# Aria Abubakar

List of Publications by Year
in descending order

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|---|---|---|---|
| 84 papers | 2,469 citations | 201674 27 h-index | 214800 47 g-index |
| 84 all docs | 84 docs citations | 84 times ranked | 1035 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Estimating subsurface properties using a semisupervised neural network approach. Geophysics, 2022, 87, IM1-IM10. | 2.6 | 17 |
| 2 | Using relative geologic time to constrain convolutional neural network-based seismic interpretation and property estimation. Geophysics, 2022, 87, IM25-IM35. | 2.6 | 13 |
| 3 | Deep learning for end-to-end subsurface modeling and interpretation: An example from the Groningen gas field. The Leading Edge, 2022, 41, 259-267. | 0.7 | 2 |
| 4 | Low-Frequency Data Learning for Solving Highly Nonlinear Inverse Scattering Problems. , 2022, , . | | 0 |
| 5 | Application of Electrical Impedance Tomography for Monitoring Tissue Water Content of the Thigh. , 2022, , . | | 0 |
| 6 | Low-Frequency Data Prediction With Iterative Learning for Highly Nonlinear Inverse Scattering Problems. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 4366-4376. | 4.6 | 27 |
| 7 | Workshop Preview: Data Analytics and Machine Learning Hackathon 2021: A deep dive into the open-source data challenge for E&P. The Leading Edge, 2021, 40, 68-71. | 0.7 | 0 |
| 8 | Solving Combined Field Integral Equation With Deep Neural Network for 2-D Conducting Object. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 538-542. | 4.0 | 16 |
| 9 | Imposing interpretational constraints on a seismic interpretation convolutional neural network. Geophysics, 2021, 86, IM63-IM71. | 2.6 | 17 |
| 10 | Supervised Descent Learning for Thoracic Electrical Impedance Tomography. IEEE Transactions on Biomedical Engineering, 2021, 68, 1360-1369. | 4.2 | 29 |
| 11 | Machine Learning in Electromagnetics With Applications to Biomedical Imaging: A Review. IEEE Antennas and Propagation Magazine, 2021, 63, 39-51. | 1.4 | 42 |
| 12 | Joint Inversion of Audio-Magnetotelluric and Seismic Travel Time Data With Deep Learning Constraint. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 7982-7995. | 6.3 | 34 |
| 13 | Using relative geologic time to constrain seismic facies classification using neural networks. , 2021, , . | | 7 |
| 14 | Deep learning applications for wind farms site characterization and monitoring. , 2021, , . | | 6 |
| 15 | Study on Low-Frequency Data Learning for Inverse Scattering Problems with High Nonlinearity. , 2021, , . | | 0 |
| 16 | Fault-Guided Seismic Stratigraphy Interpretation via Semi-Supervised Learning. , 2021, , . | | 1 |
| 17 | Neural network-based supervised descent method for 2D electrical impedance tomography. Physiological Measurement, 2020, 41, 074003. | 2.1 | 21 |
| 18 | Pixel- and Model-Based Microwave Inversion With Supervised Descent Method for Dielectric Targets. IEEE Transactions on Antennas and Propagation, 2020, 68, 8114-8126. | 5.1 | 30 |

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|---|---|---|---|
| 19 | Seismic stratigraphy interpretation by deep convolutional neural networks: A semisupervised workflow. Geophysics, 2020, 85, WA77-WA86. | 2.6 | 55 |
| 20 | A Supervised Descent Learning Technique for Solving Directional Electromagnetic Logging-While-Drilling Inverse Problems. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 8013-8025. | 6.3 | 41 |
| 21 | Machine learning and data analytics for geoscience applications â€" Introduction. Geophysics, 2020, 85, WAi-WAii. | 2.6 | 8 |
| 22 | Application of supervised descent method for 2D magnetotelluric data inversion. Geophysics, 2020, 85, WA53-WA65. | 2.6 | 29 |
| 23 | Three-Dimensional Joint Inversion of EM and Acoustic Data Based on Contrast Source Inversion. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2020, 5, 28-36. | 2.2 | 18 |
| 24 | Semi-supervised seismic and well log integration for reservoir property estimation. , 2020, , . | | 10 |
| 25 | Wasserstein cycle-consistent generative adversarial network for improved seismic impedance inversion: Example on 3D SEAM model. , 2020, , . | | 20 |
| 26 | Complete sequence stratigraphy from seismic optical flow without human labeling. , 2020, , . | | 13 |
| 27 | Accelerating seismic fault and stratigraphy interpretation with deep CNNs: A case study of the Taranaki Basin, New Zealand. The Leading Edge, 2020, 39, 727-733. | 0.7 | 20 |
| 28 | A supervised descent learning technique for inversion of directional electromagnetic logging-while-drilling data. , 2020, , . | | 0 |
| 29 | First arrival traveltime tomography using supervised descent learning technique. Inverse Problems, 2019, 35, 105008. | 2.0 | 11 |
| 30 | Application of supervised descent method to transient electromagnetic data inversion. Geophysics, 2019, 84, E225-E237. | 2.6 | 28 |
| 31 | Supervised Descent Learning Technique for 2-D Microwave Imaging. IEEE Transactions on Antennas and Propagation, 2019, 67, 3550-3554. | 5.1 | 95 |
| 32 | Supervised Descent Method for Electrical Impedance Tomography. , 2019, , . | | 6 |
| 33 | Supervised Descent Method for Full-wave Microwave Imaging. , 2019, , . | | 2 |
| 34 | Supervised Descent Method for 2D Magnetotelluric Inversion using Adam Optimization. , 2019, , . | | 3 |
| 35 | Three-Dimensional Electrical Impedance Tomography With Multiplicative Regularization. IEEE Transactions on Biomedical Engineering, 2019, 66, 2470-2480. | 4.2 | 34 |
| 36 | Study on Joint Inversion Algorithm of Acoustic and Electromagnetic Data in Biomedical Imaging. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2019, 4, 2-11. | 2.2 | 37 |

