

Peter Gerstoft

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A. Professional Preparation:

1983 MSc., Engineering, Technical University of Denmark, Kgs. Lyngby, Denmark
1984 MSc., Engineering, University of Western Ontario, London, ON, Canada
1986 PhD., Engineering, Technical University of Denmark, Kgs. Lyngby, Denmark
1988 BBA Finance, Copenhagen School of Economics, Frederiksberg, Denmark

B. Appointments:

2013-present Adj Professor, Electrical and Computer Engineering; University of California, San Diego.
2004-present Data Scientist, Scripps Institution of Oceanography; University of California, San Diego.
1997-2004 Associate Scientist, Marine Physical Laboratory; University of California, San Diego.
1999-2000 Senior Seismic Acoustic Officer, Comprehensive Nuclear-Test-Ban Treaty Organization.
1992-1997 Senior Scientist, NATO SACLANT Undersea Research Centre, La Spezia, Italy.
1989-1990 Visiting Scientist, Dept. of Ocean Engineering; Massachusetts Institute of Technology.
1987-1992 Scientist, Odegaard & Danneskiold-Samsøe Acoustics and Vibrations.

D. Synergistic Activities:

(i) Developed widely used computer codes for the scientific community:

a. **SAGA** (1992- present) - General geoacoustic and electromagnetic inversion program: approximately one hundred installations performed in twenty countries.

<http://noiselab.ucsd.edu/saga/saga.html>

b. **CABRILLO** (1997-1999) – Seismic exploration Finite difference modeling of acoustic, elastic and poro-elastic media. <http://noiselab.ucsd.edu/cabrillo/cabrillo.html>

c. **OSIRIS** (1987-1992) - Commercial seismic exploration software for modeling of synthetic seismograms.

Teaching

Spring 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016: SIO202 Seismology, with 2-9 students
Spring 2014, 2016: ECE295 Data assimilation and inverse problems. (15 and 10 students) WWW:
<http://noiselab.ucsd.edu/295/index.html>

Dec 2016, Dec 2017 Zhejiang University: Principles of Underwater sound, (30 and 65 students)
<http://noiselab.ucsd.edu/china2016/index.html>

Spring 2017, 2018, 2019: Machine learning for physical problems (60 and 75 students)
<http://noiselab.ucsd.edu/ECE228/>

C. Publications: 170 reviewed papers with > 7800 citations; H-index 48 (Google Scholar). One paper in Science and one in PNAS. **For more publications see** noiselab.ucsd.edu, or [Gerstoft in Google Scholar](#).

Conferences

- Chair of Acoustical Society of America Fall 2019 Meeting in San Diego.
- Technical Program Chair of Acoustical Society of America Fall 2011 Meeting with 1251 abstracts.
- Organizer of the international conference on “Full Field Inversion Methods in Ocean and Seismo-Acoustics”, Lercici, Italy, 10-15 June 1994.

Field Campaigns participation

- Aug 15-Jan 2016, EM radar measurements, SIO pier to Camp Pendleton, using arrays
- October 2015 Casper Passive EM measurement, off the coast of Virginia.

- October/November 2014 Ross Ice Shelf, Antarctica.
- April 2012 Ocean Bottom Sensor, Gulf of Mexico.
- Sep 2006 Shallow Water 06, Off New Jersey coast.
- May and Dec 2006 Seismic passive measurement, Mohave Desert.
- June 2005, Ocean Acoustic measurement Alliance, Italy.
- March 2003, Ocean Acoustic measurement Alliance, Italy.
- June 2003, Ocean Acoustic measurement Alliance, Italy.

Organizer and Chairman of the following sessions:

