

# Stephen J. Arrowsmith

Southern Methodist University  
Earth Sciences  
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## Education

PHD, University of Leeds, 2004.  
Major: Geophysics

## Academic, Government, Military and Professional Positions

### Academic

Postdoctoral Scholar, University of California San Diego. (January 4, 2004 - October 1, 2006).

### Professional

Principle Member of Technical Staff, Sandia National Laboratories. (May 1, 2015 - December 1, 2018).

Scientist 3, Los Alamos National Laboratory. (May 1, 2009 - May 1, 2015).

Postdoctoral Researcher, Los Alamos National Laboratory. (October 1, 2006 - May 1, 2009).

## Professional Memberships

American Geophysical Union. (January 1, 2005 - Present).

Seismological Society of America. (January 1, 2005 - Present).

## TEACHING

### Teaching Experience

#### Southern Methodist University

GEOL 1301, Earth Systems, 1 course.

GEOL 5399, Special Topics: Earth Sciences, 1 course.

GEOL 7300, Research, 1 course.

GEOL 7355, Seminar in Geophysics, 1 course.

## RESEARCH

### Published Intellectual Contributions

#### Book Chapters

Bowman, D., Lees, J., Cutts, J., Komjathy, A., Young, E., Seiffert, K., Boslough, M., Arrowsmith, S. J. (2019). Geoacoustic observations on drifting balloon-borne sensors. *Infrasound monitoring for atmospheric studies* (pp. 125--171). Springer, Cham.

Marcillo, O., Arrowsmith, S. J., Charbit, M., Carmichael, J. (2019). Infrasound signal detection: re-examining the component parts that makeup detection algorithms. *Infrasound Monitoring for Atmospheric Studies* (pp. 249--271). Springer.

Arrowsmith, S. J., ReVelle, D., Edwards, W., Brown, P. (2007). Global detection of infrasonic signals from three large bolides. *Advances in Meteoroid and Meteor Science* (pp. 357--363). Springer.

## Conference Proceedings

- Dannemann, F. K., Arrowsmith, S. J. (2019). Centennial Session: Forensic Seismology, Origins and Future I. *AGU Fall Meeting 2019*.
- Arrowsmith, S. J., Park, J., Che, I.-Y., Kang, T.-B. (2019). Combining infrasound and seismic data for joint location: application to ground-truth events. *AGU Fall Meeting 2019*.
- Blom, P. S., Mialle, P., Marcillo, O. E., Arrowsmith, S. J. (2019). Recent Advances in Infrasonic and Seismoacoustic Research I Posters. *AGU Fall Meeting 2019*.
- Koch, C., Arrowsmith, S. J. (2018). Bayesian Source Location using Seismic and Acoustic observations. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J., Pankow, K. L., Brogan, R., Young, C. J. (2017). Evaluating the Waveform Correlation Event Detection System (WCEDS) through comparison with an analyst catalog. *AGU Fall Meeting Abstracts*.
- Young, E., Bowman, D., Arrowsmith, S. J., Boslough, M., Klein, V., Ballard, C., Lees, J. (2017). Prospects for infrasound bolide detections from balloon-borne platforms. *EGU General Assembly Conference Abstracts* (vol. 19, pp. 12272).
- Slinkard, M., Maceira, M., Arrowsmith, S. J., Begnaud, M., Blom, P., Ford, S.R., Foxe, M., MacCarthy, J., Marcillo, O., Merchant, B., others (2016). A Trends Review of Geophysics Research in Nuclear Explosion Monitoring. *AGU Fall Meeting Abstracts*.
- Blom, P. S., Marcillo, O. E., Arrowsmith, S. J. (2015). Analysis of a Multi-Stage Sounding Rocket via Ground-Based Infrasonic Observations. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J., Young, C. J., Ballard, S., Slinkard, M. (2015). Detecting and Locating Seismic Events Without Phase Picks or Velocity Models. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J. (2015). Infrasound Monitoring of Natural Hazards. *AGU Fall Meeting Abstracts*.
- Pinsky, V., Arrowsmith, S. J., Hofstetter, A., Nippress, A. (2015). Real-time realizations of the Bayesian Infrasonic Source Localization Method. *AGU Fall Meeting Abstracts*.
- Blom, P., Arrowsmith, S. J., Marcillo, O. (2014). Implementation and Testing of an Improved Mathematical Framework for the Bayesian Infrasonic Source Localization Method. *AGU Fall Meeting Abstracts*.
- Charbit, M., Arrowsmith, S. J., Che, I.-y., Le Pichon, A., Nouvellet, A., Park, J., Roueff, F., Charbit, M., Arrowsmith, S. J., Che, I., others (2014). Infrasonic detection performance in presence of nuisance signal. *EGU General Assembly Conference Abstracts* (vol. 16).
- Arrowsmith, S. J., Blom, P., Marcillo, O., Whitaker, R. (2014). Recent Advances in Infrasound Science for National Security Applications. *AGU Fall Meeting Abstracts*.
- Marcillo, O., Arrowsmith, S. J., Whitaker, R. (2014). What can we get out of acoustic coda from explosions? *AGU Fall Meeting Abstracts*.
- Blom, P., Arrowsmith, S. J. (2013). Advances in Geometric Acoustic Propagation Modeling Methods. *AGU Fall Meeting Abstracts*.
- Pinsky, V., Gitterman, Y., Arrowsmith, S. J., Ben-Horin, Y. (2013). Explosion Source Location Study Using Collocated Acoustic and Seismic Networks in Israel. *AGU Fall Meeting Abstracts*.
- Hale, J., Arrowsmith, S. J., Burlacu, R., Hayward, C., Pankow, K. (2013). Infrasound observations of the massive landslide at Bingham Canyon Copper Mine. *AGU Fall Meeting Abstracts*.

