

**DETAILED INFORMATION ABOUT
FACT INC. FOUNDER FRED
AMINZADEH**

PROFESSIONAL EXPERIENCE

University of Southern California, Los Angeles, CA

Petroleum Engineering Program,

Research Professor, 2009-present

Principal Investigator, DOE funded Geothermal Project, 2010-present

Characterizing Fractures in Geysers Geothermal Field by Micro-seismic Data, Using Soft Computing, Fractals, and Shear Wave Anisotropy

Electrical Engineering Department,

Research Professor, 2011-present

Co-advisor to PHD students and collaborates with other faculty on different R&D Projects

Center for Geothermal Studies (CGS),

Executive Director, 2010-present

Leads geothermal related programs at USC to pave way to establish the USC center of excellence for geothermal studies. The aims and current ongoing programs of cgs are at www.cgs.usc.edu.

Center for Integrated Smart Oil Fields, (CiSOFT),

Researcher, 2009-present

Conducts R&D projects on different techniques and sensors with applications in oil, gas, unconventional resources and geothermal fields, teaches the following courses:

- Intelligent and Collaborative Oilfield Systems Characterization & Management
- Advanced Oilfield Operations with Remote Visualization and Control

dGB-USA, Houston, Texas

President and CEO, 1999-2008.

Established and helped grow dGB-USA the South/North America part of dGB-Group. dGB is a software and service company providing services and OpendTect software to upstream energy companies.

FACT Inc.

President and CEO, 1989-present.

Developed short courses on diverse topics (seismic attributes, reservoir characterization, Elastic Modeling, Amplitude Versus Offset, 4D Seismic and Oil industry applications of Soft Computing. offered them in many countries including Argentina, China, India, Brazil, Saudi Arabia, Iran, Venezuela, USA, Italy and Mexico.

Unocal Corporation, Houston, Texas

Director of external technology alliance, 1996-1999

Directed Unocal's external technology activities including those with other industry partners, academia and national laboratories

Unocal Corporation, Brea California

Manager, Geophysical Technology / Seismic Acquisition, (and other positions) 1982-1995

Led different Geophysical technology teams including those in seismic data acquisition. Participated in various business development activities in South Caspian, especially in Azerbaijan and Uzbekistan.

Reviewed many E&P and business development initiatives including the Azeri, Chirag and Gunashli development plan.

Bell Laboratories, Murray Hill, NJ

Member of Technical Staff, 1979-1982

Contributed to important projects on speech and acoustic signal processing, time series analysis, uncertainties associated with on demand modeling and forecasting, and parameter identification. Introduced the generalized Kalman filtering method, with many applications including: strategic multi-stage planning and seismic data analysis.

OTHER CONSULTING AND ADVISORY POSITIONS

Saratoga Resources (a Gulf of Mexico Deep Gas Player), 2010-present,

Member of the Advisory Board

Department of Energy, 2007-2008

Member of Unconventional Resources Technical Advisory Committee,

Oak Ridge National Laboratories, Oak Ridge, Tennessee, 1996-2001

Member of Scientific Advisory Board, CESAR)

Los Alamos and Lawrence Berkeley National Laboratories, 1996-1998

Consultant

Rice University, Geology and Geophysics Department, 1995- 1996

Adjunct Professor,

EDUCATION

PhD, Electrical Engineering (Control) 1979

University of Southern California, Los Angeles, California

The Ph.D. work emphasized on the geophysical and seismic signal processing. The dissertation was on **Non-Normal Incidence State Space Model for Layered Earth Media**. This work was the foundation for a subsequent patent for elastic modeling and AVO analysis.

