Stanford



Biondo Biondi

Barney and Estelle Morris Professor

Geophysics

Curriculum Vitae available Online

Bio

BIO

My students and I devise new algorithms to improve the imaging of active and passive seismic data. Images obtained from seismic data are the primary source of information on the structural and stratigraphic complexities in Earth's subsurface and on many subsurface dynamic processes. These images are constructed by processing seismic wavefields recorded at the Earth's surface and generated by either active-source (e.g., vibroseis trucks) experiments or by natural (e.g., ocean waves) and anthropogenic (e.g., vehicle traffic) sources. Because our datasets are enormous, and wavefield propagation needs to be accurately modeled to achieve high-resolution imaging, we need to harness the power of the latest computational hardware to test our methods on field data. Therefore, mapping imaging algorithms into high-performance architecture is an essential component of our research. The amount and quality of information that we can extract from seismic data are directly linked to the temporal and spatial sampling of the sources and the receivers. In the past several years, we have been working on methods to process data recorded by using fiber cables as seismic sensors. Fiber-optic seismic recording promises to enable cost-effective continuous seismic monitoring at a large scale. A particularly exciting possibility is leveraging preexisting telecommunication infrastructure to record seismic data with dense arrays in urban environments continuously. In 2016 we pioneered that idea by recording data under the Stanford campus. Since then, we recorded data in San Jose and on a 48-km array under Stanford and neighboring cities.

ACADEMIC APPOINTMENTS

- Professor, Geophysics
- Member, Bio-X
- Member, Institute for Computational and Mathematical Engineering (ICME)

ADMINISTRATIVE APPOINTMENTS

- Chair of the Geophysics Department, Stanford University, (2019-2022)
- Director, Stanford Earth imaging Project, Stanford University, (1998- present)
- Co-Director, Stanford Earth Sciences Algorithms and Architectures Initiative, Stanford University, (2010- present)
- Program Director, Computational Geoscience Degree Program, Stanford University, (2011-2018)
- Member, Ad-hoc Faculty Committee on the Stanford Research Computing Facility, Stanford University, (2011-2012)
- Co-Director, Center for Computational Earth and Environmental Sciences, Stanford University, (2010-2019)
- Member, Stanford Senate Committee on Research, (2009-2010)
- Member, Earth Sciences Council, Stanford University, (2007-2010)
- Member, Stanford Senate Committee on Research, Stanford University, (2007-2008)

- Member, School of Earth Sciences Web Advisory Committee, Stanford University, (2006-2007)
- Member of the Faculty Advisory Panel of the Stanford CEES, Stanford University, (2005- present)
- Member of the Academic Oversight Committee of the Graduate Program in EEES, Stanford University, (2005-2009)
- Member of the School of Earth Sciences Academic Program (Graduate) Committee, Stanford University, (2004-2005)
- Member of the School of Earth Sciences Computational Initiative Committee, Stanford University, (2004-2005)
- Instructor at the Mathematical Geophysics (Summer) School, Stanford University, (2002-2002)
- Member of Teaching and Information Technology Geophysics Department Committee, Stanford University, (2000-2003)
- Organizing Committee, Stanford Mathematical Geophysics (Summer) School, Stanford University, (1998-2003)
- Instructor at the Mathematical Geophysics (Summer) School, Stanford University, (1998-1998)

HONORS AND AWARDS

- Honorable Mention award for Best Paper Presented at the 2019 SEG Annual Meeting (co-author)., Society of Exploration Geophysicists (2019)
- Honorable mention for Best Paper in Geophysics from SEG (co-author), Society of Exploration Geophysicists (2016)
- Honorable mention for Best Paper in Geophysics from SEG (co-author), Society of Exploration Geophysicists (2009)
- Distinguished Instructor Short Course, Society of Exploration Geophysicists and the European Association of Geoscientists and Engineers (2007)
- Louis Cagniard Award for the best poster presentation (co-author), European Association of Geoscientists and Engineers (2005)
- Reginald Fessenden Award, Society of Exploration Geophysicists (2004)
- Outstanding Contribution SEG 65th Annual Meeting, Society of Exploration Geophysicists (1996)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Invited speaker, Executive Exploration Forum, Schlumberger, Montecarlo, Monaco (2012 - 2012)
- Invited speaker, Workshop, Inversion-based High Resolution Imaging of Reservoirs, Meeting of Society of Exploration Geophysicists (2012 - 2012)
- Short Course Instructor, Pemex, Villahermosa, Mexico (2012 - 2012)
- Short Course Instructor, Ion Geophysical;, Houston, Texas (2012 - 2012)
- Short Course Instructor, TGS; Houston, Texas (2012 - 2012)
- Short Course Instructor, Pemex, Villahermosa, Mexico (2011 - 2011)
- Short Course Instructor, Saudi Aramco, Dhaharain, Saudi Arabia (2011 - 2011)
- Short Course Instructor, Society of Exploration Geophysicists - Continuing Education , New Orleans, Louisiana (2011 - 2011)
- Short Course Instructor, WesternGeco-Schlumberger - Area Geophysicist University , Houston, Texas (2011 - 2011)
- Convenor, SEG (Summer) Research Workshop: Subsalt Exploration and Development: Four years later, what's new in acquisition, imaging and interpretation? (2010 - 2010)
- Invited speaker, Workshop: Full wave-equation methods for complex imaging challenges, Meeting of Society of Exploration Geophysicists (2009 - 2009)
- Invited speaker, Workshop: Reverse-Time Migration- Problems and Promises, Meeting of Society of Exploration Geophysicists (2009 - 2009)
- Keynote speaker, Research Workshop: SubSalt Imaging - focus on azimuth, European Association of Geoscientists and Engineers (2009 - 2009)
- Invited speaker, Workshop: Computing trends in O&G and Earth Sciences, Meeting of European Association of Geoscientists and Engineers (2008 - 2008)
- Invited speaker, Workshop: Reducing Cycle Time from seismic acquisition to interpretation, Meeting of European Association of Geoscientists and Engineers (2008 - 2008)
- Keynote speaker, Workshop: Interpreting Depth-Imaged Data – Case studies, examples, and pitfalls from the interpreters, Meeting of Society of Exploration Geophysicists (2008 - 2008)
- Member, Editorial Board of the Journal on Imaging Sciences published by the Society for Industrial and Applied Mathematics (2007 - present)
- Short Course Instructor, Saudi Aramco, Dhaharain, Saudi Arabia (2007 - 2007)