- Whitaker, R., Jones, K., Arrowsmith, S. J. (2013). Modeling the Infrasound Acoustic Signal Generation of Underground Explosions at the Source Physics Experiment. *AGU Fall Meeting Abstracts*.
- Marcillo, O., Arrowsmith, S. J. (2013). Optimizing an infrasound sensor network for measuring acoustic background noise and its inversion for stratospheric winds. *AGU Fall Meeting Abstracts*.
- Jones, K. R., Arrowsmith, S. J. (2013). Southwest US Seismo-Acoustic Network: An Autonomous Data Aggregation, Detection, Localization and Ground-Truth Bulletin for the Infrasound Community. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J., Marcillo, O. (2012). A Framework for Estimating Stratospheric Wind Speeds from Infrasound Noise. *AGU Fall Meeting Abstracts*.
- Park, J., Arrowsmith, S. J., Hayward, C., Stump, B. (2012). Automatic Infrasound Detection and Location of Sources in the western US. *AGU Fall Meeting Abstracts*.
- Pinsky, V., Gitterman, Y., Ben-Horin, Y., Arrowsmith, S. J. (2012). Seismo-acoustic analysis for series of ammunition demolition explosions at Sayarim, Israel. *EGU General Assembly Conference Abstracts* (vol. 14, pp. 4242).
- Jones, K. R., Arrowsmith, S. J., Whitaker, R. (2012). Source Region Modeling of Explosions 2 and 3 from the Source Physics Experiment Using the Rayleigh Integral Method. *AGU Fall Meeting Abstracts*.
- Sciotto, M., Rowe, C., Cannata, A., Arrowsmith, S. J., Privitera, E., Gresta, S. (2011). Investigation of volcanic seismo-acoustic signals: applying subspace detection to lava fountain activity at Etna Volcano. *AGU Fall Meeting Abstracts*.
- Burlacu, V., Arrowsmith, S. J., Pankow, K., Hale, M., Hayward, C., Stump, B. (2010). A network of infrasonic arrays in Utah. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J., Anderson, D., Whitaker, R. (2010). Locating Events using Infrasound Data. *AGU Fall Meeting Abstracts*.
- Arrowsmith, S. J., Hartse, H. E., Randall, G. E., Taylor, S. R. (2009). Infrasound as a Depth Discriminant: Construction of a Unique Dataset and Preliminary Analyses. *Proceedings of the* (pp. 697--705).
- Arrowsmith, M., Arrowsmith, S. J., Stump, B. W., Hedlin, M. (2008). A Tale of Two Countries, Three Discriminants, and Many Mining Explosions. *AGU Fall Meeting Abstracts*.
- Brown, P., Edwards, W., Le Pichon, A., Antier, K., Revelle, D., Tancredi, G., Arrowsmith, S. J. (2008). Instrumental Observations of the Fireball and Crater Formation Associated with the Carancas Meteorite Fall. *Asteroids, Comets, Meteors 2008* (vol. 1405).
- Eisner, L., Arrowsmith, S. J., Le Calvez, J., Rutledge, J. (2005). Graph Theory for Seismic Analyses. *AGU Spring Meeting Abstracts*.
- Renwald, M., Arrowsmith, S., Stump, B., Hedlin, M. (2004). Analysis of Regional Seismic Waveforms From Mining Explosions in the United States and Russia. *AGU Fall Meeting Abstracts*.
- Walker, K., Arrowsmith, S. J., Berger, J., Hedlin, M., Zumberge, M. (2004). Resolving infrasound signal back azimuths with arrays of optical fiber sensors. *Proceedings of the 26th Seismic Research Review: Trends in Nuclear Explosion Monitoring* (pp. 680--687).
- Arrowsmith, S. J., Kendall, M., Vandecar, J., White, N., Booth, D. (2003). Seismic images reveal plume-lithosphere interaction beneath the British Isles. *EGS-AGU-EUG Joint Assembly*.
- Arrowsmith, S. J., Kendall, M., Vandecar, J., Booth, D. (2001). Insights into the tectonics of the British Isles from seismic tomography. *AGU Fall Meeting Abstracts*.