MS, EE, 1977

University of Southern California, Los Angeles, California,

AFFILIATIONS & AWARDS

- IEEE Simon Ramo award (nominated), 2011
- SPE Western North America Region award for Reservoir Description and Analysis, 2011
- Eni award for the New Frontiers in Hydrocarbon Prize (nominated), 2010
- OCEC Distinguished Educator of the Year, 2010
- World Oil Innovative Thinkers award finalist, 2005 and 2006
- Recipient of SEG Special Commendation Award, 1998, Citation:
 **“In recognition of Meritorious Service Rendered the Scientific Community
 the Earth Sciences and Exploration Geophysics ”**
- Recipient of the Kepitsa and Peter the Great Medals from Russian Academy of Sciences, 1995
- Fellow of IEEE, 1995, Citation:
 **“For Contributions to the Application of Modeling, Signal Processing, Pattern
 Recognition and Expert Systems in the Analysis of Seismic and Acoustic Data”.**
- Member of Russian Academy of Natural Sciences, 1995
- Recipient of three US patents
 - **Guided Oscillatory Well Path Drilling by Seismic Imaging, patent # 5242025**, 1993
 - **Seismic Ray Tracing Method and Apparatus, patent # 5, 079, 749**, 1992
 - **Hybrid Reservoir Characterization # 6,236, 943**, 2001
- Honorary member of Azerbaijan Oil Academy, 1992

PROFESSIONAL ACTIVITIES

- President –elect and President, Society of Exploration Geophysicists, 2006-2008
- Guest Editor, IEEE Magazine on Signal Processing, 2010
- Co Chairman of SEG Summer Research Workshop on Uncertainty (Galveston, TX), 2003
- Vice President of SEG, 2001-2002
- Member of National Research Council, (NSF) Committee on Seismology, 1998-2000
- Chairman of Society of Exploration Geophysicists (SEG) Research Committee, 1994-1996
- Associate Editor, Society of Petroleum Engineering Reservoir Management, 1998-2006.
- Associate Editor, Journal of Science and Petroleum Engineering, 1996-pres.
- Associate Editor, Journal of Seismic Exploration, 1994-pres.
- Associate Editor, IEEE's Transactions on Geoscience and Remote Sensing, 1989-pres.
- Associate Editor, Computers and Electrical Engineering, 1989-1998
- Chairman of SEG Research Workshop on Dynamic Reservoir Characterization, 1999

BOOK PUBLICATIONS

- Geophysics for Engineers, **Elsevier** expected in 2012
- Hydrocarbon Seepage: From Source to Surface, **AAPG/SEG** expected in 2012
- NN and Soft Computing Techniques, with applications in the oil industry **EAGE** 2006
- Fuzzy Partial Differential Equations (80 page chapter contr.) **Physica Verlag** 2004
- Applications of Artificial Neural Networks & Fuzzy Logic, **Kluwer Academic** 2003
- Soft Computing and Intelligent Data Analysis in Oil Exploration, **Elsevier** 2003
- Overpressure Analysis (contributed three chapters), **Elsevier** 2001
- Intelligent Reservoir Characterization, **Physica Verlag** 2001
- Petroleum Geology of South Caspian Basin, **Gulf Publishing**, 2001
- 3-D Salt and Overthrust Model, SEG/EAGE 3-D Modeling Series, No. 1, **SEG** 1997
- Soft Computing, **Academic Press** 1995
- Experts Systems in Oil Exploration, **SEG**, 1991
- Advances in Seismic Data Processing, **JAI Press** 1989
- Pattern Recognition and Image Processing, **Pergamon Press/Elsevier** 1987

SELECTED LEADERSHIP ACCOMPLISHMENTS

- Served as the President-elect and President of Society of Exploration Geophysicists. The presidency marked many first time ever accomplishments including opening China Office, Inter-Society Relations, Geoscientists without Borders, Geo-Mentoring and Reserves Committees, New SEG online and General Assembly (2006-2008)
- Founded and directed two successful technical service companies: dGB-USA, and FACT Inc. Among clients are over 100 oil companies including many super majors, majors, NOC's, independents and small oil companies as well as different size service companies (1999-2008)
- Led a large team of professionals from oil companies and national laboratories to carry out a \$25 MM 3D seismic project to model salt and overthrust structures. The results continue to be extensively used to reduce exploration risk and development cost, for which received the 1998 SEG Special Commendation Award for this accomplishment. (1989-1995)
- Master-minded and finalized a large scale technical study agreement (the first contract of its type for Unocal) with Azerbaijan. Managed and completed the project, paving the way for company's entry to the country and capturing 10% interest in the Azeri-Chirag and Gunashly "mega-structure" valued at over \$900 MM. Received many stock awards for this accomplishment. (1990-1993)
- Negotiated and finalized a technology licensing (involving own patent) agreement with Total and CGG, valued at \$5 million. (1997-1998)