- Short Course Instructor, Saudi Aramco, Dhaharain, Saudi Arabia (2006 - 2006)
- Keynote speaker, Seismic Imaging Symposium, Veritas-DGC, Calgary, Canada (2006 - 2006)
- Chairman, SEG/EAGE (Summer) Research Workshop: Subsalt Exploration & Development: Imaging, interpretation & drilling- What have we learned (2006 - 2006)
- Distinguished Scientist Lecture, BP Technology Center, Houston, Texas (2005 - 2005)
- Invited speaker, Workshop on Computational Geosciences, Colorado School of Mines (2005 - 2005)
- Invited speaker, Department seminar at Rice University (2005 - 2005)
- Short Course Instructor, PDVSA, Puerto La Cruz, Venezuela (2005 - 2005)
- Invited speaker Workshop, Geophysical Imaging, Rensselaer Polytechnic Institute (2005 - 2005)
- Invited speaker Workshop, Estimation of accurate velocity macro-models in complex structures, Meeting of European Association of Geoscientists and Engineers (2004 - 2004)
- Invited speaker, International Conference Scientific Computing In Petroleum Industry, Beijing, China (2004 - 2004)
- Invited speaker, Workshop, Estimation of accurate velocity macro-models in complex structures, Meeting of European Association of Geoscientists and Engineers (2004 - 2004)
- Keynote speaker, Salt Tectonics Symposium at ExxonMobil Exploration Company, Houston, Texas (2004 - 2004)
- Convenor, EAGE-SEG (Summer) Research Workshop: Processing and imaging of seismic data using explicit or implicit velocity model information (2003 - 2003)
- Invited speaker, 12th International Workshop of IUGG's Commission on Controlled-Source Seismology (2003 - 2003)
- Convenor, SEG Workshop Passive Seismic Imaging (2003 - 2003)
- Invited speaker, Geophysical Society of Houston (2002 - 2002)
- Invited speaker, Special session: Depth Imaging, Meeting of Canadian Society of Exploration Geophysicists (2002 - 2002)
- Invited speaker, Interactive session: Wave equation versus ray based methods, Meeting of European Association of Geoscientists and Engineers (2002 - 2002)
- Invited speaker, Geophysical Society of Houston (2001 - 2001)
- Invited speaker, Southeastern Geophysical Society (2001 - 2001)
- Invited speaker, Heiland Lecture at Colorado School of Mines (2001 - 2001)
- Convenor, SEG Workshop Seismic Imaging beyond Kirchhoff (2001 - 2001)
- Convenor, SEG Workshop Changing the way we work: e-business & the Internet (2001 - 2001)
- Invited speaker, International seminar on sesimic migration and inversion, Seoul National University, South Korea. (2001 - 2001)
- Invited speaker, Incorporated Research Institutions for Seismology (IRIS) Workshop (2000 - 2000)
- Invited speaker, Workshop: Prestack Depth Imaging: Prospects and Challenges, Meeting of European Association of Geoscientists and Engineers (2000 - 2000)
- Invited Speaker, New Approaches to Seismic Imaging Workshop, 6th International Congress of the Brazilian Geophysical Society (1999 - 1999)
- Short Course Instructor, Daqing, China (1998 - 1998)
- Convenor, EAGE-SEG (Summer) Research Workshop Depth Imaging of Seismic Reservoir Attributes (1998 - 1998)
- Member, Research Committee of the Society of Exploration Geophysicists Research Committee (1996 - present)

PROFESSIONAL EDUCATION

- Ph.D, Stanford University , Geophysics (1990)
- M.S., Stanford University , Geophysics (1987)
- M.Sc., Politecnico di Milano , Electrical Engineering (1984)

LINKS

- Stanford Earth imaging Project (SEP): http://sep.sites.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Research

My students and I devise new algorithms to improve the imaging of reflection seismic data. Images obtained from seismic data are the main source of information on the structural and stratigraphic complexities in Earth's subsurface. These images are constructed by processing seismic wavefields recorded at the surface of Earth and generated by either active-source experiments (reflection data), or by far-away earthquakes (teleseismic data). The high-resolution and fidelity of 3-D reflection-seismic images enables oil companies to drill with high accuracy for hydrocarbon reservoirs that are buried under two kilometers of water and up to 15 kilometers of sediments and hard rock. To achieve this technological feat, the recorded data must be processed employing advanced mathematical algorithms that harness the power of huge computational resources. To demonstrate the advantages of our new methods, we process 3D field data on our parallel cluster running several hundreds of processors.

Teaching

I teach a course on seismic imaging for graduate students in geophysics and in the other departments of the School of Earth Sciences. I run a research graduate seminar every quarter of the year. This year I will be teaching a one-day short course in 30 cities around the world as the SEG/EAGE Distinguished Instructor Short Course, the most important educational outreach program of these two societies.

Professional Activities

2007 SEG/EAGE Distinguished Instructor Short Course (2007); co-director, Stanford Exploration Project (1998-present); founding member, Editorial Board of SIAM Journal on Imaging Sciences (2007-present); member, SEG Research Committee (1996-present); chairman, SEG/EAGE Summer Research Workshop (2006)

Teaching

COURSES

2026-27

- 3-D Seismic Imaging: GEOPHYS 280 (Spr)
- Geophysical Inverse Problems: ENERGY 283, GEOPHYS 281 (Win)
- Reflection Seismology: GEOPHYS 385A (Aut, Win, Spr)

2025-26

- 3-D Seismic Imaging: GEOPHYS 280 (Win)
- Fiber Sensing for a Sustainable Planet: GEOPHYS 150, GEOPHYS 250 (Spr)
- Reflection Seismology: GEOPHYS 385A (Aut, Win, Spr)

2024-25

- 3-D Seismic Imaging: GEOPHYS 280 (Spr)
- Geophysical Inverse Problems: ENERGY 283, GEOPHYS 281 (Win)
- Reflection Seismology: GEOPHYS 385A (Aut, Win, Spr, Sum)

2023-24

- Reflection Seismology: GEOPHYS 385A (Aut, Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Trey Knudson, Danny May

Doctoral Dissertation Advisor (AC)

Thomas Cullison, Haipeng Li, Elliott Steele, Joe Stitt, Tong Wu, Amer Zuabi

Master's Program Advisor

Benz Poobua

Doctoral (Program)