- Horizontal array session at the Acoustical Society of America Spring 02 Pittsburgh meeting.
- Geoacoustic inversion at the Acoustical Society of America Spring 03 Nashville meeting.
- Inversion session at the 2003 IEEE Oceans meeting.
- Inversion using noise sources, Acoustical Society of America Fall, Minneapolis 2005.
- Geoacoustic inversion at the Underwater Acoustic Measurements Conference, Crete 2005
- Geoacoustic inversion at the Underwater Acoustic Measurements Conference, Crete 2007
- Geoacoustic inversion at the Underwater Acoustic Measurements Conference, Greece 2009
- Geoacoustic inversion at the Acoustical Society of America Spring 2008 Paris meeting.
- Signal processing session at the Acoustical Society of America Spring 2009 Meeting, Portland.
- Kalman and particle filters at the Acoustical Society of America Fall 2009 Meeting, San Antonio.
- Bottom characterization and geoacoustic inversion, European Conference on Ocean acoustics, 2010.
- Bottom characterization at the Underwater Acoustic Measurements Conference, Greece 2011.
- Array signal processing at the IEEE Asilomar Conference on Signals, Systems, and Computers, 2012.
- Properties, Trends, and Utilization of Ocean Noise, Acoustical Soc America fall 2013 San Francisco.
- Sonar signal and information processing, Underwater Acoustic Measurements Conference, Greece 2014.
- Sonar signal and information processing, Underwater Acoustic Measurements Conference, Greece, 2015.
- Remote sensing with noise, Information Theory with Applications, San Diego, 2015
- Sparse sampling, Information Theory with Applications, San Diego, 2016
- Compressive sensing in acoustics, Acoustical Soc America fall 2016 Honolulu.
- Graph Signal Processing, Information Technology and Applications, San Diego 2018
- Machine learning in acoustics, Acoustical Soc America fall 2018 Victoria, Canada.
- Graph Signal Processing, Information Technology and Applications, San Diego 2019

Invited talks:

- About 20 at Acoustical Society of America
- 3 at American Geophysical Union (2008, 2013, 2017).
- 2 at Seismological society of America (2017 and 2018).
- European signal processing EUSIPCO (2017), IEEE SPP conference (2018).

Keynote/special lectures

- Invited lecturer at the Summer School on Imaging in complex media, Cargese, France, 2005
- Gave the "Hot topics" talk "remote sensing with noise" for the whole Acoustical Society of America, fall 2009
- Keynote speaker, International Conference on Marine Environment and Biodiversity Conservation in the South China Sea, Taiwan, 2010.
- Invited talk at Active Uses of Passive Seismic Data, SEG, Houston, May 2014
- Discussion leader, Joint SEG-AGU Summer Research Workshop, Advances in Active+Passive "Full Wavefield" Seismic Imaging: From Reservoirs to Plate Tectonics, Vancouver 2014.
- Keynote talk "Compressive sensing in ocean acoustics" Israel Underwater acoustics symposium, Tel Aviv, May 2016

- One day tutorial on “Signal processing and compressive sensing in ocean acoustics” Israel Underwater Acoustics Symposium, Tel Aviv, May 2016.
- One month class (9 hours /week) on Ocean acoustics and signal processing at Zhejiang University, December 2016
- Two Two-day tutorials on “Compressive sensing in acoustics” and “Machine learning in acoustics”, at Seoul National University and AMD (Korean defense Laboratory) November 2017.
- One month class (9 hours /week) on Ocean acoustics and signal processing at Zhejiang University, December 2017
- Plenary talk, “Machine learning in ocean acoustics”, Underwater Acoustics Conference and Exhibition, UACE2019, 400 scientists. Crete, July 2019.

E. Collaborators and Other Affiliations:

(i) Collaborators (14):

R Aster (U Colorado), E Fernandez Grande (DTU Denmark), N Harmon (U Southampton), H Houston (UW), G Matz (Vienna), CF. Mecklenbrauker (TU Vienna), E Michalopoulou (NJIT), K Mosegaard (Tech. U Denmark), NP Rao (NGRI Hyderabad, India), C Rychert (U Southampton), M. Siderius (Portland State), W. Seong (Seoul National U), R Stephen (WHOI), Tollefsen (FOA Norway), J Traer (MIT), M Viberg (U Goteburg Sweden), Y Hao (USTC), John Vidale (UW), J Zhang (LANL), A Xenaki (DTU Denmark), DA Wiens (Washington U)

(ii) Graduate Advisors (2):

Professor C. Dyrbye, Technical University of Denmark
 Professor Alan G Davenport, University of Western Ontario

(iii) Thesis Advisor (20):

