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**PRINCIPAL RESEARCH INTERESTS**

Petroleum reservoir characterization and monitoring, advanced interpretation methods, seismic data analysis and processing, near surface, anisotropy, and seismic wave propagation.

**PROFESSIONAL SERVICE, AWARDS, AND ACCOMPLISHMENTS**

- 2008: Seismos column in The Leading Edge (1992-present)
- 2006: Editorial board member for Journal of Seismic Exploration  
Technical Program Committee member and co-chairman: EAGE Passive Seismic Forum
- 2005: Executive Committee member Dhahran Geoscience Society (professional development, 2005-06)  
Technical Session chairman: Geophysical Reservoir Monitoring Forum (Bahrain, Mar. 2005)
- 2004: Book published: *Elements of 3D Seismology: Second Edition*  
Patent co-inventor: "Wavelet-based analysis of singularities in seismic data" (No. 6,745,129)  
Visiting scholar Stanford Exploration Project, Stanford University
- 2003: Organizing Committee member: TLE Forum III: Future Computing
- 2002: Elected to European Academy of Sciences  
National Science Foundation SBIR review panelist  
Visiting scholar Stanford Exploration Project, Stanford University  
Member of Technical Audit Team for Petroleum Development Oman
- 2001: SEG Leading Edge Editorial Board (2001-03)  
Chairman First TLE Forum: Geophysics and the Environment  
Chairman SEG Publications Committee (2001-04)  
Invited session chairman at Land Seismic Imaging Forum, Bahrain
- 1999: Book published: *Elements of 3D Seismology*  
Editor of GEOPHYSICS (1999-2001) and SEG Executive Committee Member  
Honorable mention for Best Paper in Geophysics
- 1998: Best Poster Presentation at SEG Annual Meeting
- 1997: Book, *Greek Seismology: Earthquake Theories in Classical Antiquity* (avail. Samizdat Free Press)
- 1995: Assistant Editor of Geophysics (1995-99)

**SOCIETY AFFILIATIONS**

Society of Exploration Geophysicists  
American Geophysical Union  
European Association of Geoscientists and Engineers  
European Academy of Sciences

**EDUCATION**

Ph.D., 1989, Geophysics Colorado School of Mines  
M.Sc., 1980, Geophysics University of Tulsa  
B.Sc., 1978, Geology University of Arkansas

## EMPLOYMENT HISTORY

Professor, University of Houston, 2008  
Saudi Aramco, Geophysical Consultant, 2007  
Saudi Aramco, Geophysical Specialist, 2005-2006  
University of Tulsa, Associate Professor 1996-2004  
University of Tulsa, Assistant Professor, 1990-95  
Golden Geophysical Corp., Denver, 1989-90  
Conoco, Oklahoma City, Explorationist, 1981-86  
Western Geophysical Company, London, UK, Research Geophysicist, 1980-81  
Western Geophysical Company, Field Crew, 1978-79 (summers)

## PEER-REVIEWED PUBLICATIONS

1. Liner, C. L., 2008, The seismic sand curve revisited, *GEOPHYSICS*, **73**, A7
2. Fei, T., and Liner C. L., 2008, Hybrid fourier finite difference 3D depth migration for anisotropic media, *Geophysics*, *GEOPHYSICS*, **73**, S27
3. Li, C.-F., and Liner C. L., 2008, Wavelet-based detection of singularities in acoustic impedance from surface reflection data, *GEOPHYSICS*, **73**, V1
4. Liner, C. L., and Fei, T., 2006, Layer-Induced Seismic Anisotropy from Full Wave Sonic Logs: Theory, application, and validation, *GEOPHYSICS*, **71**, D183
5. Liner, C. L., and Clapp, R. G., 2004, Nonlinear pairwise alignment of seismic traces, *GEOPHYSICS*, **69**, 1552
6. Liner, C. L., and Li, C.-F., 2004, Application of the continuous wavelet transform to broadband wavefield data, *Euro. Acad. of Sci. Annals*.
7. Ronen, S. and Liner, C. L., 2000, Least-squares DMO and migration, *GEOPHYSICS*, **65**, 1364-1371.
8. Liner, C. L. and Underwood, W. D., 1999, 3-D seismic survey design for linear  $v(z)$  media, *GEOPHYSICS*, **64**, 486-493.
9. Liner, C. L., 1999, Concepts of normal and dip moveout, *GEOPHYSICS*, **64**, 1637-1647. (Honorable mention for Best Paper)
10. Liner, C. L., Bozkurt, G. and Cox, V. D., 1996, Shooting direction and crosswell seismic data acquisition, *GEOPHYSICS*, **61**, 1489-1498.
11. Liner, C. L., 1995, Some analytic aspects of a 2.5-D wave equation: *GEOPHYSICS*, **60**, 1536-1540.
12. Liner, C. L., 1994, Rayleigh wave approximations: *Journal of Seismic Exploration*, **3**, 273-281.
13. Liner, C. L., and Lines, L. R., 1994, Simple prestack migration of crosswell seismic data, *Journal of Seismic Exploration*, **3**, 101-112
14. Liner, C. L., 1991, Born theory of wave-equation dip moveout, *GEOPHYSICS*, **56**, 182-189.
15. Liner, C. L., 1991, Theory of a 2.5-D acoustic wave equation for constant density media (short note), *GEOPHYSICS*, **56**, 2114-2117.
16. Liner, C., 1990, General theory and comparative anatomy of dip moveout, *GEOPHYSICS*, **55**, 595-607.