SELECTED TECHNICAL ACCOMPLISHMENTS

- Made a significant contribution to the application of gas chimney technology in the oil industry and its impact on reducing seal and charge risk by applying it to over 100 fields around the world. Won the top paper award in AAPG 2008.
- First to introduce elastic impedance concept, USC Ph D Dissertation, 1979, Geophysical Prospecting, 1982. Based on this, invented a novel modeling and AVO analysis method that has been applied to over 100 fields and exploration projects with outstanding success. The superior results of this method has created interest outside Unocal, leading to licensing of the technology to others (1990-1998), patent #**5,079,749**
- Introduced new attributes for quantifying attenuation of seismic waves in the subsurface as part of meta-attributes and used it for modeling of seismic data.
- Invented a hybrid reservoir characterization method, combining physics-based and statistics-based concepts, **patent # 6,236, 943**. Applied the method to many practical problems including one to distinguish the tight and pay zone in the Norphlet formation. Results presented in an international conference won best paper award.

- Introduced a new method for pattern recognition and clustering seismic data to identify hydrocarbon bearing reservoirs from seismic features. Combined with other geostatistical and neural network approaches, among many other successful applications, was a GOM project producing a \$9MM saving (1995)
- Introduced advanced seismic signal processing, pattern recognition, artificial intelligence, and expert systems leading to major discoveries and induction to the **Fellow of IEEE**.(1982-1995)
- Pioneered a generalized Kalman filter, originally for multi-stage planning and economic applications that was subsequently used by large number of researchers for seismic data analysis, environmental, remote sensing, marine science and sonar applications. (1980-1998)
- Introduced clustering of seismic attributes for the first time and published the first paper on seismic clustering. (1985)
- Invented a novel modeling and AVO analysis method that has been applied to over 100 Unocal fields and exploration projects with outstanding success. The superior results has created interest outside Unocal, leading to licensing of the technology to other companies for commercialization.
- Invented and patented a technique for horizontal drilling using seismic technology. This patent has contributed to major recent advances in drilling and imaging technologies. **patent # 5,242,025**

SELECTED ACADEMIC AND EDUCATIONAL ACCOMPLISHMENTS

- Many accomplishment during under 2 years with USC since March 2009: Giving two CiSOFT courses, establishing USC Global Energy Center, Establishing USC Center for Geothermal Studies, Launching USC Reservoir Monitoring Project, and Advising two PhD Students.
- Designed and conducted many courses including those on seismic attributes & geostatistical and neural network based reservoir characterization and conducted over 30 courses in over 15 countries.
- Introduced the concept of "Geo-Engineer" the model that was used by many academic institutions, including the Harriot-Watts of the UK for multi-disciplinary training. (1996).
- Served as adjunct professor Served as adjunct professor in many universities and provided technical advice (as a consultant) to many US National Laboratories.

SELECTED PUBLICATIONS

Publications included over 300 technical papers in wider areas of geosciences and oil industry applications including many interviews with Oil and Gas Journal, American Oil and Gas Reporter, over 30 keynote speeches and a large number of books as follow: **PARTIAL LIST OF OTHER PUBLICATIONS***