1. Venkatesh Sathyanarayanan
2. Ali Dormiani (2018-19), ECE
3. Ruixian Liu, MSc student, (2018,-), ECE
4. William Jenkins (2017-), SIO
5. Jie Li (2015-17) SIO/Ocean University of China
6. Mike Bianco (2015-), SIO
7. Emma Reeves (2014-), SIO
8. Mark Wagner (2014-), ECE
9. Erich Zochmann (2014-) Vienna
10. Angeliki Xenaki (2013-15) GN Resound
11. Anup Das (2014-15), ECE
12. Zhao Chen (2012-18), SIO
13. Wenyuan Fan (2011-2014), SIO
14. Sami Alzeer (ECE/SIP, 2015-2016)
15. Daniel Tan (2009-2014), DSO, Singapore
16. Ravi Menon (2008-2013), Slack
17. Florian Xaver (2009-2013), Frequentis AG
18. Ali Karimian (2009-2012), Constellation
19. James Traer (2006-2011), MIT
20. Tim Ray (2008-2010). Deceased
21. Laura Brooks (2006-2008), University of Adelaide
22. Yong Han Goh (2006-2007), DSO, Singapore
23. Caglar Yardim (2003-2007), Ohio State University
24. Chen-fen Huang (2001-2005), Taiwan National University

(iv) Postgraduate Sponsor (16):

1. Santosh Nannuru (2016-18)
2. Kai Gemba (2015-17)
3. Haiquang Nui (2015-17), Institute of Acoustics, China
4. Nima Riahi (2014-16), Swiss Railways
5. Anja Diez (2014-16), Norway Polar Research
6. Ravi Menon (2013-14), Slack
7. James Traer (2011-12), MIT
8. Olivier Carriere (2011-13), European Patent Office
9. Huajian Yao (2010-12), University of Science and Technology China
10. Michael Lewis (2009-11), Consulting Engineer
11. Jian Zhang (2007- 11), Schlumberger, Houston
12. Caglar Yardim (2007-09), Ohio State University
13. Chen-Fen Huang (2005-07), Taiwan National University
14. Karim Sabra (2003-05), Georgia Tech
15. David Battle (2001-03), DSTO
16. Kaelig Castor (2002-04), CGG

(a) Memberships (Include scholarly societies, professional boards, civic organizations, etc.)

Fellow of Acoustical Society of America

Member of AGU

Senior Member IEEE

Elected Member of the Union of Radio Scientists, Commission F, American Academy of Sciences 2004

Honors and Awards (Include the dates they were received.)

Fulbright Scholar during the 1989-1990 stay at M.I.T.

Fellow Acoustical Society of America, 2003

Elected Member URSI commission F, 2004

Keynote speaker, Compressive sensing in ocean acoustics, Israel Underwater Conference, 25 May 2016

Tutorial, Compressive sensing in ocean acoustics, Tel Aviv, Israel, 23-24 May 2016

Invited professor “Principles of Underwater acoustics”, Zhejiang University, Dec 2016