## BOOKS

1. *Elements of 3-D Seismology*, 2004, (Pennwell, 2<sup>nd</sup> edition, 607 pp)
2. *Elements of 3-D Seismology*, 1999, (Pennwell, 1<sup>st</sup> edition, 450 pp)
3. *Greek Seismology: Earthquake Theories in Classical Antiquity* (Samizdat Press) 1986; revised 1997

## OTHER SIGNIFICANT PUBLICATIONS

1. Liner, C. L., and Fei, T., 2007, The Backus number. *The Leading Edge*, 26, 420
2. Smythe, J., Gersztenkorn, A., Radovich, B., Liner, C., and Li, C.-F., 2004, SPICE: Layered Gulf of Mexico Shelf Framework from Spectral Imaging, *The Leading Edge*, 23, 921
3. Liner, C. L., and Clapp, R. G., 2004, Nonlinear pairwise alignment of seismic traces. *The Leading Edge*, 23, 1146
4. Liner, C. L. and Liner, J. L., 1997, Application of GPR to a site investigation involving shallow faults: *The Leading Edge*, 16, no. 11, 1649-1651.
5. Liner, C. L. and Liner, J. L., 1995, Ground-penetrating radar: A near-face experience from Washington county, Arkansas : *The Leading Edge*, 14, no. 01, 17-21. (\* Discussion in TLE-14-6-644 and TLE-14-5-311)

## CONFERENCE PROCEEDINGS

1. Fei, T. and Liner, C., 2006, Hybrid fourier finite-difference 3D prestack depth migration for VTI media. 76th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 2377-2381.
2. Liner, C., 2006, Layer-induced seismic anisotropy from full wave sonic logs. 76th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 159-163.
3. Liner, C., and Vlad, I., 2005, Analytical traveltimes for arbitrary multiples in constant velocity. 754th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 2127-2129.
4. Liner, C., Li, C.-F., Gersztenkorn, A., and Smythe, J., 2004, SPICE: A new general seismic attribute. 74th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 433-436.
5. Liner, C., and Clapp, R., 2004, Nonlinear pairwise alignment of seismic traces. 74th Ann. Internat. Mtg.: Soc. of Expl. Geophys., 2072-2075
6. Al-Moughraby, B. and Liner, C., 2003, Seismic frequency enhancement through spectral borrowing, 73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys., 2016-2019.
7. Chung, C., Liner, C., Epili, D., Underwood, W. and Gobeli, R., 2000, Depth focusing reflection tomography with application to prestack depth migration, 70th Ann. Internat. Mtg: Soc. of Expl. Geophys., 918-921.
8. Bozkurt, G., Epili, D. and Liner, C., 1999, Anisotropic tomography of the Glenn Pool crosswell data, 69th Ann. Internat. Mtg: Soc. of Expl. Geophys., 239-242.
9. Bozkurt, G., Epili, D. and Liner, C. L., 1998, Anisotropic parameter estimation using log, core and seismic data in the Glenn Pool Field, Oklahoma, 68th Ann. Internat. Mtg: Soc. of Expl. Geophys., 296-299.
10. Liner, C. L., Gobeli, R. and Underwood, W. D., 1998, 3-D seismic survey design as an optimization problem, 68th Ann. Internat. Mtg: Soc. of Expl. Geophys., 117-120. **(Best Poster Award)**
11. Liner, C. L., Gobeli, R. and Underwood, W. D., 1997, Aspects of 3D seismic survey design for linear  $v(z)$  media, 59th Mtg.: Eur. Assn. Geosci. Eng., Session:B002.B002.
12. Liner, C. L. and Gobeli, R., 1997, 3-D seismic survey design and linear  $v(z)$ , 67th Ann. Internat. Mtg: Soc. of Expl. Geophys., 43-46.
13. Liner, C. L., Gobeli, R. and Underwood, W. D., 1996, Sloping event DMO amplitude, 58th Mtg.: Eur. Assn. Geosci. Eng., Session:P154.
14. Liner, C. L. and Gobeli, R., 1996, Bin size and linear  $v(z)$ , 66th Ann. Internat. Mtg: Soc. of Expl. Geophys., 47-50.
15. Liner, C. L., Gobeli, R. and Underwood, W. D., 1995, DMO amplitude, 65th Ann. Internat. Mtg: Soc. of Expl. Geophys., 1437-1440.
16. Liner, C. L., Bozkurt, G. and Cox, V. D., 1994, Shooting direction and crosswell seismic data acquisition, 64th Ann. Internat. Mtg: Soc. of Expl. Geophys., 32-36.
17. Bozkurt, G. and Liner, C. L., 1994, Straight ray tomography: Synthetic and real data examples, 64th Ann. Internat. Mtg: Soc. of Expl. Geophys., 174-177.
18. Bozkurt, G., Liner, C. L., Lines, L. R., Tan, H., Eager, J. S., Colethorp, S. L., Beck, J. G., Cox, V. D., Baker, L. D., Hoffpauir, C. G., Sanders, M. E., Stock, J. M. and Williams, J. E., 1994, Glenn Pool project: Crosswell seismic data acquisition overview, 64th Ann. Internat. Mtg: Soc. of Expl. Geophys., 298-301.
19. Vassiliou, A. A., Savage, C. W., Liner, C. L., Bozkurt, G. and Lines, L. R., 1994, Glenn Pool project: Initial tomographic results, 64th Ann. Internat. Mtg: Soc. of Expl. Geophys., 302.
20. Bording, R. P. and Liner, C. L., 1994, Theory of 2.5-D reverse time migration, 64th Ann. Internat. Mtg: Soc. of Expl. Geophys., 692-694.
21. Hwang, S. and Liner, C., 1993, Acoustic seismic modeling in the slowness-time intercept domain, 63rd Ann. Internat. Mtg: Soc. of Expl. Geophys., 920-923.
22. Liner, C. L. and Lines, L., 1993, Simple prestack migration of crosswell seismic data, 63rd Ann. Internat. Mtg: Soc. of Expl. Geophys., 308-312.
23. Bording, R. P. and Liner, C. L., 1993, Some numerical aspects of the 2.5 dimensional wave equation, 63rd Ann. Internat. Mtg: Soc. of Expl. Geophys., 205-207.
24. Liner, C. L. and Stockwell, J. W., Jr., 1993, Some analytic aspects of the 2.5-dimensional wave equation, 63rd Ann. Internat. Mtg: Soc. of Expl. Geophys., 201-204.
25. Liner, C., 1991, Theory of a 2.5 dimensional acoustic wave equation for constant density media, 61st Ann. Internat. Mtg: Soc. of Expl. Geophys., 1595-1597.