1. Aminzadeh, F., Maity, D. and Tafti, T. A., 2012, Advanced Computing Approach in Microseismic Data Analysis, Computer and Geosciences journal, submitted.
2. Tafti, T. A., Sahimi, M., Aminzadeh, F. and Sammis, C. G., 2012, Using Microseismicity to Map the Fractal Structure of the Fracture Network at The Geysers Geothermal Field in California, Bull. Seism. Soc. Am., submitted
3. Aminzadeh, F., Tafti, T. A. and Maity, D. and, 2012, Integrated Evaluation of Microseismic Data: Beyond Event Locations, Computer and Geosciences journal, submitted.
4. Tafti T. A. and Aminzadeh, F., 2012, Characterizing fracture network in shale reservoir using microseismic data, SPE-153814-PP, Western Regional meeting, Bakersfield, CA
5. Aminzadeh, F., Al Yateem, K., Puecher, L., 2011, Sensors and the Way Forward for Sensing Efficiently and Effectively, SPE Digital Energy Conference and Exhibition, 19-21 April 2011, The Woodlands, Texas, USA
6. Tafti, T. A., and Aminzadeh, F., 2011, Application of high-resolution passive
7. seismic tomographic inversion and estimating reservoir properties, AGU Fall Meeting, San Francisco, CA

8. Tafti T. A., and Aminzadeh, F., 2011, Fracture characterization at the geysers geothermal field using time lapse velocity modeling, fractal analysis and microseismic monitoring, Geothermal Resources Council Transactions, Vol. 35, pp. 547-551.
9. Clifford, A.C. and Aminzadeh, F., 2011, Gas detection from absorption attributes and amplitude versus offset with artificial neural networks in Grand Bay Field [Gas detection from absorption and AVO with ANN]. Extended Abstracts of 81st SEG Annual Meeting, San Antonio, September 18-23, 2011.
10. Aminzadeh, F., Maity, D., Tafti, T. A. and Brouwer, F., 2011, Artificial neural network based autopicker for micro-earthquake data, In: SEG Annual Meeting. pp. 1623-1626.
11. Aminzadeh, F., Tafti, T. A., Maity, D., Boyle, K., Sahimi, M., & Sammis, C. (2010). Analysis of microseismicity using fuzzy logic and fractals for fracture network characterization. American Geophysical Union annual meeting. San Francisco, Ca.
12. Aminzadeh, F., Tafti, T. A., Maity, D., 2010. Characterizing fractures in the geysers geothermal field using soft computing. Geothermal Resources Council Transactions 34, 1193–1198.
13. Aminzadeh, F., 2009, State of the Art of Soft Computing for Intelligent Oil Field Applications, addressing Society of Exploration Annual Meeting's "The Recent Advances and the Road Ahead Session. October 26, 2009 (**Invited Speech**)
14. Aminzadeh, F., 2009, Leveraging Opportunities of Fossil vs. Geothermal Energy E&P Technologies. Geothermal Resources Council Meeting Address to the "Breaking News Session", Reno Nevada, October 6, 2009.
15. Aminzadeh, F., & Tafti, T. A. (2009). Characterizing Fractures in Geysers Geothermal Field by Micro-seismic Data Using Soft Computing, Fractals, and Shear Wave Anisotropy. Geothermal Resource Council Annual meeting, Reno, NV.
16. Aminzadeh, F., Lines, L., 2009, The Growing Role of Geophysics, GeoExpro, February, 2009.
17. Zhao, B., Brouwer, F.G.C., Aminzadeh, F., Morris, S., and Harris, R., 2008, Multiple prediction and reservoir characterization of a tight sand reservoir 2008, SEG Las Vegas 2008 Annual Meeting.
18. de Groot, P., Aminzadeh, F., Hemstra, N., de Bruin, G. 2008, Advanced seismic interpretation techniques in OpendTect. Drilling & Exploration World, Vol. 17 No. 03, January 2008.
19. Aminzadeh, F., Lines, L., 2008, Increased global demand, energy supply challenges drive geophysical advances, The American Oil and Gas Reporter, July 2008.
20. de Groot, P., Aminzadeh, F., Hemstra, N., de Bruin, G. 2008, Advanced seismic interpretation techniques in OpendTect. Drilling & Exploration World, Vol. 17 No. 03, January 2008.
21. Connolly, D., Aminzadeh, F., Selva, C., 2008 Using integrated gas chimney processing, seismic attributes, and seismic facies classification to delineate oil filled Case studies from the Oriente Basin reservoirs, Ecuador, AAPG annual convention, San Antonio, TX with *top10 paper citation*,
22. Thomson, L., Aminzadeh, F., 2007, Advances Push Geophysics Beyond 3D Methods, the American Oil and Gas Reporter, February, 2007.
23. Aminzadeh, F., and de Groot, P., 2006, Neural Networks and Soft Computing Techniques, with applications in the oil industry EAGE Publishing.
24. Connolly, D., Aminzadeh, F., 2006, Reducing Seal And Charge Risk Through Fluid Migration Pathway Detection In Seismic Data, AAPG annual convention, Houston, TX
25. Klutts, J., Connolly, D.L., Aminzadeh, F., and Brouwer, F., 2006. Visualizing Gas Chimney Volumes Reduces Exploration Risk: A Case Study from Onshore Louisiana. 76th SEG Annual Meeting, New Orleans, 1-6 October 2006.
26. Aminzadeh, F., and de Groot, P., 2005, A neural networks based seismic object detection, techniques, Extended Abstracts of the Annual SEG meeting in Houston.