A. Primary Published Work or Creative Work:

I. Refereed Journal Articles:

- 1 Gerstoft, P. and A.G. Davenport. A simplified method for dynamic analysis of a guyed mast. *J Wind Engineering and Industrial Aerodynamics*, **23**:487-499. (1986)
- 2 Gerstoft, P. and S.O. Hansen. A Newton tubing system for the measurement of fluctuating pressures. *J Wind Engineering and Industrial Aerodynamics*, **25**:335-354. (1987)
- 3 Gerstoft, P. and H. Schmidt. A boundary element approach to ocean seismo-acoustic facet reverberation. *J. Acoust. Am.* **89**: 1629-1642. (1991)
- 4 Gerstoft, P. Inversion of seismo-acoustic data using genetic algorithms and a posteriori probability distributions. *J. Acoust. Soc. Am.* **95**:770-782. (1994)
- 5 Gerstoft, P. Global inversion by genetic algorithms for both source position and environmental parameters. *J. Computat. Acoustics* **2**:251-266. (1994)
- 6 Gerstoft, P. Inversion of acoustic data using a combination of genetic algorithms and the Gauss-Newton approach. *J. Acoust. Soc. Am.* **97**:2181-2191. (1995)
- 7 Gingras, D.F and P. Gerstoft. Inversion for geometric and geoacoustic parameters in shallow water: experimental results. *J. Acoust. Soc. Am.* **97**:3589-3598. (1995)
- 8 Gerstoft, P. and D.F. Gingras. Parameter estimation using multi-frequency range-dependent acoustic data in shallow water. *J. Acoust. Soc. Am.* **99**:2839-2850. (1996)
- 9 Hermand, J.P. and P. Gerstoft. Inversion of broadband multitone acoustic data from the YELLOW SHARK summer experiments. *IEEE J. Ocean. Eng.* **21**:324-346. (1996)
- 10 Goh, J.T., H. Schmidt, P. Gerstoft and W. Seong. Benchmarks for validating range- dependent seismo-acoustic propagation codes. *IEEE J. Ocean. Eng.*, **22**, 226-236. (1997)
- 11 Gingras, D.F., P. Gerstoft and N.L. Gerr. Electromagnetic matched field processing: basic concepts and tropospheric simulations. *IEEE Trans. Ant Prop.*, **45**: 1536- 1545. (1997)
- 12 Ratilal, P., P. Gerstoft, J.T. Goh and K. Yeo. Inversion of pressure data on a vertical array for sea floor geoacoustic properties. *J. Computat. Acoust.* **6**:269-289. (1998)
- 13 Ratilal, P., P. Gerstoft and J. Goh. Subspace approach to inversion by genetic algorithms involving multiple frequencies. *J. Computat. Acoust.* **6**:99-115. (1998)
- 14 Siderius, M., P. Gerstoft and P. Nielsen. Broadband geoacoustic inversion from sparse data using genetic algorithms. *J. Computat. Acoust.* **6**: 117-134. (1998)
- 15 Gerstoft, P. and C.F. Mecklenbrauker. Ocean acoustic inversion with estimation of a posteriori probability distributions. *J. Acoust. Soc. Am.* **104**:808-819. (1998)
- 16 Mecklenbrauker, C.F, P Gerstoft, P.J Chung, J.F Bohme. Hypothesis testing for acoustic environmental models using likelihood ratio. *J. Acoust. Soc. Am.* **105**:1738-1748. (1999)
- 17 Gerstoft, P., D.F. Gingras, L.T. Rogers and W.S. Hodgkiss. Estimation of radio refractivity structure using matched field array processing. *IEEE Ant Prop.* **48**:345-356. (2000)
- 18 Mecklenbrauker, C.F., and P. Gerstoft. Objective functions for ocean acoustic inversions derived by likelihood methods. *J. Computat. Acoust.* **8**:259-270. (2000)