Ivan Deiana

Publications

PUBLICATIONS

- **Bridge health monitoring using existing telecommunication fiber-optic networks.** *Nature communications*
  Liu, J., Aggarwal, J., Hwang, D., Lee, J., Wu, Y., Yin, F., Li, H., Santi, P., Sohn, H., Biondi, B., Ratti, C., Noh, H. Y.
  2026; 17 (1)
- **Urban Monitoring Using Preexisting Telecommunication Fiber-Optic Networks for Distributed Acoustic Sensing: A Review** *IEEE SENSORS JOURNAL*
  Liu, J., Li, H., Li, J., Hwang, D., Aggarwal, J., Biondi, B., Noh, H.
  2025; 25 (21): 39353-39370
- **Fiber-Optic Seismic Full Waveform Monitoring of Groundwater Dynamics** *GEOPHYSICAL RESEARCH LETTERS*
  Li, H., Liu, J., Mao, S., Yuan, S., Clapp, R. G., Biondi, B. L.
  2025; 52 (20)
- **Characterizing Vehicle-Induced Distributed Acoustic Sensing Signals for Accurate Urban Near-Surface Imaging** *SEISMOLOGICAL RESEARCH LETTERS*
  Liu, J., Li, H., Yuan, S., Noh, H., Biondi, B.
  2025; 96 (5): 2867-2880
- **Reservoir properties estimation before and after hydraulic stimulation using extended elastic full-waveform inversion and distributed acoustic sensing** *GEOPHYSICS*
  Bader, M., Clapp, R. G., Nihei, K. T., Biondi, B.
  2025; 90 (5): B221-B235
- **Urban sensing using existing fiber-optic networks.** *Nature communications*
  Liu, J., Li, H., Noh, H. Y., Santi, P., Biondi, B., Ratti, C.
  2025; 16 (1): 3091
- **Future SMART Cities Enabled by Fiber Sensing**
  Biondi, B., Li, H., IEEE
  IEEE.2025
- **Modelling uncertainty in P-wave arrival-times retrieved from DAS data: case-studies from 15 fibre optic cables** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Bozzi, E., Agostinetti, N., Fichtner, A., Klaasen, S., Ugalde, A., Biondi, B., Yuan, S., Dahm, T., Isken, M., Paitz, P., Walter, F., Baird, A. F., Becerril, et al
  2024; 239 (3): 1928-1942
- **Detecting local earthquakes via fiber-optic cables in telecommunication conduits under Stanford University campus using deep learning** *COMPUTERS & GEOSCIENCES*
  Huot, F., Clapp, R. G., Biondi, B. L.

2024; 190

- **DeepNRMS: Unsupervised deep learning for noise-robust CO2 monitoring in time-lapse seismic images** *GEOPHYSICS*
  Park, M., Frigerio, J., Clapp, B., Biondi, B.
  2024; 89 (4): IM1-IM11

- **The Global DAS Month of February 2023** *SEISMOLOGICAL RESEARCH LETTERS*
  Wuestefeld, A., Spica, Z. J., Aderhold, K., Huang, H., Ma, K., Lai, V., Miller, M., Urmantseva, L., Zapf, D., Bowden, D. C., Edme, P., Kiers, T., Rinaldi, et al
  2024; 95 (3): 1569-1577

- **Using Vehicle-Induced DAS Signals for Near-Surface Characterization With High Spatiotemporal Resolution** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Yuan, S., Liu, J., Noh, H., Clapp, R., Biondi, B.
  2024; 129 (4)

- **Exploiting the Potential of Urban DAS Grids: Ambient-Noise Subsurface Imaging Using Joint Rayleigh and Love Waves** *Seismological Research Letters*
  Ji, Q., Luo, B., Biondi, B.
  2024

- **Moment tensor inversion of perforation shots using distributed-acoustic sensing** *GEOPHYSICS*
  Bader, M., Clapp, R. G., Nihei, K. T., Biondi, B.
  2023; 88 (6): WC37-WC45

- **Spatial Deep Deconvolution U-Net for Traffic Analyses With Distributed Acoustic Sensing** *IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS*
  Yuan, S., van den Ende, M., Liu, J., Noh, H., Clapp, R., Richard, C., Biondi, B.
  2023

- **Full-waveform inversion by model extension: Practical applications** *GEOPHYSICS*
  Barnier, G., Biondi, E., Clapp, R. G., Biondi, B.
  2023; 88 (5): R609-R643

- **Full-waveform inversion by model extension: Theory, design, and optimization** *GEOPHYSICS*
  Barnier, G., Biondi, E., Clapp, R. G., Biondi, B.
  2023; 88 (5): R579-R607

- **TelecomTM: A Fine-Grained and Ubiquitous Traffic Monitoring System Using Pre-Existing Telecommunication Fiber-Optic Cables as Sensors** *PROCEEDINGS OF THE ACM ON INTERACTIVE MOBILE WEARABLE AND UBIQUITOUS TECHNOLOGIES-IMWUT*
  Liu, J., Yuan, S., Dong, Y., Biondi, B., Noh, H.
  2023; 7 (2)

- **Target-oriented elastic full-waveform inversion through acoustic extended image-space redatuming** *GEOPHYSICS*
  Biondi, E., Barnier, G., Biondi, B., Clapp, R. G.
  2023; 88 (3): R269-R296

- **Turning Telecommunication Fiber-Optic Cables into Distributed Acoustic Sensors for Vibration-Based Bridge Health Monitoring** *STRUCTURAL CONTROL & HEALTH MONITORING*
  Liu, J., Yuan, S., Luo, B., Biondi, B., Noh, H.
  2023; 2023

- **PubDAS: A PUBlic Distributed Acoustic Sensing Datasets Repository for Geosciences** *SEISMOLOGICAL RESEARCH LETTERS*
  Spica, Z. J., Ajo-Franklin, J., Beroza, G. C., Biondi, B., Cheng, F., Gaite, B., Luo, B., Martin, E., Shen, J., Thurber, C., Viens, L., Wang, H., Wuestefeld, et al
  2023; 94 (2A): 983-998

- **Automatic interpretive image-focusing analysis** *GEOPHYSICS*
  Jennings, J., Clapp, R., Araya-Polo, M., Biondi, B.
  2023; 88 (2): U1-U15