## Journal Articles

- Koch, C. D., Arrowsmith, S. J. (2019). Locating Surface Explosions by Combining Seismic and Infrasound Data. *Seismological Research Letters*, 90. <https://doi.org/10.1785/0220190017>
- Young, E. F., Bowman, D. C., Lees, J. M., Klein, V., Arrowsmith, S. J., Ballard, C. (2018). Explosion-Generated Infrasound Recorded on Ground and Airborne Microbarometers at Regional Distances. *Seismological Research Letters*, 89(4), 1497--1506.
- Arrowsmith, S. J. (2018). False alarms and the IMS infrasound network: Understanding the factors influencing the creation of false events. *Geophysical Journal International*, 215(2), 1322--1337.
- Arrowsmith, S. J., Young, C. D., Pankow, K. (2018). Implementation of the Waveform Correlation Event Detection System (WCEDS) Method for Regional Seismic Event Detection in Utah. *Bulletin of the Seismological Society of America*, 108(6), 3548--3561.
- Marcillo, O., Arrowsmith, S. J., Charbit, M., Carmichael, J. (2018). Infrasound Signal Detection: Re-examining the Component Parts. *Infrasound Monitoring for Atmospheric Studies: Challenges in Middle Atmosphere Dynamics and Societal Benefits*, 250.
- Park, J., Hayward, C. T., Zeiler, C. P., Arrowsmith, S. J., Stump, B. W. (2017). Assessment of infrasound detectors based on analyst review, environmental effects, and detection characteristics. *Bulletin of the Seismological Society of America*, 107(2), 674--690.
- Arrowsmith, S. J., Bowman, D. (2017). Explosion yield estimation from pressure wave template matching. *The Journal of the Acoustical Society of America*, 141(6), EL519--EL525.
- Bowman, D. C., Lees, J. M., Le Pichon, A., Arrowsmith, S. J. (2017). Infrasound in the stratosphere captured with balloon-borne sensors. *The Journal of the Acoustical Society of America*, 141(5), 4046--4046.
- Arrowsmith, S. J., Downey, N., Preston, L., Bowman, D. C. (2017). Local-distance acoustic propagation from explosions. *The Journal of the Acoustical Society of America*, 141(5), 3627--3627.
- Pinsky, V., Blom, P., Polozov, A., Marcillo, O., Arrowsmith, S. J., Hofstetter, A. (2017). Towards an accurate real-time locator of infrasonic sources. *Journal of Seismology*, 21(6), 1361--1383.
- Blom, P., Marcillo, O., Arrowsmith, S. J. (2016). Analysis and modeling of infrasound from a four-stage rocket launch. *The Journal of the Acoustical Society of America*, 139(6), 3134--3138.
- Park, J., Stump, B. W., Hayward, C., Arrowsmith, S. J., Che, I.-Y., Drob, D. P. (2016). Detection of regional infrasound signals using array data: Testing, tuning, and physical interpretation. *The Journal of the Acoustical Society of America*, 140(1), 239--259.
- Carmichael, J. D., Nemzek, R., Arrowsmith, S. J., Sentz, K. (2016). Fusing geophysical signatures of locally recorded surface explosions to improve blast detection. *Geophysical Journal International*, 204(3), 1838--1842.
- Arrowsmith, M., Arrowsmith, S. J., Marcillo, O. (2016). Using sounds from the ocean to measure winds in the stratosphere. *Eos, Transactions American Geophysical Union (Online)*, 97(SAND2015-6154J).
- Arrowsmith, S. J., Euler, G., Marcillo, O., Blom, P., Whitaker, R., Randall, G. (2015). Development of a robust and automated infrasound event catalogue using the International Monitoring System. *Geophysical Journal International*, 200(3), 1411--1422.
- Blom, P., Arrowsmith, S. J. (2015). Hamiltonian ray tracing in an arbitrary curvilinear coordinate system—Amplitude estimation. *The Journal of the Acoustical Society of America*, 137(4), 2373--2373.