27. Aminzadeh, F., 2005, Applications of AI and Soft Computing for Challenging Problems in the Oil Industry, *Journal of Petroleum Science and Engineering*, Vol. 47, pp 5-14.
28. Aminzadeh, F., 2005, A New Concept for Seismic Anomaly Detection, *Proceedings of the Offshore Technology Conference*, Paper # 17049.
29. Aminzadeh, F., Ross, C., de Groot, P. Brouwer, F., , 2005, Hydrocarbon Probability Index Based on ANN and Prestack Attributes, *Extended Abstracts (F001) of European Association of Geoscientists and Engineers, EAGE Conference in Madrid*.
30. Walraven, D., Connolly, D., Aminzadeh, F., 2005, Determining Migration Pathway in Marco Polo Field Using Chimney Technology, *Extended Abstracts (E017) of European Association of Geoscientists and Engineers, EAGE Conference in Madrid*.
31. Aminzadeh, F., de Groot, P., 2004, Soft Computing for qualitative and quantitative seismic object and reservoir property prediction, Part 1, *Neural Network Applications, First Break, EAGE, Volume 22*, pp 49-54.
32. Aminzadeh, F., Wilkinson, D., 2004, Soft Computing for qualitative and quantitative seismic object and reservoir property prediction, Part 2, *Fuzzy logic applications, First Break, EAGE, Volume 22*, pp 69-78.
33. Ware, P., Aminzadeh, F., Oke B., Setzer T., 2004, Use of Meta Attributes to identify migration pathways in a Tertiary Basin, deepwater Sundaland margin. *Deep Water and Frontier Exploration in Asia and Australia IPA-AAPG Conference, Jakarta Indonesian December 7-8, 2004*
34. Aminzadeh, F., 2004, Soft Computing for qualitative and quantitative seismic object and reservoir property prediction, Part 3, *Evolutionary computing and other aspects of soft computing, First Break, EAGE, Volume 22*, pp 107-116.
35. Nikravesh, M. and Aminzadeh, F., Soft Computing for reservoir characterization, in *Fuzzy Partial Differential Equations and Relational Equations*, Nikravesh, M., Zadeh, L. A., Korotkich, V. Eds., Springer Verlag Berlin, pp 1-79
36. Aminzadeh, F. and Connolly D., 2004. Hydrocarbon Phase Detection and Other Applications of Chimney Technology. *AAPG Int. Conference, Cancun, 2004*
37. Walraven, D., Aminzadeh, F., and Connolly, D., 2004, Predicting seal risk and charge capacity using chimney processing: Three Gulf of Mexico case histories, *SEG National Convention, SEG Annual Convention Extended Abstracts*.
38. Alvarado, J., Aminzadeh, F. and Connolly, D., 2003, Application of gas chimney technology in the Lamprea Area, offshore GOM, *73rd Ann. Internat. Mtg.: Soc. of Expl. Geophys.*, 2334-2334.
39. Nikravesh, M., Aminzadeh, F., Zadeh, L. A., 2003, *Soft Computing and Intelligent Data Analysis*, Vol. 51, *Developments in Petroleum Science Series*, Elsevier, 724p.
40. Nikravesh, M., Aminzadeh, F., 2003, *Soft Computing for Intelligent Reservoir Characterization and Modeling*, 2003, in *Soft Computing and Intelligent Data Analysis*, Nikravesh, M., Aminzadeh, F., Zadeh, L. A. Eds. Vol. 51, *Developments in Petroleum Science Series*, Elsevier, pp3-32.
41. Hassibi, M, Ershaghi, I, , Aminzadeh, F, 2003, High Resolution Reservoir Heterogeneity Characterization Using Recognition Technology, 2003, in *Soft Computing and Intelligent Data Analysis*, Nikravesh, M., Aminzadeh, F., Zadeh, L. A. Eds. Vol. 51, *Developments in Petroleum Science Series*, Elsevier, pp289-307.
42. Connolly, D. L. and Aminzadeh, F. 2003, *Geo-Hazard Detection with Chimney Cubes*, *Offshore Technology Conference Paper # 15114*.
43. Tamhane, D., Wong, P. M., Aminzadeh, F., 2002, Integrating Linguistic Descriptions and Digital Signals in Petroleum Reservoirs, *International Journal of Fuzzy Systems*, Vol 4, No. 1, pp585-591.
44. Aminzadeh, F., de Groot, P., Berge, T., Oldenzel, T., Ligtenberg, H., Connolly, D., 2002, Determining migration path from seismically derived gas chimney, *AAPG Hedberg Research Conference, April 7-10, 2002, Vancouver, Canada*.