- 19 Sidcrius, M., P. Nielsen, P. Gerstoft. Range-dependent seabed characterization by inversion of acoustic data from a towed receiver array. *J. Acoust. Am.* **112**:1523-1535. (2002)
- 20 Gerstoft, P., W.S. Hodgkiss, W.A. Kuperman, H. Song, M. Siderius and P.L. Nielsen. Adaptive beamforming of a towed array during a turn. *IEEE Oceanic Eng.*, **28**:44-54. (2003)
- 21 Gerstoft, P., L. Ted Rogers, W.S. Hodgkiss and J. Krolik. Inversion for refractivity parameters from radar sea clutter. *Radio Science*, **38**(3): 1 -22. (2003)
- 22 Song, H., W.S. Kuperman, W.S. Hodgkiss, P. Gerstoft and J.S. Kim. Null broadening with snapshot-deficient covariance matrices. *IEEE Oceanic Eng.* **28**(2): 250-261. (2003)
- 23 Gerstoft, P., L.T. Rodgers, W.S. Hodgkiss, and L.J. Wagner. Refractivity estimation using multiple elevation angles. *IEEE J. Oceanic Eng.* **28**(3):513-525. (2003)
- 24 Gerstoft, P., W.S. Hodgkiss, W.A. Kuperman and H. Song. Phenomenological and global optimization inversion. *IEEE J. Oceanic Eng. Special Issue Geoacoustic Inversion*, **28** (3) 342-354. (2003)
- 25 Nielsen, P., M. Siderius, P. Gerstoft. Range-dependent geo-acoustic inversion: results from the Inversion Techniques Workshop. *IEEE J. Oceanic Eng.* **28**(3):414-423. (2003)
- 26 Siderius, M., P.L. Nielsen, P. Gerstoft. Performance comparison between vertical and horizontal arrays for geoacoustic inversion. *IEEE J. Oceanic Eng.* **28** (3):424-431. (2003)
- 27 Battle, D., P. Gerstoft, W.A. Kuperman, W.S. Hodgkiss and M. Siderius. Geo-acoustic inversion of tow-ship noise via near-field-matched-field processing. *IEEE J. Oceanic Eng.* **28**(3):456-467. (2003)
- 28 Park, C., W. Seong, P. Gerstoft and M. Siderius. Time domain geoacoustic inversion of high-frequency chirp signal from a simple towed system. *IEEE J. Oceanic Eng.* **28**(3):468-478. (2003)
- 29 D'Spain, G.L., G Rovner, P. Gerstoft, W.A. Kuperman, W.S Hodgkiss. Determination of waveguide invariants in general environments. *J. Underwater Acoustics*, **51**(1) 123-142.
- 30 Gerstoft, P., W.S. Hodgkiss, L.T. Rogers and M. Jablecki. Probability distribution of low-altitude propagation loss from radar sea clutter data. *Radio Science* **39** (6): Art. No. RS6006 (2004)
- 31 Castor, K., P. Gerstoft, P. Roux, W.A. Kuperman and B.E. McDonald. Long-range propagation of finite-amplitude acoustic waves in an ocean waveguide. *J. Acoust. Soc. Am.*, **116** (4):2004-2010. Part I (2004)
- 32 Battle, D.J., P. Gerstoft, W.S. Hodgkiss. W.A. Kuperman, and P.L. Nielsen. Bayesian model selection applied to self-noise geoacoustic inversion. *J. Acoust. Soc. Am.*, **116** (4): 2043-2056. Part I, (2004)
- 33 Sabra, K.G, P Gerstoft, P Roux, WA Kuperman, MC Fehler. Extracting time-domain Green's function estimates from ambient seismic noise. *Geophys. Res. Lett.* **32** L03310 (2005)
- 34 Park, C, W Seong, P. Gerstoft. Geoacoustic inversion in time domain using ship of opportunity noise recorded on a horizontal towed array. *J Acoust Soc Am.* **117**: 1933-1941 (2005)
- 35 Rogers, L.T., M. Jablecki, and P. Gerstoft. Posterior distributions of a statistic of propagation loss inferred from radar sea clutter. *Radio Science* **40** No. RS6005, doi:10.1019/2004RS0031122005.