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|---|---|---|---|
| 37 | Feasibility study of acoustic imaging for human thorax using an acoustic contrast source inversion algorithm. Journal of the Acoustical Society of America, 2018, 144, 2782-2792. | 1.1 | 8 |
| 38 | Rapid simulation of borehole electromagnetic response in axially symmetric and transversely isotropic formations. Geophysics, 2018, 83, E245-E257. | 2.6 | 6 |
| 39 | Fast inversion of triaxial induction data in dipping crossbedded formations. Geophysics, 2017, 82, D31-D45. | 2.6 | 25 |
| 40 | Estimation of Reservoir Parameters From Inversion of Triaxial Induction Data Constrained by Mud-Filtrate Invasion Modeling. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2017, 2, 228-236. | 2.2 | 7 |
| 41 | Electromagnetic Inverse Problems for Sensing and Imaging. IEEE Antennas and Propagation Magazine, 2016, 58, 17-17. | 1.4 | 0 |
| 42 | Reservoir property mapping and monitoring from joint inversion of time-lapse seismic, electromagnetic, and production data. Geophysics, 2016, 81, ID73-ID84. | 2.6 | 27 |
| 43 | A 2.5D finite-difference algorithm for elastic wave modeling using near-optimal quadratures. Geophysics, 2016, 81, T155-T162. | 2.6 | 8 |
| 44 | Iterative solution of 3D acoustic wave equation with perfectly matched layer boundary condition and multigrid preconditioner. Geophysics, 2013, 78, T133-T140. | 2.6 | 11 |
| 45 | A contrast source inversion method in the wavelet domain. Inverse Problems, 2013, 29, 025015. | 2.0 | 72 |
| 46 | Application of the variable projection scheme for frequency-domain full-waveform inversion. Geophysics, 2013, 78, R249-R257. | 2.6 | 29 |
| 47 | Joint inversion of controlled-source electromagnetic and production data for reservoir monitoring. Geophysics, 2012, 77, ID9-ID22. | 2.6 | 6 |
| 48 | Joint petrophysical inversion of electromagnetic and full-waveform seismic data. Geophysics, 2012, 77, WA3-WA18. | 2.6 | 95 |
| 49 | A Three-Dimensional Model-Based Inversion Algorithm Using Radial Basis Functions for Microwave Data. IEEE Transactions on Antennas and Propagation, 2012, 60, 3361-3372. | 5.1 | 31 |
| 50 | A contrast-source integral-equation approach for three-dimensional modeling of elastic wave problems. Wave Motion, 2012, 49, 638-658. | 2.0 | 4 |
| 51 | An effective perfectly matched layer design for acoustic fourth-order frequency-domain finite-difference scheme. Geophysical Journal International, 2012, 188, 211-222. | 2.4 | 31 |
| 52 | Estimating petrophysical parameters and average mud-filtrate invasion rates using joint inversion of induction logging and pressure transient data. Geophysics, 2011, 76, E21-E34. | 2.6 | 25 |
| 53 | A MULTIPLICATIVE REGULARIZED GAUSS-NEWTON ALGORITHM AND ITS APPLICATION TO THE JOINT INVERSION OF INDUCTION LOGGING AND NEAR-BOREHOLE PRESSURE MEASUREMENTS. Progress in Electromagnetics Research B, 2011, 29, 105-138. | 1.0 | 6 |
| 54 | A compressed implicit Jacobian scheme for 3D electromagnetic data inversion. Geophysics, 2011, 76, F173-F183. | 2.6 | 16 |