- **Detection and Characterization of Microseismic Events from Fiber-Optic DAS Data Using Deep Learning** *SEISMOLOGICAL RESEARCH LETTERS*
  Huot, F., Lellouch, A., Given, P., Luo, B., Clapp, R. G., Nemeth, T., Nihei, K. T., Biondi, B. L.
  2022; 93 (5): 2543-2553
- **Microseismic analysis over a single horizontal distributed acoustic sensing fiber using guided waves** *GEOPHYSICS*
  Lellouch, A., Luo, B., Huot, F., Clapp, R. G., Given, P., Biondi, E., Nemeth, T., Nihei, K. T., Biondi, B. L.
  2022; 87 (3): KS83-KS95
- **Integrating deep neural networks with full-waveform inversion: Reparameterization, regularization, and uncertainty quantification** *GEOPHYSICS*
  Zhu, W., Xu, K., Darve, E., Biondi, B., Beroza, G. C.
  2022; 87 (1): R93-R109
- **p True-amplitude migration through regularized extended linearized waveform inversion** *GEOPHYSICS*
  Biondi, E., Meadows, M. A., Biondi, B.
  2022; 87 (1): S1-S20
- **Joint inversion of the reflectivity and the velocity model** *GEOPHYSICS*
  Cabrales-Vargas, A., Sarkar, R., Biondi, B. L., Clapp, R. G.
  2022; 87 (1): R1-R12
- **Denoising for full-waveform inversion with expanded prediction-error filters** *GEOPHYSICS*
  Bader, M., Clapp, R. G., Biondi, B.
  2021; 86 (5): V445-V457
- **Seismic inversion of shale reservoir properties using microseismic-induced guided waves recorded by distributed acoustic sensing** *GEOPHYSICS*
  Luo, B., Lellouch, A., Jin, G., Biondi, B., Simmons, J.
  2021; 86 (4): R383-R397
- **Seismic Applications of Downhole DAS.** *Sensors (Basel, Switzerland)*
  Lellouch, A., Biondi, B. L.
  2021; 21 (9)
- **Properties of a deep seismic waveguide measured with an optical fiber** *PHYSICAL REVIEW RESEARCH*
  Lellouch, A., Biondi, E., Biondi, B. L., Luo, B., Jin, G., Meadows, M. A.
  2021; 3 (1)
- **Low-Magnitude Seismicity With a Downhole Distributed Acoustic Sensing Array-Examples From the FORGE Geothermal Experiment** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Lellouch, A., Schultz, R., Lindsey, N. J., Biondi, B. L., Ellsworth, W. L.
  2021; 126 (1)
- **Comparison between Distributed Acoustic Sensing and Geophones: Downhole Microseismic Monitoring of the FORGE Geothermal Experiment** *SEISMOLOGICAL RESEARCH LETTERS*
  Lellouch, A., Lindsey, N. J., Ellsworth, W. L., Biondi, B. L.
  2020; 91 (6): 3256–68
- **Approximate Bayesian inference of seismic velocity and pore-pressure uncertainty with basin modeling, rock physics, and imaging constraints** *GEOPHYSICS*
  Pradhan, A., Dutta, N. C., Le, H. Q., Biondi, B., Mukerji, T.
  2020; 85 (5): ID19–ID34
- **Fracture properties estimation using distributed acoustic sensing recording of guided waves in unconventional reservoirs** *GEOPHYSICS*
  Lellouch, A., Meadows, M. A., Nemeth, T., Biondi, B.
  2020; 85 (5): M85–M95
- **Applied 3D salt body reconstruction using shape optimization with level sets** *GEOPHYSICS*
  Dahlke, T., Biondi, B., Clapp, R.

2020; 85 (5): R437–R446

- **A pipeline approach for three dimensional time-domain finite-difference multi-parameter waveform inversion on GPUs** *COMPUTERS & GEOSCIENCES*
  Le, H., Clapp, R. G., Levin, S. A., Biondi, B.
  2020; 140
- **Urban Seismic Site Characterization by Fiber-Optic Seismology** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Spica, Z. J., Perton, M., Martin, E. R., Beroza, G. C., Biondi, B.
  2020; 125 (3)
- **City-Scale Dark Fiber DAS Measurements of Infrastructure Use During the COVID-19 Pandemic.** *Geophysical research letters*
  Lindsey, N. J., Yuan, S. n., Lellouch, A. n., Gualtieri, L. n., Lecocq, T. n., Biondi, B. n.
  2020; 47 (16): e2020GL089931
- **Velocity-Based Earthquake Detection Using Downhole Distributed Acoustic Sensing-Examples from the San Andreas Fault Observatory at Depth** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
  Lellouch, A., Yuan, S., Ellsworth, W. L., Biondi, B.
  2019; 109 (6): 2491–2500
- **Estimating Signal and Structured Noise in Ultrasound Data using Prediction-Error Filters**
  Jennings, J., Jakovljevic, M., Biondi, E., Dahl, J., Biondi, B.
  edited by Byram, B. C., Ruiter, N. V.
  SPIE-INT SOC OPTICAL ENGINEERING.2019
- **A Seismic Shift in Scalable Acquisition Demands New Processing Fiber-optic seismic signal retrieval in urban areas with unsupervised learning for coherent noise removal** *IEEE SIGNAL PROCESSING MAGAZINE*
  Martin, E. R., Huot, F., Ma, Y., Cieplicki, R., Cole, S., Karrenbach, M., Biondi, B. L.
  2018; 35 (2): 31–40
- **Fiber-Optic Network Observations of Earthquake Wavefields** *GEOPHYSICAL RESEARCH LETTERS*
  Lindsey, N. J., Martin, E. R., Dreger, D. S., Freifeld, B., Cole, S., James, S. R., Biondi, B. L., Ajo-Franklin, J. B.
  2017; 44 (23): 11792–99
- **Time-lapse inverse theory with applications** *GEOPHYSICS*
  Maharramov, M., Biondi, B. L., Meadows, M. A.
  2016; 81 (6): R485-R501
- **Integrated VTI model building with seismic data, geologic information, and rock-physics modeling - Part 1: Theory and synthetic test** *GEOPHYSICS*
  Li, Y., Biondi, B., Clapp, R., Nichols, D.
  2016; 81 (5): C177-C191
- **Integrated VTI model building with seismic data, geologic information, and rock-physics modeling - Part 2: Field data test** *GEOPHYSICS*
  Li, Y., Biondi, B., Clapp, R., Nichols, D.
  2016; 81 (5): C205-C218
- **High-frequency Rayleigh-wave tomography using traffic noise from Long Beach, California** *GEOPHYSICS*
  Chang, J. P., de Ridder, S. A., Biondi, B. L.
  2016; 81 (2): B43-B53
- **Time-lapse inverse theory with applications** *GEOPHYSICS*
  Maharramov, M., Biondi, B. L., Meadows, M. A.
  2016; 81 (6): R485-R501
- **Imaging with primaries and free-surface multiples by joint least-squares reverse time migration** *GEOPHYSICS*
  Wong, M., Biondi, B. L., Ronen, S.
  2015; 80 (6): S223-S235
- **Ambient seismic noise tomography at Ekofisk** *GEOPHYSICS*
  de Ridder, S. A., Biondi, B. L.