- Blom, P. S., Marcillo, O., Arrowsmith, S. J. (2015). Improved Bayesian infrasonic source localization for regional infrasound. *Geophysical Supplements to the Monthly Notices of the Royal Astronomical Society*, 203(3), 1682--1693.
- Marcillo, O., Arrowsmith, S. J., Blom, P., Jones, K. (2015). On infrasound generated by wind farms and its propagation in low-altitude tropospheric waveguides. *Journal of Geophysical Research: Atmospheres*, 120(19), 9855--9868.
- Stevenson, D. J., Cutts, J. A., Mimoun, D., Arrowsmith, S. J., Banerdt, W. B., Blom, P., Brageot, E., Brissaud, Q., Chin, G., Gao, P., others (2015). Probing the interior structure of Venus. *Keck Institute for Space Studies*.
- Park, J., Arrowsmith, S. J., Hayward, C., Stump, B. W., Blom, P. (2014). Automatic infrasound detection and location of sources in the western United States. *Journal of Geophysical Research: Atmospheres*, 119(13), 7773--7798.
- Marcillo, O., Arrowsmith, S. J., Whitaker, R., Morton, E., Scott Phillips, W. (2014). Extracting changes in air temperature using acoustic coda phase delays. *The Journal of the Acoustical Society of America*, 136(4), EL309--EL314.
- Nippres, A., Green, D. N., Marcillo, O. E., Arrowsmith, S. J. (2014). Generating regional infrasound celerity-range models using ground-truth information and the implications for event location. *Geophysical Journal International*, 197(2), 1154--1165.
- Jones, K. R., Whitaker, R. W., Arrowsmith, S. J. (2014). Modelling infrasound signal generation from two underground explosions at the Source Physics Experiment using the Rayleigh integral. *Geophysical Journal International*, 200(2), 779--790.
- Arrowsmith, S. J., Norris, D., Whitaker, R., Anderson, D. (2014). Sources of error model and progress metrics for acoustic/infrasonic analysis: location estimation. *Pure and Applied Geophysics*, 171(3-5), 587--597.
- Morton, E. A., Arrowsmith, S. J. (2014). The development of global probabilistic propagation look-up tables for infrasound celerity and back-azimuth deviation. *Seismological Research Letters*, 85(6), 1223--1233.
- Arrowsmith, S. J., Marcillo, O., Drob, D. P. (2013). A framework for estimating stratospheric wind speeds from unknown sources and application to the 2010 December 25 bolide. *Geophysical Journal International*, 195(1), 491--503.
- Morton, E. A., Arrowsmith, S. J. (2013). An empirical study of acoustic/infrasonic source and propagation effects using a large dataset of explosions. *The Journal of the Acoustical Society of America*, 134(5), 4193--4193.
- Taylor, S. R., Arrowsmith, S. J., Anderson, D. N. (2013). Development of a matched filter detector for acoustic signals at local distances from small explosions. *The Journal of the Acoustical Society of America*, 134(1), EL84--EL90.
- Marcillo, O., Arrowsmith, S. J. (2013). Measuring the coherency of microbaroms at long distances for the inversion of stratospheric winds. *The Journal of the Acoustical Society of America*, 134(5), 4223--4223.
- Arrowsmith, S. J., Taylor, S. R. (2013). Multivariate acoustic detection of small explosions using Fisher's combined probability test. *The Journal of the Acoustical Society of America*, 133(3), EL168--EL173.
- Arrowsmith, S. J., Marcillo, O., Randall, G. (2013). Processing international monitoring system infrasound data to detect and locate global events using probabilistic algorithms. *The Journal of the Acoustical Society of America*, 134(5), 4224--4224.
- Marcillo, O., Arrowsmith, S. J., Whitaker, R., Anderson, D., Nippres, A., Green, D. N., Drob, D. (2013). Using physics-based priors in a Bayesian algorithm to enhance infrasound source location. *Geophysical Journal International*, 196(1), 375--385.