26. Liner, C., 1989, DMO amplitude problem: Methods and goals, 59th Ann. Internat. Mtg: Soc. of Expl. Geophys., 1152.
27. Liner, C. L. and Cohen, J. K., 1988, An amplitude-preserving inverse of Hale's DMO, 58th Ann. Internat. Mtg: Soc. of Expl. Geophys., Session:S17.5.
28. Liner, C. L. and Bleistein, N., 1988, Comparative anatomy of common offset dip moveout, 58th Ann. Internat. Mtg: Soc. of Expl. Geophys., Session:S17.1.
29. Ronen, J. and Liner, C., 1987, Theory of spatial antialiasing of log-stretched multichannel reflection data, 57th Ann. Internat. Mtg: Soc. of Expl. Geophys., Session:S14.5.

#### **COURSES TAUGHT/DEVELOPED AT THE UNIVERSITY OF TULSA**

- |                                     |                             |
|-------------------------------------|-----------------------------|
| 1. Petroleum Seismology             | 6. Advanced Seismology      |
| 2. Advanced Petroleum Seismology    | 7. Environmental Geophysics |
| 3. Seismic Data Processing          | 8. The Earth in Space       |
| 4. Advanced Seismic Data Processing | 9. Physical Geology         |
| 5. Seismic Stratigraphy             |                             |

#### **PHD STUDENTS**

1. Bassel Al-Moughraby, 2004, (U Tulsa)
  - *Seismic frequency enhancement through spectral shaping.*
  - Chevron Energy Technology Company
2. Hamed El-Mowafy, 2003, (U Tulsa)
  - *3-D seismic fluvial architecture of the basal middle Frio formation, stratton and Agua Dulce Fields, South Texas*
3. Chun-Feng Li, 2002, (U Tulsa)
  - *Scaling and wavelet-based singularity analysis for geological and geophysical interpretation*
  - Tongji University, Shanghai, China
4. Gokay Bozkurt, 1998, (U Tulsa)
  - *Crosswell tomography in anisotropic media: Glenn Pool Field, Oklahoma*
  - UNOCAL Corporation
5. Andrew Shatilo, 1996, (U Tulsa)
  - *Estimation of wavelet phase spectrum and its application in seismic exploration.*
  - ExxonMobil Upstream Research
6. Chong Chung, 1994, (U Tulsa)
  - *Depth focusing reflection tomography with application to prestack depth migration*
  - GX Technology
7. Dan Whitmore, 1994, (U Tulsa)
  - *Plane wave pre-stack depth migration in complex structural areas.*
  - ConocoPhillips
8. Yaohui Zhang, 1992, (U Tulsa)
  - *Common conversion point stacking for P-SV converted waves.*
  - BGP (China National Petroleum Corporation)