2015; 80 (6): B167-B176

- **Near-surface Scholte wave velocities at Ekofisk from short noise recordings by seismic noise gradiometry** *GEOPHYSICAL RESEARCH LETTERS*
  de Ridder, S. A., Biondi, B. L.
  2015; 42 (17): 7031-7038
- **Elliptical-anisotropic eikonal phase velocity tomography** *GEOPHYSICAL RESEARCH LETTERS*
  de Ridder, S. A., Biondi, B. L., Nichols, D.
  2015; 42 (3): 758-764
- **Time-lapse seismic noise correlation tomography at Valhall** *GEOPHYSICAL RESEARCH LETTERS*
  de Ridder, S. A., Biondi, B. L., Clapp, R. G.
  2014; 41 (17): 6116-6122
- **Q-compensated reverse-time migration** *GEOPHYSICS*
  Zhu, T., Harris, J. M., Biondi, B.
  2014; 79 (3): S77-S87
- **Salt delineation via interpreter-guided 3D seismic image segmentation** *INTERPRETATION-A JOURNAL OF SUBSURFACE CHARACTERIZATION*
  Halpert, A. D., Clapp, R. G., Biondi, B.
  2014; 2 (2): T79-?
- **Advances in finite-frequency imaging and inversion - Introduction** *GEOPHYSICS*
  Fichtner, A., Plessix, R., Fleury, C., Biondi, B.
  2014; 79 (3): WA1-WA2
- **Simultaneous inversion of full data bandwidth by tomographic full-waveform inversion** *GEOPHYSICS*
  Biondi, B., Almomin, A.
  2014; 79 (3): WA129-WA140
- **Wave-equation migration velocity analysis for VTI models** *GEOPHYSICS*
  Li, Y., Biondi, B., Clapp, R., Nichols, D.
  2014; 79 (3): WA59-WA68
- **Q-compensated reverse-time migration** *Geophysics*
  Zhu, T., Harris, J. M., Biondi, B.
  2014; 79 (3): S77-S87
- **Salt delineation via interpreter-guided 3D seismic image segmentation** *Interpretation*
  Halpert, A. D., Clapp, R. G., Biondi, B.
  2014; 2 (2): T79-T88
- **Daily reservoir-scale subsurface monitoring using ambient seismic noise** *GEOPHYSICAL RESEARCH LETTERS*
  de Ridder, S. A., Biondi, B. L.
  2013; 40 (12): 2969-2974
- **Moveout-based wave-equation migration velocity analysis** *GEOPHYSICS*
  Zhang, Y., Biondi, B.
  2013; 78 (2): U31-U39
- **Subsalt imaging by target-oriented inversion-based imaging: A 3D field-data example** *GEOPHYSICS*
  Tang, Y., Biondi, B.
  2013; 78 (2): S47-S58
- **Subsalt velocity estimation by target-oriented wave-equation migration velocity analysis: A 3D field-data example** *GEOPHYSICS*
  Tang, Y., Biondi, B.
  2013; 78 (1): U19-U29

- **Time-lapse seismic imaging by linearized joint inversion - A Valhall Field case study** *Proceedings of the 82d Annual International Meeting, Society of Exploration Geophysicists*
  Ayeni, G., Biondi, B.
  2012: 4499–4504
- **Residual moveout-based wave-equation migration velocity analysis** *Proceedings of the 82d Annual International Meeting, Society of Exploration Geophysicists*
  Zhang, Y., Biondi, B.
  2012: 4261–4265
- **Joint imaging with Streamer and OBN data** *82d Annual International Meeting, Society of Exploration Geophysicists*
  Wong, M., Ronen, S., Biondi, B.
  2012: 2930–34
- **Continuous Passive Seismic Monitoring of CCS Projects by Correlating Seismic Noise - A Feasibility Study** *74th Annual International Conference, European Association of Geoscientists & Engineers*
  de Ridder, S., Biondi, B.
  2012
- **Imaging with multiples using linearized full-wave inversion** *Proceedings of the 82d Annual International Meeting, Society of Exploration Geophysicists*
  Wong, M., Biondi, B., Ronen, S.
  2012: 3724–3728
- **Tomographic full waveform inversion (TFWI) by combining full waveform inversion with wave-equation migration velocity analysis** *Proceedings of the 82d Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B., Almomin, A.
  2012: 2727–2731
- **Tomographic Full Waveform Inversion: Practical and Computationally Feasible Approach** *Proceedings of the 82d Annual International Meeting, Society of Exploration Geophysicists*
  Almomin, A., Biondi, B.
  2012: 2983–2987
- **Fast 3D migration-velocity analysis by wavefield extrapolation using the prestack exploding-reflector model** *GEOPHYSICS*
  Guerra, C., Biondi, B.
  2011; 76 (5): WB151-WB167
- **Target-oriented wavefield tomography using synthesized Born data** *GEOPHYSICS*
  Tang, Y., Biondi, B.
  2011; 76 (5): WB191-WB207
- **Subsalt velocity analysis by target#oriented wavefield tomography: A 3#D field#data example** *81st Annual International Meeting, Society of Exploration Geophysicists*
  Tang, T., Biondi, B.
  2011: 3958–63
- **Wave#equation inversion of time#lapse seismic data sets** *81st Annual International Meeting, Society of Exploration Geophysicists*
  Ayeni, G., Biondi, B.
  2011: 4149–54
- **Least#squares reverse time migration/inversion for ocean bottom data: A case study** *Proceedings of the 81st Annual International Meeting, Society of Exploration Geophysicists*
  Wong, M., Ronen, S., Biondi, B.
  2011: 2369–2373
- **Migration velocity analysis for anisotropic models** *Proceedings of the 81st Annual International Meeting, Society of Exploration Geophysicists*
  Li, Y., Biondi, B.
  2011: 201–6
- **Velocity estimation by image-focusing analysis** *GEOPHYSICS*