45. Aminzadeh, F., Chilingar, G. V., Robertson. J. O., 2002, Seismic Methods of Pressure Prediction, in *Origin and Prediction of Abnormal Formation Pressures*, Chilingar, G. V., Serebryaskov, V. A., and Robertson. J. O., Eds. Vol. 50, Developments in Petroleum Science Series, Elsevier, pp 169-190.
46. Aminzadeh, F., Connolly, D., Heggland. R., Meldahl, P., and de Groot, P., 2002, Geohazard detection and other applications of chimney cubes, *The Leading Edge*, **21**, no. 7, 681-685.
47. Islam, M. R., Khilyuk, K., Katz, S., Chilingar, G. V, Katz, S., Robertson. J. O., Gurevich. A. E., Aminzadeh, F., Buryakovsky, L., 1994, Mathematical Modeling of Abnormally High Formation Pressures, in *Origin and Prediction of Abnormal Formation Pressures*, Chilingar, G. V., Serebryaskov, V. A., and Robertson. J. O., Eds. Vol. 50, Developments in Petroleum Science Series, Elsevier, pp311-351
48. Berge, T.B., F. Aminzadeh, P. De groot, T. Oldenziel, 2002, Seismic Inversion Successfully Predicts Reservoir Porosity, and Gas Content in Ibhubesi Field, Orange Basin, South Africa: *The Leading Edge*, **21**, no. 4, 338-348.
49. Aminzadeh, F., and Connolly, D. 2002, Looking for Gas Chimneys and Faults, *AAPG Explorer*, Vol. 23, No. 2, pp 20-21.
50. Meldahl, P., Heggland, R., Bril, B., de Groot, P., Aminzadeh, F., 2002, Identifying Seismic Objects by their Texture, Orientation and Size: A New Interpretation Tool, AAPG conference in Houston, Invited Paper for the Session: Selections from the Society of Exploration Geophysicists and European Association of Geoscientists and Engineers: SEG and EAGE 2001.
51. Wong, P.M., Aminzadeh, F., and Nikraves, M., 2002, Intelligent Reservoir Characterization, in Wong, P.M., Aminzadeh, F., and Nikraves, M. (Eds.) *Soft Computing for Reservoir Characterisation and Modeling*, Studies in Fuzziness and Soft Computing, Physica-Verlag, Springer-Verlag, pp. 3-12.
52. Wong, P.M., Aminzadeh, F., and Nikraves, M., 2002, *Soft Computing for Reservoir Characterisation and Modeling*, Studies in Fuzziness and Soft Computing, ed. Physica-Verlag, Springer-Verlag,
53. Nikraves, M. and Aminzadeh, F., 2001, Mining and Fusion of Petroleum Data with Fuzzy Logic and Neural Network Agents, *Journal of Petroleum Science and Engineering*, Vol. 29, pp 221-238.
54. Aminzadeh, F. 2001, Seismic Characters and Seismic Attributes to Predict Reservoir Properties, *Proceedings of SEG-GSH Spring Symposium*, 2001,
55. Aminzadeh, F., de Groot, P., Berge, T. and Valenti, G. 2001. Using gas chimneys as an exploration tool (part I & II). *World Oil magazine*, May 2001, p.50-56 (part I) and June 2001, p.69-72 (part II).
56. Aminzadeh, F., and de Groot, P., 2001, Seismic Characters and Seismic Attributes to Predict Reservoir Properties, *Proceedings of SEG-GSH Spring Symposium*,
57. Carlos, S., Aminzadeh, F., Diaz B., M. and Porras M., J, 2001, Using geostatistical techniques for mapping a reservoir in Eastern Venezuela. in *Proceedings of the 7th International Congress of the Brazilian Geophysical Society*.
58. Aminzadeh, F., Barhen, J., Glover, C.W. and Toomanian, N. B. 2000, Reservoir Parameter Estimation Using a Hybrid Neural Network, *Computers and Geosciences*, Vol 26, pp 869-875,
59. Shatilo, A., Aminzadeh, F., 2000, Constant Normal Moveout (CNMO) Correction: A technique and Test Results, *Geophysical Prospecting*, Vol. 48, No. 3, pp 473-488.
60. Dasgupta, S., Kim, J., AlMousa, A., AlMustafa, H., Aminzadeh, F. and Lunen, E., 2000, From seismic character and seismic attributes to reservoir properties: Case study in Arab-D reservoir of Saudi Arabia, *70th Ann. Internat. Mtg: Soc. of Expl. Geophys.*, 597-599.
61. Tamhane, D., P.M. Wong, F. Aminzadeh and M. Nikraves, 2000, "Soft Computing for Intelligent Reservoir Characterization," *SPE Asia Pacific Conference on Integrated Modelling for Asset Management*, SPE 59397.