- Arrowsmith, S. J., Burlacu, R., Pankow, K., Stump, B. W., Stead, R., Whitaker, R., Hayward, C. (2012). A seismoacoustic study of the 2011 January 3 Circleville earthquake. *Geophysical Journal International*, 189(2), 1148--1158.
- Arrowsmith, S. J., Whitaker, R. W., Maccarthy, J. K., Anderson, D. N. (2012). A sources-of-error model for acoustic/infrasound yield estimation for above-ground single-point explosions. *InfraMatics*, 1(01), 1.
- Arrowsmith, S. J., Whitaker, R., Le Pichon, A., Cansi, Y., Brachet, N., Charbit, M., Park, J., Stump, B. W., Che, I.-Y. (2012). Development and validation of infrasound data processing algorithms. *Proceeding of the 2012 Monitoring Research Review: Ground-Based Nuclear Explosion Monitoring Technologies*, 2, 665--675.
- Arrowsmith, S. J., Burlacu, R., Pankow, K., Stump, B. W., Stead, R., Whitaker, R., Hayward, C. (2012). Modeling the generation of infrasound from earthquakes. *The Journal of the Acoustical Society of America*, 132(3), 2047--2047.
- Johnson, J. B., Anderson, J., Marcillo, O., Arrowsmith, S. J. (2012). Probing local wind and temperature structure using infrasound from Volcan Villarrica (Chile). *Journal of Geophysical Research: Atmospheres*, 117(D17).
- Hartse, H. E., Randall, G. E., Anderson, D. N., Phillips, W. S., Arrowsmith, S. J. (2012). Regional event identification research in central Asia. *Department of Energy, Proceedings of the 2012 Monitoring Research Review: Ground-based Nuclear Explosion Monitoring Technologies*, 397, 406.
- Burlacu, R., Arrowsmith, S. J., Hayward, C., Stump, B. W. (2011). Infrasound observations from the February 21, 2008 Wells earthquake. *Nevada Bureau of Mines and Geology Special Publication*, 36.
- Modrak, R. T., Arrowsmith, S. J., Anderson, D. N. (2010). A Bayesian framework for infrasound location. *Geophysical Journal International*, 181(1), 399--405.
- Taylor, S. R., Arrowsmith, S. J., Anderson, D. N. (2010). Detection of short time transients from spectrograms using scan statistics. *Bulletin of the seismological society of America*, 100(5A), 1940--1951.
- Anderson, D. N., Randall, G. E., Whitaker, R. W., Arrowsmith, S. J., Arrowsmith, M. D., Fagan, D. K., Taylor, S. R., Selby, N. D., Schult, F. R., Kraft, G. D., others (2010). Seismic event identification. *Wiley Interdisciplinary Reviews: Computational Statistics*, 2(4), 414--432.
- Arrowsmith, S. J., Johnson, J. B., Drob, D. P., Hedlin, M. A. (2010). The seismoacoustic wavefield: A new paradigm in studying geophysical phenomena. *Reviews of Geophysics*, 48(4).
- Arrowsmith, S. J., Burlacu, R., Whitaker, R., Randall, G. (2009). A repeating secondary source of infrasound from the Wells, Nevada, earthquake sequence. *Geophysical Research Letters*, 36(11).
- Stump, B. W., Hayward, C. T., Arrowsmith, S. J., Randall, G. E., Pankow, K., Burlacu, R., Taylor, S. R. (2009). Infrasound from earthquakes: Signal characterization. *Proceedings of the 2009 Monitoring Research Review: Ground-Based Nuclear Explosion Monitoring Technologies*, 742--749.
- Arrowsmith, M. D., Stump, B. W., Arrowsmith, S. J., Hedlin, M. A. (2009). MINING EXPLOSION IDENTIFICATION AND DISCRIMINANT ASSESSMENT IN TWO UNIQUE REGIONS. *Proceedings of the 31th Monitoring Research Review: Ground-Based Nuclear Explosion Monitoring Technologies*, 21--23.
- Arrowsmith, S. J., Whitaker, R., Katz, C., Hayward, C. (2009). The F-detector revisited: An improved strategy for signal detection at seismic and infrasound arrays. *Bulletin of the Seismological Society of America*, 99(1), 449--453.
- Brown, P., ReVelle, D., Silber, E., Edwards, W., Arrowsmith, S. J., Jackson, Jr, L., Tancredi, G., Eaton, D. (2008). Analysis of a crater-forming meteorite impact in Peru. *Journal of Geophysical Research: Planets*, 113(E9).
- Arrowsmith, S. J., Hedlin, M. A., Stump, B. W., Arrowsmith, M. D. (2008). Infrasound signals from large mining explosions. *Bulletin of the Seismological Society of America*, 98(2), 768--777.