Biondi, B.
2010; 75 (6): U49-U60

- **Target-oriented joint least-squares migration/inversion of time-lapse seismic data sets** *GEOPHYSICS*
  Ayeni, G., Biondi, B.
  2010; 75 (3): R61-R73
- **Joint least-squares inversion of up- and down-going signal for ocean bottom data sets** *80th Annual International Meeting, Society of Exploration Geophysicists*
  Wong, M., Biondi, B., Ronen, S.
  2010: 2752–2756
- **3-D Seismic Imaging** *Investigations in Geophysics*
  Biondi, B.
  edited by Gardner, G.
  Society of Exploration Geophysicists.2010; 14 (2nd Edition)
- **Target oriented tomography using Born data**
  Tang, Y., Biondi, B.
  2010: 4066–70
- **Velocity Estimation by Image Focusing Analysis** *80th Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.
  2010: 4066–70
- **Low frequency passive seismic interferometry for land data** *80th Annual International Meeting, Society of Exploration Geophysicists*
  de Ridder, S., Biondi, B.
  2010: 4041–46
- **Fast 3D velocity updates using the pre-stack exploding reflector model** *80th Annual International Meeting, Society of Exploration Geophysicists*
  Guerra, G., Biondi, B.
  2010: 4375–79
- **Efficient Seismic Monitoring of Hydrocarbon Reservoirs Using Multiple Shooting Vessels** *Offshore Technology Conference*
  Ayeni, G., Tang, Y., Biondo, B.
  2010
- **Speeding up sesimic image segmentation** *80th Annual International Meeting, Society of Exploration Geophysicists*
  Halpert, A., Clapp, R., Biondi, B.
  2010: 1276–80
- **3D plane-wave migration in tilted coordinates: A field data example** *GEOPHYSICS*
  Shan, G., Clapp, R., Biondi, B.
  2009; 74 (6): WCA199-WCA209
- **Imaging by target-oriented wave-equation inversion** *GEOPHYSICS*
  Valenciano, A. A., Biondi, B. L., Clapp, R. G.
  2009; 74 (6): WCA109-WCA120
- **Joint target-oriented wave-equation inversion of multiple time-lapse seismic data sets** *79th Annual International Meeting, Society of Exploration Geophysicists*
  Ayeni, G., Biondi, B.
  2009: 3825–29
- **Wave-equation tomography using image-space phase encoded data** *79th Annual International Meeting, Society of Exploration Geophysicists*
  Guerra, C., Tang, Y., Biondi, B.
  2009: 3964–68
- **Least-squares migration/inversion of blended data** *79th Annual International Meeting, Society of Exploration Geophysicists*
  Tang, Y., Biondi, B.

2009: 2859–63

- **Seismic image segmentation with multiple attributes** *79th Annual International Meeting, Society of Exploration Geophysicists*
  Halpert, A., Clapp, R. G., Biondi, B.
  2009: 3700–3704
- **Joint preconditioned least-squares inversion of simultaneous source time-lapse seismic data sets** *79th Annual International Meeting, Society of Exploration Geophysicists*
  Ayeni, G., Tang, Y., Biondi, B.
  2009: 3914–18
- **Plane-wave migration in tilted coordinates** *GEOPHYSICS*
  Shan, G., Biondi, B.
  2008; 73 (5): S185-S194
- **Wave-equation angle-domain common-image gathers for converted waves** *GEOPHYSICS*
  Rosales, D. A., Fomel, S., Biondi, B. L., Sava, P. C.
  2008; 73 (1): S17-S26
- **Angle-domain common-image gathers for steep reflectors** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Shan, G., Biondi, B.
  2008: 3068–72
- **Wavepath tomography for model building and hazard detection** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Bevc, D., Fliedner, M. M., Biondi, B.
  2008: 3098–4002
- **Fast velocity model building by plane-wave migration in tilted coordinates, automated volume-based picking, and tomography** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Guitton, A., Fliedner, M. M., Biondi, B., Ortigosa, F.
  2008: 3270–74
- **Imaging by target-oriented wave-equation inversion: 3-D field data results** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Valenciano, A., Biondi, B., Clapp, R. G.
  2008: 2181–85
- **Fast velocity model building by plane-wave migration in tilted coordinates, automated volume-based picking, and tomography** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Guitton, A., Fliedner, M. M., Biondi, B., Ortigosa, F.
  2008: 3270–74
- **Imaging by target-oriented wave-equation inversion: 3-D field data results** *78th Annual International Meeting, Society of Exploration Geophysicists*
  Valenciano, A., Biondi, B., Clapp, R. G.
  2008: 2181–85
- **Attenuation of specular and diffracted 2D multiples in image space** *GEOPHYSICS*
  Alvarez, G., Biondi, B., Guitton, A.
  2007; 72 (5): V97-V109
- **Application of image segmentation to tracking 3D salt boundaries** *GEOPHYSICS*
  Lomask, J., Clapp, R. G., Biondi, B.
  2007; 72 (4): P47-P56
- **Seismoelectric imaging of shallow targets** *GEOPHYSICS*
  Haines, S. S., Pride, S. R., Klemperer, S. L., Biondi, B.
  2007; 72 (2): G9-G20
- **Residual moveout in anisotropic angle-domain common-image gathers** *GEOPHYSICS*
  Biondi, B.

2007; 72 (2): S93-S103

- **Angle-domain common-image gathers from anisotropic migration** *GEOPHYSICS*
  Biondi, B.
  2007; 72 (2): S81-S91
- **Seismoelectric data processing for surface surveys of shallow targets** *GEOPHYSICS*
  Haines, S. S., Guitton, A., Biondi, B.
  2007; 72 (2): G1-G8
- **Least-squares attenuation of reverse-time-migration artifacts** *GEOPHYSICS*
  Guitton, A., Kaelin, B., Biondi, B.
  2007; 72 (1): S19-S23
- **Concepts and applications in 3-D seismic imaging**
  Biondi, B.
  Society of Exploration Geophysicists.2007
- **3D plane#wave migration in tilted coordinates** *77th Annual International Meeting, Society of Exploration Geophysicists*
  Shan, G., Clapp, R. G., Biondi, B.
  2007: 2190–94
- **Wavepath tomography for subsalt velocity#model building** *77th Annual International Meeting, Society of Exploration Geophysicists*
  Fliedner, M. M., Brown, M., Bevc, D., Biondi, B.
  2007: 1938–42
- **Target-oriented wave-equation inversion** *GEOPHYSICS*
  Valenciano, A. A., Biondi, B., Guitton, A.
  2006; 71 (4): A35-A38
- **Converted-wave azimuth moveout** *GEOPHYSICS*
  Rosales, D. A., Biondi, B.
  2006; 71 (3): S99-S110
- **Accurate imaging of complex salt features with narrow azimuth migration** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Fliedner, M. M., Crawley, S., Bevc, D., Biondi, B.
  2006: 2609–13
- **3-D Seismic Imaging** *Investigations in Geophysics*
  Biondi, B.
  Society of Exploration Geophysicists.2006
- **SEG Advanced Modeling (SEAM) today and tomorrow** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Bednar, J. B., Abriel, W. L., Biondi, B., Levin, S., Cheng, A.
  2006: 3531–34
- **Least-square attenuation of reverse time migration artifacts** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Guitton, A., Kaelin, B., Biondi, B.
  2006: 2348–52
- **Towards wave-equation imaging and velocity estimation** *Recoder*
  Gray, S., Trad, D., Biondi, B., Lines, L.
  2006; 31: 47-53
- **Imaging steep salt flank with plane-wave migration in tilted coordinates** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Shan, G., Biondi, B.
  2006: 2372–76
- **Prestack exploding-reflectors modeling for migration velocity analysis** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.