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| 55 | Application of the MR-CSI Method for Three-Dimensional Imaging of the Triaxial Induction Measurements. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 2613-2619. | 6.3 | 6 |
| 56 | Inversion of controlledâ€source electromagnetic data using a modelâ€based approach. Geophysical Prospecting, 2010, 58, 455-467. | 1.9 | 26 |
| 57 | Application of a two-and-a-half dimensional model-based algorithm to crosswell electromagnetic data inversion. Inverse Problems, 2010, 26, 074013. | 2.0 | 19 |
| 58 | The contrast-source stress-velocity integral-equation formulation of three-dimensional time-domain elastodynamic scattering problems: A structured approach using tensor partitioning. Journal of the Acoustical Society of America, 2009, 126, 1095-1100. | 1.1 | 4 |
| 59 | Simultaneous multifrequency inversion of full-waveform seismic data. Geophysics, 2009, 74, R1-R14. | 2.6 | 128 |
| 60 | Application of the finite-difference contrast-source inversion algorithm to seismic full-waveform data. Geophysics, 2009, 74, WCC47-WCC58. | 2.6 | 62 |
| 61 | Joint electromagnetic and seismic inversion using structural constraints. Geophysics, 2009, 74, R99-R109. | 2.6 | 152 |
| 62 | A CG-FFT approach to the solution of a stress-velocity formulation of three-dimensional elastic scattering problems. Journal of Computational Physics, 2008, 227, 10018-10039. | 3.8 | 20 |
| 63 | Sensitivity study and inversion of the fullyâ€triaxial induction logging in crossâ€bedded anisotropic formation. , 2008, , . | | 9 |
| 64 | Removal of Sea Surface Related Wavefields from CSEM Data. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2008, 4, 576-580. | 0.4 | 2 |
| 65 | Application of the nearly perfectly matched layer in acoustic wave modeling. Geophysics, 2007, 72, SM169-SM175. | 2.6 | 61 |
| 66 | A 3D parametric inversion algorithm for triaxial induction data. Geophysics, 2006, 71, G1-G9. | 2.6 | 46 |
| 67 | NONLINEAR INVERSION OF MULTI-FREQUENCY MICROWAVE FRESNEL DATA USING THE MULTIPLICATIVE REGULARIZED CONTRAST SOURCE INVERSION. Progress in Electromagnetics Research, 2006, 62, 193-201. | 4.4 | 18 |
| 68 | An integral equation approach for 2.5-dimensional forward and inverse electromagnetic scattering. Geophysical Journal International, 2006, 165, 744-762. | 2.4 | 36 |
| 69 | Contrast Source Inversion of 3D Electromagnetic Data. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2006, 2, 223-226. | 0.4 | 0 |
| 70 | 2.5D Algorithm for Tomographic Imaging of the Deep Electromagnetic Geophysical Measurement. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2006, 2, 214-218. | 0.4 | 0 |
| 71 | A Green function formulation of the Extended Born approximation for three-dimensional electromagnetic modelling. Wave Motion, 2005, 41, 211-227. | 2.0 | 12 |
| 72 | Iterative forward and inverse algorithms based on domain integral equations for three-dimensional electric and magnetic objects. Journal of Computational Physics, 2004, 195, 236-262. | 3.8 | 159 |

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| 73 | A Multiplicative Regularization Approach for Deblurring Problems. IEEE Transactions on Image Processing, 2004, 13, 1524-1532. | 9.8 | 40 |
| 74 | A GENERAL FRAMEWORK FOR CONSTRAINT MINIMIZATION FOR THE INVERSION OF ELECTROMAGNETIC MEASUREMENTS. Progress in Electromagnetics Research, 2004, 46, 265-312. | 4.4 | 290 |
| 75 | Determining Formation Resistivity Anisotropy in the Presence of Invasion. , 2004, , . | | 44 |
| 76 | A threeâ€dimensional parametric inversion of multiâ€component multiâ€spacing induction logging data. , 2004, , . | | 10 |
| 77 | Time-Lapse TM-Polarization Electromagnetic Imaging. Subsurface Sensing Technologies and Applications, 2003, 4, 117-135. | 0.9 | 6 |
| 78 | Multiplicative regularization for contrast profile inversion. Radio Science, 2003, 38, n/a-n/a. | 1.6 | 126 |
| 79 | Contrast source inversion methods in elastodynamics. Journal of the Acoustical Society of America, 2003, 114, 2825. | 1.1 | 19 |
| 80 | Inverse Scattering Algorithms Based on Contrast Source Integral Representations. Inverse Problems in Science and Engineering, 2002, 10, 559-576. | 0.5 | 9 |
| 81 | Nonlinear inversion of the electrode logging measurements in a deviated well. Geophysics, 2001, 66, 110-124. | 2.6 | 5 |
| 82 | Non-linear three-dimensional inversion of cross-well electrical measurements. Geophysical Prospecting, 2000, 48, 109-134. | 1.9 | 18 |
| 83 | Iterative reconstructions of electrical conductivity from multiexperiment low-frequency electromagnetic data. Radio Science, 2000, 35, 1293-1306. | 1.6 | 4 |
| 84 | Three-dimensional nonlinear inversion in cross-well electrode logging. Radio Science, 1998, 33, 989-1004. | 1.6 | 39 |