- Arrowsmith, S. J., Whitaker, R., Taylor, S. R., Burlacu, R., Stump, B. W., Hedlin, M., Randall, G., Hayward, C., ReVelle, D. (2008). Regional monitoring of infrasound events using multiple arrays: application to Utah and Washington State. *Geophysical Journal International*, 175(1), 291--300.
- Arrowsmith, S. J., Drob, D. P., Hedlin, M. A., Edwards, W. (2007). A joint seismic and acoustic study of the Washington State bolide: Observations and modeling. *Journal of Geophysical Research: Atmospheres*, 112(D9).
- Arrowsmith, S. J., Hedlin, M. A., Arrowsmith, M. D., Stump, B. W. (2007). Identification of delay-fired mining explosions using seismic arrays: application to the PDAR array in Wyoming, USA. *Bulletin of the Seismological Society of America*, 97(3), 989--1001.
- Arrowsmith, S. J., Eisner, L. (2006). A technique for identifying microseismic multiplets and application to the Valhall field, North Sea. *Identifying Microseismic Multiplets. Geophysics*, 71(2), V31--V40.
- Arrowsmith, S. J., Arrowsmith, M. D., Hedlin, M. A., Stump, B. W. (2006). Discrimination of delay-fired mine blasts in Wyoming using an automatic time-frequency discriminant. *Bulletin of the Seismological Society of America*, 96(6), 2368--2382.
- Sea, N., Arrowsmith, S. J., Eisner, L. (2006). SIGNAL PROCESSING-A technique for identifying microseismic multiplets and application to the Valhall field. *Geophysics*, 71(2), V31.
- Arrowsmith, S. J., Hedlin, M., Ceranna, L., Edwards, W. (2005). An analysis of infrasound signals from the June 3rd, 2004 fireball over Washington State. *InfraMatics*, 10, 14--21.
- Walker, K., Zumberge, M., Berger, J., Hedlin, M., Arrowsmith, S. J. (2005). Detecting and characterizing infrasound signals with optical fiber infrasound sensors. *The Journal of the Acoustical Society of America*, 117(4), 2420--2420.
- Arrowsmith, M. D., Arrowsmith, S. J., Stump, B. W., Hedlin, M. (2005). Discrimination of small events using regional waveforms: Application to seismic events in the US and Russia. *Proceedings of the 27th Seismic Research Review: Ground Based Nuclear Explosion Monitoring Technologies*, 498--508.
- Arrowsmith, S. J., Hedlin, M. A. (2005). Observations of infrasound from surf in southern California. *Geophysical Research Letters*, 32(9).
- Arrowsmith, S. J., Kendall, M., White, N., VanDecar, J. C., Booth, D. C. (2005). Seismic imaging of a hot upwelling beneath the British Isles. *Geology*, 33(5), 345--348.