2006: 3056–60

- **Residual moveout in anisotropic angle-domain common-image gathers with dipping reflectors** *76th Annual International Meeting, Society of Exploration Geophysicists*
  Jousselin, P., Biondi, B.
  2006: 224–28
- **Wave-equation migration velocity analysis by focusing diffractions and reflections** *GEOPHYSICS*
  Sava, P. C., Biondi, B., Etgen, J.
  2005; 70 (3): U19-U27
- **Common azimuth migration for elliptical and VTI media** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Sen, S., Biondi, B.
  2005: SPMI 4.8
- **Converted-waves angle-domain common-image gathers** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Rosales, D., Biondi, B.
  2005
- **Target-oriented wave-equation inversion** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Valenciano, A., Biondi, B.
  2005
- **Seismic imaging of complex structures by reflection seismic data** *Data Analysis and Imaging with Global and Local Arrays*
  Biondi, B., Bevc, D.
  edited by Levander, A., Nolet, G.
  American Geophysical Union.2005
- **Regularized least-squares inversion for 3-D subsalt imaging** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Clapp, M., Biondi, B.
  2005
- **Which depth imaging method should you use? A road map through the maze of possibilities** *The Leading Edge*
  Bevc, D., Biondi, B.
  2005; 24: 602-606
- **Diffraction-focusing migration velocity analysis with application to seismic and GPR data** *Geophysics*
  Sava, P., Biondi, B., Etgen, J. T.
  2005; 70: U19-27
- **3D wavefield extrapolation in laterally-varying tilted TI media** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Shan, G., Biondi, B.
  2005: ANI 1.3
- **Angle-domain common image gathers for anisotropic migration** *75th Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.
  2005: SPMI 4.5
- **Wave-equation migration velocity analysis. II. Subsalt imaging examples** *EAGE/SEG Summer Research Workshop on Processing and Imaging of Seimic Data*
  Sava, P., Biondi, B.
  WILEY-BLACKWELL PUBLISHING, INC.2004: 607–23
- **Wave-equation migration velocity analysis. I. Theory** *EAGE/SEG Summer Research Workshop on Processing and Imaging of Seimic Data*
  Sava, P., Biondi, B.
  WILEY-BLACKWELL PUBLISHING, INC.2004: 593–606
- **3D angle-domain common-image gathers for migration velocity analysis** *EAGE/SEG Summer Research Workshop on Processing and Imaging of Seimic Data*
  Biondi, B., Tisserant, T.
  WILEY-BLACKWELL PUBLISHING, INC.2004: 575–91

- **Angle-domain common-image gathers for migration velocity analysis by wavefield-continuation imaging** *GEOPHYSICS*
  Biondi, B., Symes, W. W.
  2004; 69 (5): 1283-1298
- **Incorporating geologic information into reflection tomography** *GEOPHYSICS*
  Clapp, R. G., Biondi, B., Claerbout, J. F.
  2004; 69 (2): 533-546
- **Numerical analysis of the azimuth moveout operator for vertically inhomogeneous media** *GEOPHYSICS*
  Alkhalifah, T. A., Biondi, B.
  2004; 69 (2): 554-561
- **Geologically constrained migration velocity analysis** *Geophysics*
  Clapp, R. G., Biondi, B., Claerbout, J. F.
  2004; 69: 533-546
- **Residual move-out analysis with 3-D angle-domain common-image gathers** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Tisserant, T., Biondi, B.
  2004 : 2391–94
- **Velocity estimation for seismic data exhibiting focusing-effect AVO** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Vlad, I., Biondi, B.
  2004: 2427–30
- **Attenuation of diffracted multiples in angle domain common image gathers** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Alvarez, G., Biondi, B., Guitton, A.
  2004: 1301–4
- **Acquisition geometry regularization for multicomponent data** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Rosales, D., Biondi, B.
  2004: 2052–55
- **3-D angle-domain common-image gathers for migration velocity analysis** *Geophysical Prospecting*
  Biondi, B., Tisserant, T.
  2004; 52: 575-591
- **Image segmentation for tracking salt boundaries,** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Lomask, J., Biondi, B., Shragge, J.
  2004: 2443–46
- **Migration methods for passive seismic data,** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Draganov, D., Wapenaar, K., Artman, B., Biondi, B.
  2004: 1123–27
- **Diffraction-focusing migration velocity analysis** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Sava, P., Biondi, B., Etgen, J. T.
  2004: 2395–98
- **Imaging overturned waves by plane-wave migration in tilted coordinates** *74th Annual International Meeting, Society of Exploration Geophysicists*
  Shan, G., Biondi, B.
  2004: 969–72
- **Equivalence of source-receiver migration and shot-profile migration** *GEOPHYSICS*
  Biondi, B.
  2003; 68 (4): 1340-1347
- **Symplectic structure of wave-equation imaging: a path-integral approach based on the double-square-root equation** *GEOPHYSICAL JOURNAL INTERNATIONAL*

de Hoop, M. V., Le Rousseau, J. H., Biondi, B. L.
2003; 153 (1): 52-74

- **Wave equation imaging comparisons: Survey sinking versus shot profile methods** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Bevc, B., Fliedner, M., Crawley, S., Biondi, B.
  2003: 885–88
- **Velocity updating from wavefield-continuation migration,** *EAGE-SEG (Summer) Research Workshop,*
  Biondi, B., Clapp, R. G., Symes, W.
  2003: T20
- **Migration velocity analysis by recursive wavefield extrapolation** *EAGE-SEG (Summer) Research Workshop*
  Sava, P., Biondi, B.
  2003
- **Wavefield-continuation angle-domain common-image gathers for migration velocity analysis,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B., Tisserant, T., Symes, W.
  2003: 2104–7
- **Wave-equation migration velocity analysis by inversion of differential image perturbations,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Sava, P., Biondi, B.
  2003: 2124–27
- **Operator aliasing in wavefield continuation migration,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Artman, B., Biondi, B., Shragge, J.
  2003: 1091–93
- **Narrow-azimuth migration of marine streamer data,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.
  2003: 897–900
- **Development of experimental methods in electroseismics,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Haines, S., Guitton, A., Biondi, B., Pride, S.
  2003: 557–59
- **2-D deconvolution imaging condition for shot profile migration,** *73rd Annual International Meeting, Society of Exploration Geophysicists*
  Valenciano, A., Biondi, B.
  2003: 1059–62
- **Seismic data reconstruction by inversion to common offset** *GEOPHYSICS*
  Chemingui, N., Biondi, B.
  2002; 67 (5): 1575-1585
- **Stable wide-angle Fourier finite-difference downward extrapolation of 3-D wavefields** *GEOPHYSICS*
  Biondi, B.
  2002; 67 (3): 872-882
- **Amplitude preserving prestack imaging of irregularly sampled 3-D data** *72nd Annual International Meeting, Society of Exploration Geophysicists*
  Vlad, I., Biondi, B.
  2002: 2170–73
- **Which depth imaging method should we use? A roadmap in the maze of 3-D depth imaging** *72nd Annual International Meeting, Society of Exploration Geophysicists*
  Bevc, D., Biondi, B.
  2002: 1236–39
- **Prestack imaging of overturned reflections by reverse time migration** *72nd Annual International Meeting, Society of Exploration Geophysicists*

