Ultrasonics Symp.*, pp. 288-291.

Chitnis, P.V., Mamou, J., Koppolu, S. and **Ketterling, J.A.**, "Influence of shell parameters on response of polymer-shelled microbubbles to high-frequency ultrasound," in *Proc. 2011 IEEE-Int. Ultrasonics Symp.*, pp. 644-647.

Gross, D., Filoux, E. and **Ketterling, J.A.**, "Multiple-frequency calibration of two-dimensional hydrophone arrays for instantaneous beam width measurements of shock-wave lithotripters," in *Proc.2011 IEEE-Int. Ultrasonics Symp.*, pp. 1660-1663.

Filoux, E. and **Ketterling, J.A.**, "A synthetic-focusing strategy for real-time high-frequency annular-array imaging," *Proc.2011 IEEE-Int. Ultrasonics Symp.*, pp. 1135-1138.

Chitnis, P.V., Aristizábal, O., Filoux, E., Sampathkumar, A., Mamou, J., Turnbull, D.H., **Ketterling, J.A.**, "Combined optoacoustic and high-frequency ultrasound imaging of live mouse embryos", SPIE Conference, Paper 8223-38, Jan 2012.

Silverman, R.H., **Ketterling, J.A.**, Mamou, J., Lloyd, H.O., Filoux, E. and Coleman, D.J., "Pulse-encoded ultrasound imaging of the vitreous with an annular array," Ophthalmic Surg. Lasers Imag., 43(1):82-86, 2012. PMID: 21902166

Chitnis, P.V., Lee, P., Mamou, J., Allen, J.S., Böhmer, M, and **Ketterling, J. A.**, "Rupture threshold characterization of polymer-shelled ultrasound contrast agents subjected to static overpressure," J. Applied Phys., 109, 084906, 2011. PMCID: PMC3094458

Filoux, E., Mamou, J., Aristizábal, O., **Ketterling, J.A.**, "Characterization of the spatial resolution of different high-frequency imaging systems using a novel anechoic-sphere phantom," IEEE Trans. Ultras. Ferro. Freq. Cont., 58 (5):994-1005, 2011. PMCID: PMC3105360

Chitnis, P.V., Lee, P., Dayton, P.A., Mamou, J. and **Ketterling, J.A.**, "Characterisation of polymer-shelled microbubbles in wall-less flow phantom using high-frequency ultrasound and videomicroscopy," Bubble Science, Engineering and Technology, 3(2):73-78, 2011.

Wolny, W.W., **Ketterling, J.A.**, Levassort, F., Lou-Moeller, R., Filoux, E., Mamou, J., Silverman, R.H., and Lethiecq, M., "Pad-printed thick-film transducers for high-frequency and high-power applications," *Proc. SPIE Medical Imaging*, vol. 7968, 2011.

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Ketterling, J.A., Kracht, J.M. and Cleveland, R.O., "Hydrophone arrays for instantaneous measurement of high-pressure acoustic fields," 9th International Symposium on Therapeutic Ultrasound, pp. 319-322, 2010.

Ketterling, J.A., Filoux, E., Alibakhshi, M.A., Kracht, J.M. and Cleveland, R.O., "Instantaneous beamwidth measurements of an electrohydraulic lithotripter," *Proc.2010 IEEE-Int. Ultrasonics Symp.*, pp. 112-115.

- Filoux, E., Mamou, J., Aristizabal, O., **Ketterling**, J.A., "Estimation of the spatial resolution of different high-frequency imaging systems using a novel anechoic sphere phantom," 2010 IEEE Ultrasonics Symposium, pp. 2203-2206.
- Chitnis, P.V., Lee, P., Mamou, J., **Ketterling**, J.A., "Influence of shell properties on rupture of polymer contrast agents in response to overpressure," 2010 IEEE Ultrasonics Symposium, pp.1720-1723.
- Aristizabal, O., Mamou, J., **Ketterling**, J.A., Turnbull, D.T., "In vivo 3D quantitative analysis of the mouse embryonic brain with a 38 MHz annular array and coded excitation," 2010 IEEE Ultrasonics Symposium, pp. 794-797.
- Mamou, J., Aristizabal, O., Silverman, R.H., and **Ketterling**, J.A., "A perspective on high-frequency ultrasound for medical applications," Physics Procedia, volume 3, Issue 1, 1 January 2010, pages 289-295.
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- Ketterling**, J.A., Kracht, J.M. and Cleveland, R.O, "Linear hydrophone arrays for measurement of shock wave lithotripter acoustic fields," in 2009 Proc. IEEE-Int. Ultrasonics Symposium, 2228-2231.
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- Ketterling**, J.A., Aristizabal, O. and Turnbull, D.H., "ECG-gated imaging of a mouse heart using a 40-MHz annular array," in *Proceedings of the 2008 IEEE Ultrasonics Symposium*, pp. 116-119, M.P. Yuhas (Ed.), Institute of Electrical and Electronics Engineers, Piscataway, 2008.
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