## Other

- Arrowsmith, S. J., Tarin, S., Albert, S. (2018). *Bloodhound 0.8: A Python package for infrasound data analysis*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Downey, N. J., Albert, S., Arrowsmith, S. J., Beckstead, V. J. (2018). *Local Monitoring of Underground Mining Explosions at Redmond Utah*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Arrowsmith, S. J., Bowman, D. (2017). *Acoustic yield estimation using full waveforms*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Arrowsmith, S. J. (2017). *bloodhound*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Albert, S., Arrowsmith, S. J. (2017). *Combining Seismic and Acoustic Event Catalogs to Better Understand the Nature of Individual Events*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Bowman, D., Whitaker, R. W., Bowman, D., Le Pichon, A., Young, E., Arrowsmith, S. J., Lees, J. (2017). *Enhancing the sensitivity of the IMS Infrasound Network using Balloon-Borne Microphones*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).

- Albert, S., Arrowsmith, S. J. (2017). *Event Discrimination Using Seismoacoustic Catalog Probabilities*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Arrowsmith, S. J. (2017). *Revisiting how we use seismic data to detect nuclear tests*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Maceira, M., Blom, P. S., MacCarthy, J. K., Marcillo, O. E., Euler, G. G., Begnaud, M. L., Ford, S. R., Pasyanos, M. E., Orris, G. J., Foxe, M. P., others (2017). *Trends in Nuclear Explosion Monitoring Research & Development-A Physics Perspective*. Los Alamos National Lab.(LANL), Los Alamos, NM (United States).
- Arrowsmith, S. J. (2016). *A Global Infrasound Event Catalog*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Jones, K. R., Arrowsmith, S. J., Bowman, D., Preston, L., Whitaker, R. W., Rodgers, A., Ezzedine, S. (2016). *Coupling Near-Field to Infrasound*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Nippres, A., Green, D., Arrowsmith, S. J., Merchant, B. J. (2016). *Infrasound Observations of the 13 kt South Atlantic Bolide of 06-Feb-2016*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Arrowsmith, S. J. (2016). *Infrasound data processing at Sandia*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Bowman, D., Arrowsmith, S. J. (2016). *Infrasound Event Detection via Free Flying Stations in the Stratosphere*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Carmichael, J. D., Sentz, K., Nemzek, R. J., Arrowsmith, S. J. (2016). *Multi-phenomenological Explosion Monitoring (MultiPEM): Screening Airborne from Buried, Ejection Explosions*. Los Alamos National Lab.(LANL), Los Alamos, NM (United States).
- Arrowsmith, S. J., Young, C. J., Ballard, S. N., Slinkard, M. E., Pankow, K. (2016). *Pickless seismic event detection using WCEDS*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Arrowsmith, S. J. (2016). *Revisiting strategies for detecting infrasound events*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Park, J., Hayward, C., Zeiler, C., Arrowsmith, S. J., Stump, B. W. (2015). *A Comparative Study of Automated Infrasound Detectors-PMCC and AFD with Analyst Review*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Carmichael, J. D., Nemzek, R., Arrowsmith, S. J., Sentz, K. (2015). *Detecting Weak Explosions at Local Distances by Fusing Multiple Geophysical Phenomenologies*. Los Alamos National Lab.(LANL), Los Alamos, NM (United States).
- Arrowsmith, S. J., Jones, K. R., Schramm, K. A. (2015). *Global Infrasound Network Detection and Association*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
- Jones, K. R., Arrowsmith, S. J., Whitaker, R. W. (2015). *Infrasound Observations From SPE 4 prime and Octocopter Operations*. Sandia National Lab.(SNL-NM), Albuquerque, NM (United States).
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## **Presentations Given**

- De Shon, H. R. (Presenter & Author), Quinones, L. (Author Only), Arrowsmith, S. J. (Author Only), Savvaidis, A. (Author Only), Hayward, C. (Author Only), Seismological Society of America Spring 2019 Meeting, "Exploring Hypocenter Uncertainty in the Fort Worth Basin, North Texas." (April 23, 2019 - April 26, 2019).

## **Awards and Honors**

- Employee Recognition Award, Sandia National Laboratories. (April 3, 2019).

## **SERVICE**

### **Department Service**

- Committee Member, Center for Scientific Computation. (2019 - Present).

### **Professional Service**

- Committee Member, IRIS GSN Working Group. (2019 - 2021).