Biondi, B., Shan, G.
2002: 1284–87

- **Velocity model building by wavefield-continuation imaging in the deepwater Gulf of Mexico** *The Leading Edge*
  Fliedner, M. M., Crawley, S., Bevc, D., Popovici, A. M., Biondi, B.
  2002; 21: 1232-1236
- **3-D prestack wave-equation imaging: a rapidly evolving technology** *64th Annual International Conference, European Association of Geoscientists & Engineers*
  Biondi, B., Clapp, R. G., Prucha, M. L., Sava, P.
  European Association of Geoscientists & Engineers.2002
- **Imaging of a rugose salt body in the deep Gulf of Mexico: Kirchhoff versus common azimuth wave-equation migration** *72nd Annual International Meeting, Society of Exploration Geophysicists*
  Fliedner, M., Crawley, S., Bevc, D., Popovici, A. M., Biondi, B.
  2002: 1304–7
- **Subsalt event regularization with steering filters** *72nd Annual International Meeting, Society of Exploration Geophysicists*
  Prucha, M. L., Biondi, B.,
  2002: 1176–79
- **Stolt residual migration for converted waves** *72nd Annual International Meeting, Society of Exploration Geophysicists*
  Rosales, D., Biondi, B., Sava, P.
  2002: 986–89
- **Kirchhoff imaging beyond aliasing** *GEOPHYSICS*
  Biondi, B.
  2001; 66 (2): 654-666
- **The space-time domain: theory and modelling for anisotropic media** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Alkhalifah, T., Fomel, S., Biondi, B.
  2001; 144 (1): 105-113
- **Symplectic structure of wave-equation imaging and inversion** *2nd Wave InversionTechnology Workshop on Seismic True Amplitudes*
  de Hoop, M., Le Rousseau, J. H., Biondi, B.
  2001
- **Stable wide-angle Fourier-finite difference downward extrapolation of 3-D wavefields** *71st Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.
  2001: 1009–12
- **3-D migration velocity analysis for common image gathers in the reflection angle domain** *71st Annual International Meeting, Society of Exploration Geophysicists*
  Liu, W., Popovici, A., Bevc, D., Biondi, B.
  2001: 885–88
- **Amplitude-preserved common image gathers by wave-equation migration** *71st Annual International Meeting, Society of Exploration Geophysicists*
  Sava, P., Biondi, B., Fomel, S.
  2001: 296–99
- **Azimuth moveout for 3-D prestack imaging. "3-D Seismic Exploration", Geophysics reprint series** *3-D Seismic Exploration, Geophysics reprint series*
  Biondi, B., Fomel, S., Chemingui, N.
  2001: 439-448
- **3-D residual velocity analysis and update toolkit for offset-domain prestack depth migration** *71st Annual International Meeting, Society of Exploration Geophysicists*
  Liu, W., Bevc, D., Popovici, A., Biondi, B.
  2001: 925–28

- **3-D wave-equation imaging of a North Sea dataset: common-azimuth migration + residual migration** *70th Annual International Meeting, Society of Exploration Geophysicists*
  Vaillant, L., Calandra, H., Sava, P., Biondi, B.
  2000: 874–77
- **Tau domain migration velocity analysis using angle domain CRP gathers and geologic constraint** *70th Annual International Meeting, Society of Exploration Geophysicists*
  Clapp, R. G., Biondi, B.
  2000: 926–29
- **3-D wave-equation migration of a common-azimuth North Sea dataset** *62nd Annual International Conference, European Association of Geoscientists & Engineers*
  Vaillant, L., Sava, P., Biondi, B., Calandra, H.
  European Association of Geoscientists & Engineers.2000: 231–235
- **3-D wave-equation prestack imaging under salt** *70th Annual International Meeting, Society of Exploration Geophysicists*
  Biondi, B.
  2000: 906–9
- **Internet-based seismic processing: the future of geophysical computing** *70th Annual International Meeting, Society of Exploration Geophysicists*
  Bevc, D., Feodorov, O., Popovici, A. M., Biondi, B.
  2000: 2119–21
- **Data regularization by inversion to common offset (ICO)** *69th Annual International Meeting, Society of Exploration Geophysicists*
  Chemingui, N., Biondi, B.
  1999: 1398–1401
- **Wave-equation migration velocity analysis** *69th Annual International Meeting, Society of Exploration Geophysicists*
  Biondo, B., Sava, P.
  1999: 1723–26
- **Angle-domain common image gathers by wave-equation migration** *69th Annual International Meeting, Society of Exploration Geophysicists*
  Prucha, M., Biondi, B., Symes, W.
  1999: 824–27
- **Azimuth moveout for 3-D prestack imaging** *GEOPHYSICS*
  Biondi, B., Fomel, S., Chemingui, N.
  1998; 63 (2): 574-588
- **Imaging complex geologic structure with single-arrival Kirchhoff prestack depth migration** *GEOPHYSICS*
  Audebert, F., Nichols, D., REKDAL, T., Biondi, B., Lumley, D. E., Urdaneta, H.
  1997; 62 (5): 1533-1543
- **3-D prestack migration of common-azimuth data** *GEOPHYSICS*
  Biondi, B., PALACHARLA, G.
  1996; 61 (6): 1822-1832
- **3D DEPTH MIGRATION BY ROTATED MCCLELLAN FILTERS** *GEOPHYSICAL PROSPECTING*
  Biondi, B., PALACHARLA, G.
  1995; 43 (8): 1005-1020
- **VELOCITY ESTIMATION BY BEAM STACK** *GEOPHYSICS*
  Biondi, B.
  1992; 57 (8): 1034-1047
- **HIGH-RESOLUTION VELOCITY SPECTRA USING EIGENSTRUCTURE METHODS** *GEOPHYSICS*
  Biondi, B. L., Kostov, C.
  1989; 54 (7): 832-842

- **DIP MOVEOUT IN SHOT PROFILES** *GEOPHYSICS*
  Biondi, B., Ronen, J.
  1987; 52 (11): 1473-1482