62. Heggland, R., Meldahl, P., de Groot, P. and Aminzadeh, F., 2000. Seismic Chimney Cube Reveals Oil & Gas Accumulations. *American Oil & Gas Reporter*, 43, 2, p. 78-83.
63. Aminzadeh, F., 2000, Challenges Direct Future of Geophysics, *American Oil and Gas Reporter* (Invited Paper for the Special Millennium Edition), Vol. 43, No. 1, pp 123-132,
64. Aminzadeh, F., Barhen, J., Glover, N., and Toomanian, N. B., 1999, Estimation of Reservoir Parameters Using a Hybrid Neural Network, *Journal of Science and Petroleum Engineering*, Vol. 24, pp 49-56, 1999.
65. Aminzadeh, F., 1999, Intelligent Reservoir Characterization, Invited Speech, RIO99 Geophysical Conference,
66. Aminzadeh, F., 1999, Inversion: Seismic Features Vs. Seismic Attributes, Proceedings of SEG Summer Research Workshop on GEOINVERSION, Taos, NM, 1999
67. Aminzadeh, F. and Fijany, A., 1998, Generalized Kalman Filter for Mine Detection, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Mine-Like Targets, Orlando, Florida,.
68. Bozkurt, G., Aminzadeh, F. and Nummedal, D., 1998, Use of Attributes for Sequence Stratigraphic Interpretation - S. Caspian Basin, Turkmenistan, 60th Mtg.: Eur. Assn. Geosci. Eng., Session:R088.
69. Nikravesh, M., Novak, B., Aminzadeh, F., 1998, Data Mining and Fusion with Integrated Neurofuzzy Agents: Rock Properties and Seismic Attenuation, JCIS 1998, Fourth Joint Conference on Information Sciences, Duke University, October 1998.
70. Aminzadeh, F., 1998, Integration of Seismic Elastic Inversion and Geo-statistical Techniques for Reservoir Modeling of Class 1 Sands, SEG Production Development Forum, Big Sky, Montana, August, 1999
71. Aminzadeh, F., Brac, J., and Kunz, T., 1997, 3-D salt and overthrust models, SEG/EAGE 3-D modeling series, No.1: Distribution CD of salt and overthrust models, SEG book series.
72. Gulati, S., Aminzadeh, F. and A. Fijany, ,1997, Site Remediation Using a Generalized Kalman Filtering Approach for GPR , URC_TC97, NASA University Research Center's Technical Conference on Education, Aeronautics, Space, Autonomy, Earth, and Environment, February 16-19, 1997, Albuquerque, New Mexico.
73. Toomarian, N., JBarhen, J., Glover, C. W., Aminzadeh, F., 1997 Reservoir Properties Estimation Using Neural Networks, Proceedings of NEURAP' 97, Marseilles, France, pp 133-136