- 36 Sabra, K.G., P. Gerstoft, P. Roux, W.A. Kuperman, M.C. Fehler. Surface wave tomography from microseisms in Southern California. *Geophys. Res. Lett.*, **32** L14311. (2005)
- 37 Roux, P., K.G. Sabra, P. Gerstoft. W.A. Kuperman and M.C. Fehler. P-waves from cross-correlation of seismic noise. *Geophys. Res. Letts.*, **32** (19): Art. No. L19303. (2005)
- 38 Huang, C., P. Gerstoft and W.S. Hodgkiss. Uncertainty analysis In matched-field geoacoustic inversions. *J. Acoust. Soc. Am.*, **119** (1): 197-207. (2006)
- 39 Sabra, K.G., P. Roux, P. Gerstoft, W.A. Kuperman and M.C. Fehler. Extracting coherent coda arrivals from cross-correlations of long period seismic waves during the Mount St. Helens 2004 eruption. *Geophys. Res. Letts.*, **33** (6): Art. No. L06313. (2006)
- 40 Yardim, C., P. Gerstoft, W.S. Hodgkiss. Estimation of radio refractivity from radar clutter using Bayesian Monte Carlo analysis. *IEEE Trans. Ant. Prop.*, **54** (4):1318-1327. (2006)
- 41 Gerstoft, P., C. Huang, and W.S. Hodgkiss. Estimation of transmission loss in the presence of geoacoustic inversion uncertainty. *IEEE J Oceanic Eng.* **31**(2). (2006)
- 42 Thode, A.M., P. Gerstoft, W.C. Burgess, W.C.K. Sabra, M. Guerra, M. Dale Stokes and M. Noad, and D.H. Cato. A portable matched-field processing system using passive acoustic time synchronization. *IEEE Oceanic Engineering*, **31**(3) 696-710. (2006)
- 43 Huang, C., P. Gerstoft and W.S. Hodgkiss. Validation of statistical estimation of transmission loss in the presence of geoacoustic inversion uncertainty. *J. Acoust. Soc. Am.*, **120** 1932-1941. (2006)
- 44 Gerstoft, P., K.G. Sabra, P. Roux, W.A. Kuperman, and M.C. Fehler. Green's functions extraction and surface wave tomography from microseisms in southern California. *Geophysics*, **71**(4) S123-S131. (2006)
- 45 Vasudevan, S., R.H. Anderson, S. Kraut, P. Gerstoft, L. Ted Rogers, and J.L. Krolik. Recursive Bayesian electromagnetic refractivity estimation from radar sea clutter. *Radio Science*, **42**, RS2014, doi:10.1029/2005RS003423. (2007)
- 46 Curtis, A., P. Gerstoft, H. Sato, R. Snieder, and K. Wapenaar. Seismic interferometry - turning noise into signal. *The Leading Edge*, **25**, 1082-1092. (2006)
- 47 Gerstoft, P., M.C. Fehler, and K.G. Sabra. When Katrina hit California. *Geophys. Res. Letts.*, **33**, 1.17308, doi:10.1029/2006GL027270. (2006)
- 48 Gerstoft, P., and T. Tanimoto. A year of microseisms in southern California. *Geophys. Res. Lett.*, **34**, L20304, doi:10.1029/2007GL031091. (2007)
- 49 Huang, C., P. Gerstoft, and W.S. Hodgkiss. On the effect of error correlation on matched-field geoacoustic inversion. *J Acoust. Soc. Am.*, **121**: EL64-EL69, doi:10.1121/1.2424267. (2007)
- 50 Brooks, L.A., and P. Gerstoft. Ocean acoustic interferometry. *J. Acoust. Soc. Am.*, **121**, 3377-3385, doi:10.1121/1.2723650. (2007)
- 51 Goh, Y.H., P. Gerstoft, W.S. Hodgkiss, C. Huang. Statistical estimation of transmission loss from geoacoustic inversion using a towed array. *J. Acoust. Soc. Am.*, **122**, 2571 -2579. (2007)
- 52 Yardim, C., P. Gerstoft, and W.S. Hodgkiss. Statistical maritime radar duct estimation using hybrid genetic algorithm-Markov chain Monte Carlo method. *Radio Sci.*, **42**, RS3014, doi:10.1029/2006RS003561. (2007)