74. Glover, C. W., Aminzadeh, F., Barhen, J., 1997 Neural network accuracy measures and data transforms applied to the seismic parameter estimation problem., Proceedings of NEURAP' 97, Marseilles, France, pp 161-168
75. Sherasta, R., Xu, W., Aminzadeh, F., Sengupta, M., 1997, Utilization of Seismic Modeling and Geostatistics for Prediction of Tight Zone in the Norphlet Formation, *Journal of Geophysics*, Vol. XVIII, No. 1, pp. 27-33. 1997, with *best paper citation*,
76. Aminzadeh, F., 1996, Future Geophysical Technology Trends, *The Leading Edge of Geophysics*, Vol. 15, NO. 6, pp 739-742.
77. Fijany, A., and Aminzadeh, F., 1996, A Class of Unconditionally Stable Explicit Methods for Solution of Accoustic Wave Equations, Proceedings of the SPIE International Symposium on Optical Science, Engineering and Instrumentation: Mathematical Methods on Geophysical Imaging IV, Denver Colorado.
78. de Fuguerido, R., Aminzadeh, F., 1996, A Visualization Tool for Well-Log Blocking, *Journal of Seismic Exploration*, Vol. 5, pp. 79-92.
79. Aminzadeh, F., 1996, Future Gescience Technology Trends, (Keynote Address), Proceedings of Stratigraphic Analysis, Pacht, J. E., Sheriff, R. E., and Perkins, B. F., Eds., Earth Enterprises Inc., pp 1-6.
80. Aminzadeh, F., 1996, 3-D Salt and Overthrust Models, in Applications of 3-D Seismic Data to Exploration and Development, P. Weimer and T. Davis, Eds., AAPG Studies in Geology, No. 42, AAPG/SEG, Tulsa.

81. Aminzadeh, F., 1996 "Geo-Engineer", The Wave of the Future, Journal of Petroleum Science and Eng., Vol. 15, No. 1.
82. Aminzadeh, F., Xu, W., 1996 Impact of Reservoir Heterogeneities in Fluid Flow: A Stochastic Modeling Approach, Fluid Imaging Conference, Houston, 1996.
83. Aminzadeh, F., 1996, A Class of Unconditionally Stable Explicit Methods for Solution of Acoustic Wave Equations, Proceedings of the SPIE International Symposium on Optical Science, Engineering and Instrumentation: Mathematical Methods on Geophysical Imaging IV, Denver Colorado, 4-9 August 1996.
84. Aminzadeh, F., Katz, S., Aki, K., 1994, Adaptive Neural Nets for Generation of Artificial Earthquake Precursors, IEEE Transactions on Geoscience and Remote Sensing, Vol. 32, No. 6, 1994.
85. Khilyuk, K., Katz, S., Chilingarian, G. V, Aminzadeh, F., 1994, Numerical Criterion and Sensitivity Analysis for Time-Dependent Formation Pressure in a Sealed Layer, Journal of Petroleum Science and Engineering, Vol. 12, pp 137-145, 1994
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