- Sneider, R., S. Hubbard, M. Haney, G. Bawden, P. Hatchell, A. Revil, R. Calbert, A. Curtis, M. Fehler, P. Gerstoft, B. Homby, M. Landro, D. Lesmes, K. Mehta, M. Mooney, C. Pacheco, S. Prejean, H. Sato, J. Schuster, K. Wapenaar, and M. Witt. Advanced noninvasive geophysical monitoring techniques. *Annual Review of Earth and Planetary Sciences*, **35**, 653-683. (2007)
- 53 Gerstoft, P., P.M. Shearer, N. Harmon, J. Zhang. Global P, PP, and PKP wave microseisms observed from distant storms. *Geophys. Res. Lett.*, **35**, L23307 (2008)
- 54 Harmon, N., P. Gerstoft, C.A. Rychert, G.A. Abers, M. Salas de la Cruz, and K.M. Fischer. Phase velocities from seismic noise using beamforming and cross correlation in Costa Rica and Nicaragua. *Geophys. Res. Lett.*, **35**, L19303, doi:10.1029/2008GL035387. (2008)
- 55 Traer, J., P. Gerstoft, P.D. Bromirski, W.S. Hodgkiss, and L.A. Brooks. Shallow-water seismo-acoustic noise generated by Tropical Storms Ernesto and Florence. *J Acoust. Soc. Am EL*, **124**, EL170-EL176, doi:10.1121/1.2968296. (2008)
- 56 Gerstoft, P., W.S. Hodgkiss, M. Siderius, C. Huang, and C.H. Harrison. Passive fathometer processing. *J Acoust. Soc. Am*, **123**, 1297-1305. (2008)
- 57 Huang, C., P. Gerstoft, and W.S. Hodgkiss. Effect of ocean sound speed uncertainty on matched-field geoaoustic inversion. *J Acoust. Soc. Am*, EL162-168. (2008)
- 58 Brooks, L.A., P. Gerstoft, and D.P. Knobles. Multichannel array diagnosis using noise cross-correlation. *J Acoust. Soc. Am EL*, **124**, EL203-EL209, (2008)
- 59 Jiang, Y., N.R. Chapman, and P. Gerstoft (2008). Short range travel time geoaoustic inversion with vertical line array. *J Acoust. Soc. Am EL*, **124**, EL135-EL140,
- 60 Yardim, C., P. Gerstoft, and W.S. Hodgkiss (2008). Tracking refractivity from clutter using Kalman and particle filters. *IEEE Transaction Antenna and Propagation*, **56**, 1058-1066, doi:10.1109/TAP.2008.9192015
- 61 Douvenot, R., V. Fabbro, P. Gerstoft, C. Bourlier, and J. Saillard (2008). A duct mapping method using least squares support vector machines. *Radio Science*, **43**, RS6005.
- 62 Bromirski, P.D., and P. Gerstoft (2009). Dominant source regions of the Earth's "hum" are coastal. *Geophys. Res. Lett.*, **36**, L13303, doi:10.1029/2009GL038903.
- 63 Brooks, L.A., and P. Gerstoft (2009). Green's function approximation from cross-correlation of active sources in the ocean. *J Acoust. Soc. Am.*, **126**, 46-55.
- 64 Brooks, L.A., and P. Gerstoft (2009). Green's function approximation from cross-correlations of 20-100 Hz noise during a tropical storm. *J Acoust. Soc. Am* **125**, 723-734.
- 65 Huang, C, P Gerstoft, WS. Hodgkiss (2009). Statistical estimation of source location in presence of geoaoustic inversion uncertainty. *J Acoust. Soc. Am*. **125** EL171- EL176.
- 66 Taylor, S.R., P. Gerstoft, and M.C. Fehler (2009). Estimating site amplification factors from ambient noise. *Geophys. Res. Lett.*, **36**, L09303, doi:10.1029/2009GLD37838.
- 67 Yardim, C., P. Gerstoft, and W.S. Hodgkiss (2009). Sensitivity analysis and performance estimation of refractivity from clutter techniques. *Radio Science*, **44**, RS1008,
- 68 Yardim, C., P. Gerstoft and W.S. Hodgkiss (2009). Tracking of geoaoustic parameters using Kalman and particle filters. *J Acoust. Soc. Am*, **125**, 746-760.
- 69 Zhang, J., P. Gerstoft, and P.M. Shearer (2009). High-Frequency P-wave seismic noise driven by ocean winds. *Geophys. Res. Lett.* **36**, L39302, doi:10.1029/2009GL037761.
- 70 Traer, J., P. Gerstoft, H.C. Song, and W.S. Hodgkiss (2009). On the sign of the adaptive passive fathometer impulse response. *J Acoust. Soc. Am*, **126**, 1657-1658.
- 71 Jiang, Y., N.R. Chapman, and P. Gerstoft (2009). Estimation of Marine Sediment Properties Using a Hybrid Differential Evolution Method. *EEE Oceanic Engineering*, **35**, doi:10.1109/JOE.2009.2025904. (Was A73)
- 72 Brooks, L.A., J. Townend, P. Gerstoft, S. Bannister, and L. Carter (2009). Fundamental and higher-mode Rayleigh wave characteristics of ambient seismic noise in New Zealand. *Geophys. Res. Lett.*, L23303, doi:10.1029/2009GL040434.
- 73 Douvenot, R., V. Fabbro, P. Gerstoft, C. Bourlier, and J. Saillard (2010). Real time refractivity from clutter using a best fit approach improved with physical information. *Radio Science*, **45**, RS1007, doi 10.1029/2009RS004137.
- 74 Park, C., W. Seang, P. Gerstoft, and W.S. Hodgkiss (2010). Geoaoustic Inversion Using Back-propagation. *IEEE Oceanic Eng*, **35**(4), 722-731, doi 10.1109/JOE.2010.2040659.
- 75 Siderius, M., H. Song, P. Gerstoft, W. Hodgkiss, P. Hursky, and C. Harrison (2010). Adaptive passive fathometer processing. *J Acoust. Soc. Am*, **127**, 2193-2200.
- 76 Zhang, J., P. Gerstoft, and P.M. Shearer (2010). Resolving P-wave travel-time anomalies using seismic array observations of oceanic storms. *Earth and Planetary Science Letters*, **292**, 419-427, doi:10.1016/j.epsl.2010.02.014. (Was A78)
- 77 Yardim, C., P. Gerstoft, and W.S. Hodgkiss (2009). Geoaoustic and source tracking using particle filtering: Experimental results. *J Acoust. Soc. Am*, **128**, 75-87, doi 10.1121/1.3438475.
- 78 Harmon, N., C. Rychert, and P. Gerstoft (2010). Distribution of noise sources for seismic interferometry. *Geophys. J. Int* **183**, 1470-1484, doi:10.1111.1365-246X.2010.04802.
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III. Books

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C. Work in Progress: