

Anders Vest Christiansen
Professor, Associate Professor
Department of Geoscience
WATEC, Centre for Water Technology - WATEC Aarhus University Centre for
Water Technology, C.F. Møllers Allé 4
Department of Geoscience
Type of address: Postal address.
Høegh-Guldborgs Gade 2
1671, 221
8000
Aarhus C
Denmark
Type of address: Postal address.
C.F. Møllers Allé 4
8000
Aarhus C
Denmark
Type of address: Postal address.
Høegh-Guldborgs Gade 2
1120
8000
Aarhus C
Denmark
Email: anders.vest@geo.au.dk
Mobile: +4529454305



Publications

Assessing groundwater denitrification spatially is the key to targeted agricultural nitrogen regulation

Hansen, B., Aamand, J., Blicher-Mathiesen, G., Christiansen, A. V., Claes, N., Dalgaard, T., Frederiksen, R. R., Jacobsen, B. H., Jakobsen, R., Kallesøe, A., Kim, H., Koch, J., Møller, I., Madsen, R. B., Schaper, S., Sandersen, P. B. E., Voutchkova, D. D. & Wiborg, I., Dec 2024, In: Scientific Reports. 14, 1, 13 p., 5538.

Managing the remediation strategy of contaminated megasites using field-scale calibration of geo-electrical imaging with chemical monitoring

Lévy, L., Bording, T. S., Fiandaca, G., Christiansen, A. V., Madsen, L. M., Bennedsen, L. F., Jørgensen, T. H., MacKinnon, L. & Christensen, J. F., 10 Apr 2024, In: Science of the Total Environment. 920, 171013.

Exploring the challenges of interpreting near-surface towed TEM data on saline permafrost

Lorentzen, T. H., Kass, M. A., Scheer, J., Tomaškovičová, S., Christiansen, A. V., Maury, P. K. & Ingeman-Nielsen, T., 21 Feb 2024, In: Geophysics. 89, 3

Importance of different factors for modeling nitrate transport and retention in a tile-drained agricultural catchment with distance-based generalized sensitivity analysis

Frederiksen, R. R., Blicher-Mathiesen, G., Vilhelmsen, T. N. & Christiansen, A. V., 20 Feb 2024, In: Science of the Total Environment. 912, 169614.

Stochastic inversion of time-lapse electrical resistivity tomography data by means of an adaptive ensemble-based approach

Vinciguerra, A., Aleardi, M., Madsen, L. M., Bording, T. S., Christiansen, A. V. & Stucchi, E., Jan 2024, In: Geophysical Prospecting. 72, 1, p. 268-284 17 p.

Assessing groundwater denitrification spatially is the key to targeted agricultural nitrogen regulation

Hansen, B., Aamand, J., Blicher-Mathiesen, G., Christiansen, A. V., Claes, N., Dalgaard, T., Frederiksen, R. R., Jacobsen, B. H., Jakobsen, R., Kallesøe, A., Kim, H., Koch, J., Møller, I., Madsen, R. B., Schaper, S., Sandersen, P. B. E., Voutchkova, D. D. & Wiborg, I., 2024, In: Scientific Reports.

State-of-the-art of ground-based geophysics for archaeological prospection and paleo-landscape studies in Denmark.

Kristiansen, S. M., Christiansen, A. V., Kass, A., Stamness, A., Pedersen, J. B. & Stott, D., 4 Dec 2023.

Importance of small geological features for simulated spatial patterns in tile drain flow in Fensholt catchment of Denmark
Mahmood, H., Frederiksen, R. R., Duque, C. & Christiansen, A. V., Dec 2023, In: Journal of Hydrology: Regional Studies. 50, 19 p., 101599.

Comparison of towed electromagnetic with airborne electromagnetic and electrical resistivity tomography in a hydrogeophysical context

Maurya, P. K., Foged, N., Madsen, L. M. & Christiansen, A. V., Oct 2023, In: Geophysical Journal International. 235, 1, p. 817-830 14 p.

Evaluating the impact of correlated noise for time-lapse transient electromagnetic (TEM) monitoring studies

McLachlan, P., Christiansen, N. B., Grombacher, D. & Christiansen, A. V., Oct 2023, In: Near Surface Geophysics. 21, 5, p. 333-342 10 p.

N-Map: High-resolution groundwater N-retention mapping and modelling by integration of geophysical, geological, geochemical, and hydrological data

Christiansen, A. V., Frederiksen, R. R., Vilhelmsen, T. N., Christensen, S., Maurya, P. K., Hansen, B., Kim, H., Høyer, A. S., Aamand, J., Jakobsen, R., Børgesen, C. D., Jacobsen, B. H. & Auken, E., Oct 2023, In: Journal of Environmental Management. 343, 118126.

3D DC inversion, visualization, and processing of dense time-lapse data in fine domains applied to remediation monitoring

Domenzain, D., Liu, L., Yélamos Vela, I. & Christiansen, A. V., Sept 2023, In: Geophysics. 88, 5, p. E147-E158 12 p.

Statistical modeling of three-dimensional redox architecture from non-colocated redox borehole and transient electromagnetic data

Wang, L., Kim, H., Hansen, B., Christiansen, A. V., Vilhelmsen, T. N. & Caers, J., Sept 2023, In: Hydrogeology Journal. 31, 6, p. 1475-1490 16 p.

Assessing Contaminant Mass Discharge Uncertainty With Application of Hydraulic Conductivities Derived From Geoelectrical Cross-Borehole Induced Polarization and Other Methods

Thalund-Hansen, R., Troldborg, M., Levy, L., Christiansen, A. V., Bording, T. S. & Bjerg, P. L., Aug 2023, In: Water Resources Research. 59, 8, e2022WR034360.

Potential of Machine learning techniques compared to MIKE-SHE model for drainflow predictions in tile-drained agricultural areas of Denmark.

Mahmood, H., Ferre, T., Schneider, R., Stisen, S., Frederiksen, R. R. & Christiansen, A. V., Aug 2023, (Submitted) In: Hydrology and Earth System Sciences.

A DATA DRIVEN APPROACH FOR ROBUST INVERSION OF INDUCED POLARIZATION EFFECTS IN TRANSIENT ELECTROMAGNETIC DATA

Asif, M. R., Maurya, P. K., Foged, N. & Christiansen, A. V., Jul 2023, *APPLICATION OF GEOPHYSICS TO ENGINEERING AND ENVIRONMENTAL PROBLEMS: SYMPOSIUM. 35TH 2023. (SAGEEP 2023)*. Curran Associates, p. 82-82 (SAGEEP Proceedings).

A feasibility study on time-lapse transient electromagnetic for monitoring groundwater dynamics

Zamora-Luria, J. C., McLachlan, P., Maurya, P. K., Liu, L., Grombacher, D. & Christiansen, A. V., 2 Jun 2023, In: Geophysics. 88, 5

3D inversion of an integrated ground-based and waterborne TEM survey

Xiao, L., Fiandaca, G., Maurya, P. K. & Christiansen, A. V., Jun 2023, In: Geophysics. 88, 5

Importance of small geological features for simulated spatial patterns in tile flow generation

Mahmood, H., Frederiksen, R. R., Calvache, C. D. & Christiansen, A. V., May 2023, (Submitted) In: Journal of Hydrology: Regional Studies.

Use of machine learning for drain flows predictions in tile-drained agricultural areas

Mahmood, H., Ferre, T., Schneider, R., Stisen, S., Frederiksen, R. R. & Christiansen, A. V., 26 Apr 2023.

Professor og lektor: Underdimensionering af klima- og miljøuddannelser koster samfundet dyrt

Kristiansen, S. M. & Christiansen, A. V., 17 Apr 2023, In: Altinget.

Using jointly calibrated fine-scale drain models across Denmark to assess the influence of physical variables on spatial drain flow patterns

Mahmood, H., Schneider, R., Frederiksen, R. R., Christiansen, A. V. & Stisen, S., Apr 2023, In: Journal of Hydrology: Regional Studies. 46, 17 p., 101353.

DL-RMD: a geophysically constrained electromagnetic resistivity model database for deep learning applications

Asif, M. R., Foged, N., Bording, T. S., Larsen, J. J. & Christiansen, A. V., Mar 2023, In: Earth System Science Data. 15, 3, p. 1389-1401 13 p.

A Novel Normalization Method of Transient Electromagnetic Data for Efficient Neural Network Training

He, S., Cai, H., Christiansen, A. V. & Asif, M. R., 2023. 5 p.

Automated data processing of a large-scale airborne time-domain electromagnetic survey by a deep learning expert system

Asif, M. R., Kass, A., Westerhoff, R., Rawlinson, Z. & Christiansen, A. V., 2023.

Automated Processing of a Large-Scale Airborne Electromagnetic Survey by Deep Learning

Asif, M. R., Kass, A., Westerhoff, R., Rawlinson, Z., Christiansen, A. V. & Bording, T. S., 2023. 5 p.

Borehole Nuclear Magnetic Resonance Studies at Four Danish Peatlands

Mashhadi, S. R., Grombacher, D., Pedersen, J. B., Kass, M. A., Christiansen, A. V., Zak, D. H., Hoffmann, C. C., Andersen, H. E., Lærke, P. E. & Petersen, R. J., 2023, *NSG2023 29th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers

Integrated use of spatial and time-lapse TEM data for accurate mapping of saltwater intrusion

Zamora-Luria, J. C., McLachlan, P., Liu, L., Grombacher, D. & Christiansen, A. V., 2023, *NSG2023 2nd Conference on Hydrogeophysics*. European Association of Geoscientists and Engineers

Automatic stochastic 3D clay fraction model from tTEM survey and borehole data

Neven, A., Christiansen, A. V. & Renard, P., Dec 2022, In: Scientific Reports. 12, 1, 17112.

Sammenstilling af koncepter for kortlægning af mark N-retention

Hansen, B., Blicher-Mathiesen, G., Børgesen, C. D., Christiansen, A. V., Frederiksen, R. R., Iversen, B. V., Jacobsen, R., Koch, J., Sonnenborg, T., Thodsen, H., Tornbjerg, H. & Trolborg, L., Dec 2022, *De Nationale Geologiske Undersøgelser for Danmark og Grønland - GEUS*. 70 p. (Danmarks og Grønlands Geologiske Undersøgelse Rapport; No. 19, Vol. 2022).

Three-dimensional time-lapse inversion of transient electromagnetic data, with application at an Icelandic geothermal site

Xiao, L., Fiandaca, G., Maurya, P. K., Christiansen, A. V. & Lévy, L., Oct 2022, In: Geophysical Journal International. 231, 1, p. 584-596 13 p.

Investigating the Integration of Neural Networks in Least-Squares Method for Airborne Electromagnetic Data Inversion

Asif, M. R., Maurya, P. K., Larsen, J. J. & Christiansen, A. V., Sept 2022, p. 1-5.

Monitoring water table variations in an unconfined aquifer using a time-lapse TEM method

Zamora-Luria, J. C., McLachlan, P., Grombacher, D., Maurya, P. K. & Christiansen, A. V., Sept 2022, *28th European Meeting of Environmental and Engineering Geophysics, Held at the Near Surface Geoscience Conference and Exhibition 2022, NSG 2022*. European Association of Geoscientists and Engineers, 5 p.

Quantifying Reagent Spreading by Cross-Borehole Electrical Tomography to Assess Performance of Groundwater Remediation

Lévy, L., Thalund-Hansen, R., Bording, T. S., Fiandaca, G., Christiansen, A. V., Rügge, K., Tuxen, N., Hag, M. P. & Bjerg, P. L., Sept 2022, In: *Water Resources Research*. 58, 9, 23 p., e2022WR032218.

Accelerated 2.5-D inversion of airborne transient electromagnetic data using reduced 3-D meshing

Engelbrechtsen, K. W., Zhang, B., Fiandaca, G., Meldgaard Madsen, L., Auken, E. & Christiansen, A. V., Jul 2022, In: *Geophysical Journal International*. 230, 1, p. 643-653 11 p.

Fast 2.5D and 3D Inversion of transient electromagnetic surveys using the octree-based finite element method

Xiao, L., Gianluca, F., Bo, Z., Auken, E. & Christiansen, A. V., Jul 2022, In: *Geophysics*. 87, 4, p. E267-E277 11 p.

Integrating neural networks in least-squares inversion of airborne time-domain electromagnetic data

Asif, M. R., Foged, N., Maurya, P. K., Grombacher, D. J., Christiansen, A. V., Auken, E. & Larsen, J. J., Jul 2022, In: *Geophysics*. 87, 4, p. E177-E187 11 p.

Technical note: Efficient imaging of hydrological units below lakes and fjords with a floating, transient electromagnetic (FLoaTEM) system

Maurya, P. K., Christensen, F. E., Kass, M. A., Pedersen, J. B., Frederiksen, R. R., Foged, N., Christiansen, A. V. & Auken, E., Jun 2022, In: *Hydrology and Earth System Sciences*. 26, 11, p. 2813-2827 15 p.

Assessing Physical control of simulated drain flow dynamics

Mahmood, H., Schneider, R., Frederiksen, R. R., Christiansen, A. V. & Stisen, S., May 2022, p. EGU22-6315.

Non-destructive 3D prospecting at the Viking Age fortress Borgring, Denmark

Kristiansen, S. M., Stott, D., Christiansen, A. V., Henriksen, P. S., Jessen, C., Mortensen, M. F., Pedersen, J. B., Sindbæk, S. M. & Ulriksen, J., Apr 2022, In: *Journal of Archaeological Science: Reports*. 42, 11 p., 103351.

A hydro structural modelling (hsm) concept. Create semi-automated hydrological models derived from resistivity models and lithology logs

Søltøft, T. H., Foged, N. & Christiansen, A. V., Mar 2022, *34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP 2022*. J and N Group, Ltd., p. 89-90 2 p. (Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP, Vol. 2022-March).

Deep learning based expert system to automate time-domain electromagnetic data processing

Asif, M. R., Maurya, P. K., Christiansen, A. V., Larsen, J. J. & Auken, E., Mar 2022, *34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP 2022*. J and N Group, Ltd., p. 6 1 p. (Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP, Vol. 2022-March).

Investigating coastal-pollution using floating transient electromagnetic (floatem) combined with ground-based surveys

Christiansen, A., Maurya, P., Pedersen, J. & Christensen, F. E., Mar 2022, *34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP 2022*. Environmental and Engineering Geophysical Society (EEGS), p. 29 1 p.

3D borehole DC data processing and inversion for remediation monitoring

Domenzain, D., Liu, L., Yelamos Vela, I. & Christiansen, A. V., 2022.

3D inversion & visualization of DC data acquired at dense borehole locations

Domenzain, D., Liu, L., Kühl, A. K., Christiansen, A. V. & Yelamos Vela, I., 2022, p. 2025-2029. 5 p.

A 4D Cross-Borehole Direct Current Resistivity System for Monitoring In-Situ Groundwater Remediation

Liu, L., Auken, E., Domenzain, D., Maurya, P. K., Bording, T. S., Bjerre, B., Vela, I. & Christiansen, A. V., 2022, *28th European Meeting of Environmental and Engineering Geophysics, Held at the Near Surface Geoscience Conference and Exhibition 2022, NSG 2022*. European Association of Geoscientists and Engineers, 5 p.

A Neural Network-Based Hybrid Framework for Least-Squares Inversion of Transient Electromagnetic Data

Asif, M. R., Bording, T. S., Maurya, P. K., Zhang, B., Fiandaca, G., Grombacher, D. J., Christiansen, A. V., Auken, E. & Larsen, J. J., 2022, In: IEEE Transactions on Geoscience and Remote Sensing. 60, 4503610.

Automated transient electromagnetic data processing for ground-based and airborne systems by a deep learning expert system

Asif, M. R., Maurya, P. K., Foged, N., Larsen, J. J., Auken, E. & Christiansen, A. V., 2022, In: IEEE Transactions on Geoscience and Remote Sensing. 60, 14 p., 5919814.

Combining boreholes and Airborne EM for automatic generation of hydrostratigraphic model Realizations

Christiansen, A. V., Foged, N. & Rawlinson, Z., 2022, *3rd Conference on Airborne, Drone and Robotic Geophysics, Held at the Near Surface Geoscience Conference and Exhibition 2022, NSG 2022*. European Association of Geoscientists and Engineers, EAGE, (3rd Conference on Airborne, Drone and Robotic Geophysics, Held at the Near Surface Geoscience Conference and Exhibition 2022, NSG 2022).

Comparison of Ert, Ground-Based Towed Tem and Airborne Tem Resistivity Mapping

Maurya, P. K., Foged, N., Meldgaard Madsen, L. & Christiansen, A. V., 2022, *Conference Proceedings, NSG2022 28th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, 5 p.

Cross-borehole electrical monitoring in groundwater remediation projects: understanding the flow path of remediation agents

Lévy, L., Bording, T., Christiansen, A. V., Thalund-Hansen, R. & Bjerg, P. L., 2022, *34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP 2022*. Denver: Environmental and Engineering Geophysical Society (EEGS), p. 60-64 5 p. (Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP, Vol. 2022-March).

Deep Convolutional Auto-Encoder for Automated Processing of Airborne Time-Domain Electromagnetic Data

Asif, M. R., Larsen, J. J., Auken, E. & Christiansen, A. V., 2022, p. 1-5.

Demonstration of a Halved-Mesh Approach for an Accelerated 2.5D Inversion of Tem Data

Meldgaard Madsen, L., Engebretsen, K. W. & Christiansen, A. V., 2022, *Conference Proceedings, NSG2022 28th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, 5 p.

Enhancing DC data quality using the full IP response

Domenzain, D., Liu, L., Yelamos Vela, I. & Christiansen, A. V., 2022.

Remediation monitoring guided by 3D time-lapse inversion of dense DC borehole data

Domenzain, D., Liu, L., Christiansen, A. V. & Yelamos Vela, I., 2022.

Towards a greater understanding of induced polarization effects on transient electromagnetic data and their associated inversion models in permafrost environments

Kass, M. A., Maurya, P., Lorentzen, T. H., Schjerning, J. F., Pedersen, J. & Christiansen, A. V., 2022, *34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP 2022*. J and N Group, Ltd., p. 55 1 p. (Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP, Vol. 2022-March).

Utilizing the Model Resolution Matrix to Improve Survey Design in Ert Cross-Borehole Acquisitions

Kühl, A. K., Meldgaard Madsen, L. & Christiansen, A. V., 2022, *Conference Proceedings, NSG2022 28th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, 5 p.

A towed magnetic gradiometer array for rapid, detailed imaging of utility, geological, and archaeological targets

Kass, M. A., Auken, E., Larsen, J. J. & Christiansen, A. V., Nov 2021, In: *Geoscientific Instrumentation, Methods and Data Systems*. 10, 2, p. 313-323 11 p.

Using geophysical survey results in the inference of aquifer vulnerability measures

Christensen, N. B. & Christiansen, A. V., Oct 2021, In: Near Surface Geophysics. 19, 5, p. 505-521 17 p.

Efficient reduction of powerline signals in magnetic data acquired from a moving platform

Kass, M. A., Christiansen, A. V., Auken, E. & Larsen, J. J., Aug 2021, In: IEEE Transactions on Geoscience and Remote Sensing. 59, 8, p. 7137-7146 10 p., 9246269.

Utilizing the towed Transient ElectroMagnetic method (tTEM) for achieving unprecedented near-surface detail in geological mapping

Sandersen, P. B. E., Kallesøe, A. J., Møller, I., Høyer, A. S., Jørgensen, F., Pedersen, J. B. & Christiansen, A. V., Jul 2021, In: Engineering Geology. 288, 106125.

tTEM20AAR: A benchmark geophysical data set for unconsolidated fluvio-glacial sediments

Neven, A., Maurya, P. K., Christiansen, A. V. & Renard, P., Jun 2021, In: Earth System Science Data. 13, 6, p. 2743-2752 10 p.

3D multiple-point geostatistical simulation of joint subsurface redox and geological architectures

Madsen, R. B., Kim, H., Kallesøe, A. J., Sandersen, P. B. E., Vilhelmsen, T. N., Hansen, T. M., Christiansen, A. V., Møller, I. & Hansen, B., May 2021, In: Hydrology and Earth System Sciences. 25, 5, p. 2759-2787 29 p.

Machine learning based fast forward modelling of ground-based time-domain electromagnetic data

Bording, T. S., Asif, M. R., Barfod, A. S., Larsen, J. J., Zhang, B., Grombacher, D. J., Christiansen, A. V., Engebretsen, K. W., Pedersen, J. B., Maurya, P. K. & Auken, E., Apr 2021, In: Journal of Applied Geophysics. 187, 9 p., 104290.

Cross-borehole geoelectrical time-lapse monitoring of in situ chemical oxidation and permeability estimation through induced polarization

Bording, T., Kühl, A. K., Fiandaca, G., Christensen, J. F., Christiansen, A. V. & Auken, E., Feb 2021, In: Near Surface Geophysics. 19, 1, p. 43-58 16 p.

Effect of Data Pre-Processing on the Performance of Neural Networks for 1-D Transient Electromagnetic Forward Modeling

Asif, M. R., Bording, T. S., Barfod, A. S., Grombacher, D. J., Maurya, P. K., Christiansen, A. V., Auken, E. & Larsen, J. J., Feb 2021, In: IEEE Access. 9, p. 34635-34646 12 p.

Sampling density and spatial analysis: a methodological pXRF study of the geochemistry of a Viking-Age house in Ribe, Denmark

Trant, P. L. K., Kristiansen, S. M., Christiansen, A. V., Wouters, B. & Sindbæk, S. M., Jan 2021, In: Archaeological and Anthropological Sciences. 13, 1, 17 p., 21.

Complete automation of time-domain transient electromagnetic data processing using deep convolutional autoencoder

Asif, M. R., Larsen, J. J., Maurya, P. K., Christiansen, A. V. & Auken, E., 2021.

Cross-Borehole ERT: Sensitivity, Model Resolution, and Field Data Quality

Meldgaard Madsen, L., Kühl, A. K., Lévy, L. & Christiansen, A. V., 2021. 5 p.

Non-intrusive investigation using SP measurements associated with cable bacteria in contaminated zones

Upadhyay, A., Allaart, L., Christiansen, A. V., Meldgaard Madsen, L. & Damgaard, L. R., 2021.

Three-dimensional time lapse inversion of transient electromagnetic data, with application at an Icelandic geothermal site

Xiao, L., Fiandaca, G., Maurya, P. K., Christiansen, A. V. & Lévy, L., 2021.

Search and recovery of aircraft parts in ice-sheet crevasse fields using airborne and in situ geophysical sensors

Mankoff, K. D., Van As, D., Lines, A., Bording, T., Elliott, J., Kraghede, R., Cantalloube, H., Oriot, H., Dubois-Fernandez, P., Ruault Du Plessis, O., Christiansen, A. V., Auken, E., Hansen, K., Colgan, W. & Karlsson, N. B., Jun 2020, In: Journal

of *Glaciology*. 66, 257, p. 496-508 13 p.

Soil electrical conductivity imaging using a neural network-based forward solver: Applied to large-scale Bayesian electromagnetic inversion

Moghadas, D., Behroozmand, A. A. & Christiansen, A. V., May 2020, In: *Journal of Applied Geophysics*. 176, 12 p., 104012.

A hectare-scale decision tool for nitrate retention estimation by integration of geophysical, geological, geochemical and hydrological data

Frederiksen, R. R., Christiansen, A. V., Vilhelmsen, T. N., Christensen, S. & Auken, E., Jan 2020.

On-time modelling using system response convolution for improved shallow resolution of the subsurface in airborne TEM

Auken, E., Foged, N., Andersen, K. R., Nyboe, N. S. & Christiansen, A. V., Jan 2020, In: *Exploration Geophysics*. 51, 1, p. 4-13 10 p.

AEMIP robust inversion using maximum phase angle Cole-Cole model re-parameterisation applied for HTEM survey over Lamego gold mine, Quadrilatero Ferrifero, MG, Brazil

Couto Junior, M. A., Fiandaca, G., Maurya, P. K., Christiansen, A. V., Porsani, J. L. & Auken, E., 2020, In: *Exploration Geophysics*. 51, 1, p. 170-183 14 p.

Cross-borehole complex geo-electrical monitoring of treatment zone installation in an urban area: Case study from Farum, Denmark

Lévy, L., Bording, T. S., Christiansen, A. V., Fiandaca, G., Thalund-Hansen, R., Meldgaard Madsen, L. & Bjerg, P. L., 2020.

Cross-borehole electrical resistivity tomography for monitoring in-situ chemical oxidation remediation: Large-scale project at Kærgård Plantation, Denmark

Lévy, L., Kühl, A. K., Bording, T. S., Meldgaard Madsen, L., Christiansen, A. V. & Christensen, J. F., 2020.

Danish review on advances in assessing: N retention in the subsurface in relation to future targeted N-regulation of agriculture

Hansen, B., Christiansen, A. V., Dalgaard, T., Jørgensen, F., Iversen, B. V., Larsen, J. J., Kjærgaard, C., Jacobsen, B. H., Auken, E., Hojberg, A. L. & Schaper, S., 2020, København: GEUS, Geological Survey of Denmark and Greenland. 38 p. (GEUS Rapport; No. 11, Vol. 2020).

High resolution 3D subsurface mapping using a towed transient electromagnetic system - tTEM: case studies

Maurya, P. K., Christiansen, A. V., Pedersen, J. & Auken, E., 2020, In: *Near Surface Geophysics*. 18, 3, p. 249-259 11 p.

3D characterization of the subsurface redox architecture in complex geological settings

Kim, H., Høyer, A. S., Jakobsen, R., Thorling, L., Aamand, J., Maurya, P. K., Christiansen, A. V. & Hansen, B., Nov 2019, In: *Science of the Total Environment*. 693, 14 p., 133583.

Cross-borehole tomography with full-decay spectral time-domain induced polarization for mapping of potential contaminant flow-paths

Bording, T. S., Fiandaca, G., Maurya, P. K., Auken, E., Christiansen, A. V., Tuxen, N., Klint, K. E. S. & Larsen, T. H., Oct 2019, In: *Journal of Contaminant Hydrology*. 226, 103523.

Improved assessment of hydrological processes on catchment scale using a new towed groundbased TEM system

Frederiksen, R. R., Vilhelmsen, T. N., Christiansen, A. V. & Auken, E., 11 Sept 2019.

Combining clustering methods with MPS to estimate structural uncertainty for hydrological models

Vilhelmsen, T. N., Auken, E., Christiansen, A. V., Barfod, A. S., Marker, P. A. & Bauer-Gottwein, P., Jul 2019, In: *Frontiers in Earth Science*. 7, 181.

A discussion of 2D induced polarization effects in airborne electromagnetic and inversion with a robust 1D laterally constrained inversion scheme

Lin, C., Fiandaca, G., Auken, E., Couto, M. A. & Christiansen, A. V., 1 Mar 2019, In: *Geophysics*. 84, 2, p. E75-E88

An integrated modelling framework for nutrient management

Frederiksen, R. R., Vilhelmsen, T. N., Christensen, S., Christiansen, A. V., Hansen, B. & Auken, E., 31 Jan 2019.

AEMIP inversion for gold exploration using maximum phase angle parameterization - Case in Quadrilátero Ferrífero Area, Brazil

Couto, M. A., Fiandaca, G., Maurya, P. K., Auken, E., Christiansen, A. V. & Porsani, J. L., 1 Jan 2019.

A multipurpose platform towed TEM-system imagining the top 100m of the subsurface; surface, water and snow

Auken, E., Maurya, P., Christiansen, A. V., Lane, J., White, E. & Adams, R., 1 Jan 2019.

A Regional Scale Hydrostratigraphy Generated from Geophysical Data of Varying Age, Type, and Quality

Vilhelmsen, T., Marker, P. A., Foged, N., Wernberg, T., Auken, E., Christiansen, A. V., Bauer-Gottwein, P., Christensen, S. & Hoyer, A-S., Jan 2019, In: *Water Resources Management*. 33, 2, p. 539-553 15 p.

Development of a high-resolution 3D geological model for landfill leachate risk assessment

Høyer, A. S., Klint, K. E. S., Fiandaca, G., Maurya, P. K., Christiansen, A. V., Balbarini, N., Bjerg, P. L., Hansen, T. B. & Møller, I., Jan 2019, In: *Engineering Geology*. 249, p. 45-59 15 p.

A new towed ground-based TEM-system for 3D mapping of the top 50 meters of the subsurface

Maurya, P. K., Auken, E., Christiansen, A. V., Foged, N. & Eiskjær, T. T., 2019, *24th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers

High resolution 3D imaging of subsurface using towed transient electromagnetic system - TTEM: Case studies

Pedersen, J., Maurya, P., Christiansen, A. V. & Auken, E., 2019, *1st Indian Near Surface Geophysics Conference and Exhibition*. European Association of Geoscientists and Engineers, EAGE, p. 245-250 6 p. (1st Indian Near Surface Geophysics Conference and Exhibition).

Hydraulic permeability prediction from induced polarization data at field scale

Fiandaca, G., Maurya, P. K., Balbarini, N., Hördt, A., Møller, I., Rønde, V., Foged, N., Bjerg, P. L., Christiansen, A. V. & Auken, E., 2019, *24th European Meeting of Environmental and Engineering Geophysics*. Houten, The Netherlands: European Association of Geoscientists and Engineers, p. 471-475 5 p.

Overly steep decays in airborne TEM data and their link to chargeability: example from the Howards East District, NT, Australia

Steklova, K., Lawrie, K., Auken, E., Christiansen, A. V. & Fiandaca, G., 2019, In: *Exploration Geophysics*. 2019, 1

Don't touch this! Non-destructive investigations at Borgring

Kristiansen, S. M., Stott, D., Ljungberg, T. & Christiansen, A. V., 26 Nov 2018.

Contributions to uncertainty related to hydrostratigraphic modeling using multiple-point statistics

Barfod, A. A. S., Vilhelmsen, T. N., Jørgensen, F., Christiansen, A. V., Hyer, A. S., Straubhaar, J. & Møller, I., 24 Oct 2018, In: *Hydrology and Earth System Sciences*. 22, 10, p. 5485-5508 24 p.

Monitoring seasonal variations of leaching from a landfill through time-domain induced polarization

Bording, T. S., Fiandaca, G., Auken, E. & Christiansen, A. V., 3 Oct 2018.

1D AEMIP inversion using MPA reparameterization for HTEM survey at Lamego Gold Mine, Quadrilátero Ferrífero, MG, Brazil

Couto, M. A., Fiandaca, G., Auken, E., Christiansen, A. V. & Porsani, J. L., 9 Sept 2018, *2nd Conference on Geophysics for Mineral Exploration and Mining*. European Association of Geoscientists and Engineers, EAGE

A parallel computing thin-sheet inversion algorithm for airborne time-domain data utilising a variable overburden

Boesen, T., Auken, E., Christiansen, A. V., Fiandaca, G. & Schamper, C., 1 Sept 2018, In: *Geophysical Prospecting*. 66, 7, p. 1402-1414 13 p.

tMag - A new towed gradient magnetometer array for near surface geophysics

Kass, M. A., Auken, E. & Christiansen, A. V., Sept 2018. 4 p.

Field-scale comparison of frequency- and time-domain spectral induced polarization

Maurya, P. K., Fiandaca, G., Christiansen, A. V. & Auken, E., Aug 2018, In: *Geophysical Journal International*. 214, 2, p. 1441-1466 25 p.

Geophysics-Based Contaminant Mass Discharge Quantification Downgradient of a Landfill and a Former Pharmaceutical Factory

Balbarini, N., Rønde, V., Maurya, P., Fiandaca, G., Møller, I., Klint, K. E., Christiansen, A. V., Binning, P. J. & Bjerg, P. L., Aug 2018, In: *Water Resources Research*. 54, 8, p. 5436-5456 21 p.

Geophysics-supported contaminant mass discharge quantification downgradient of a landfill and a former pharmaceutical factory

Balbarini, N., Rønde, V., Maurya, P. K., Fiandaca, G., Balling, I. M., Klint, K. E., Christiansen, A. V., John Binning, P. & Løgstrup Bjerg, P., Aug 2018, In: *Water Resources Research*. 54, 8, p. 5436-5456 21 p.

Hydrostratigraphic modeling using multiple-point statistics and airborne transient electromagnetic methods

Barfod, A., Møller, I., Christiansen, A. V., Høyer, A-S., Hoffmann, J., Straubhaar, J. & Caers, J., 18 Jun 2018, In: *Hydrology and Earth System Sciences*. 22, 6, p. 3351-3373 23 p., 413.

An efficient 2D inversion scheme for airborne frequency domain data

Boesen, T. J., Auken, E., Christiansen, A. V., Fiandaca, G., Kirkegaard, C., Pfaffhuber, A. A. & Vöge, M., 30 May 2018, In: *Geophysics*. 83, 4, p. E189-E201

Subsurface imaging of water electrical conductivity, hydraulic permeability and lithology at contaminated sites by induced polarization

Maurya, P. K., Balbarini, N., Møller, I., Rønde, V., Christiansen, A. V., Bjerg, P. L., Auken, E. & Fiandaca, G., May 2018, In: *Geophysical Journal International*. 213, 2, p. 770-785 16 p.

Permeability Estimation Directly From Logging-While-Drilling Induced Polarization Data

Fiandaca, G., Maurya, P. K., Balbarini, N., Hördt, A., Christiansen, A. V., Foged, N., Bjerg, P. L. & Auken, E., 1 Apr 2018, In: *Water Resources Research*. 54, 4, p. 2851-2870 20 p.

Presenting a free, highly flexible inversion code

Christiansen, A. V. & Auken, E., 1 Jan 2018, *78th Society of Exploration Geophysicists International Exposition and Annual Meeting, SEG 2008*. Society of Exploration Geophysicists, p. 1228-1232 5 p.

Quasi 3-D inversion of electromagnetic data

Auken, E., Christiansen, A. V., Viezzoli, A. & Simon, B., 1 Jan 2018, *78th Society of Exploration Geophysicists International Exposition and Annual Meeting, SEG 2008*. Society of Exploration Geophysicists, p. 1193-1197 5 p.

Resolution of well-known resistivity equivalences by inclusion of time-domain induced polarization data

Madsen, L. M., Fiandaca, G., Christiansen, A. V. & Auken, E., Jan 2018, In: *Geophysics*. 83, 1, p. E47-E54

Creating 3D images of the subsurface from high resolution towed transient electromagnetic data

Auken, E., Christiansen, A. V., Pedersen, J. B., Foged, N. & Eiskjær, T., 2018, p. 4924-4927. 4 p.

Fortidens landskab set fra oven

Kristiansen, S. M., Christiansen, A. V., Odgaard, B. V., Stott, D., Henriksen, P. S. & Ljungberg, T., 2018, In: *Geoviden*. 2/2018, p. 6-10

Gentænk grundvandsmodellering - nye metoder til effektiv modeludvikling

Vilhelmsen, T. N., Christensen, S., Frederiksen, R. R., Auken, E. & Christiansen, A. V., 2018.

Geofysisk kortlægning af terrænnære strukturer og deres betydning for grundvandet

Vilhelmsen, T. N., Christiansen, A. V., Frederiksen, R. R., Christensen, S. & Auken, E., 2018.

Quantification of subsurface structural uncertainty in groundwater models using 3D geophysical data

Vilhelmsen, T. N., Auken, E., Christiansen, A. V., Barfod, A., Foged, N., Pedersen, J. B. & Maurya, P. K., 2018.

Was the 4th largest Danish Lake (Mossø) once much larger?

Kristiansen, S. M., Sørensen, N. E., Kroon, A., Lykke-Andersen, H., Christiansen, A. V. & Odgaard, B. V., 2018.

Geophysics-supported contaminant mass discharge quantification downgradient of a landfill and a former pharmaceutical factory

Auken, E., Boesen, T. J. & Christiansen, A. V., 18 Dec 2017, *Advances in Geophysics*. Nielsen, L. (ed.). 1.ed. ed. Academic Press, Vol. 58.

Time-domain induced polarization - an analysis of Cole-Cole parameter resolution and correlation using Markov Chain Monte Carlo inversion

Madsen, L. M., Fiandaca, G., Auken, E. & Christiansen, A. V., Dec 2017, In: *Geophysical Journal International*. 211, 3, p. 1341-1353 13 p.

Successful Sampling Strategy Advances Laboratory Studies of NMR Logging in Unconsolidated Aquifers

Behroozmand, A. A., Knight, R., Müller-Petke, M., Auken, E., Barfod, A. A. S., Ferré, T. P. A., Vilhelmsen, T. N., Johnson, C. D. & Christiansen, A. V., 16 Nov 2017, In: *Geophysical Research Letters*. 44, 21, p. 11021-11029 9 p.

Kortlægning af arkæologiske strukturer og paleo-landsskab med geofysik: Elektromagnetisk induktion og gradient magnetometer

Christiansen, A. V., Pedersen, J. B., Auken, E. & Kristiansen, S. M., 15 Nov 2017.

A direct comparison of EMI data and borehole data on a 1000 ha data set

Frederiksen, R. R., Christiansen, A. V., Christensen, S. & Rasmussen, K. R., 1 Oct 2017, In: *Geoderma*. 303, p. 188-195 8 p.

Efficient 2D Hybrid Inversion of Airborne Frequency Domain Data

Auken, E., Boesen, T. J., Christiansen, A. V., Fiandaca, G., Pfaffhuber, A. A. & Vöge, M., 1 Oct 2017, p. 1-5. 5 p.

Comparison of Near-surface Sensitivity Functions of Airborne and Ground-based EM Systems

Meldgaard Madsen, L., Lassen, K. V. T., Auken, E. & Christiansen, A. V., Sept 2017, p. 11-15. 5 p.

Groundbased TEM Survey in the Subsiding Mekong Delta

Bording, T. S., Christiansen, A. V., Auken, E., Gunnink, J. L. & Oude Essink, G. H. P., Sept 2017. 5 p.

Resolution of DC Resistivity-thickness Equivalences by Inclusion of Induced Polarization Data

Meldgaard Madsen, L., Fiandaca, G., Auken, E. & Christiansen, A. V., Sept 2017.

Mapping the fresh-saltwater interface in the coastal zone using high-resolution airborne electromagnetics

Pedersen, J. B., Schaars, F. W., Christiansen, A. V., Foged, N., Schamper, C., Rolf, H. & Auken, E., 1 Aug 2017, In: *First Break*. 35, 8, p. 57-61 5 p.

Anthropogenic wetlands due to over-irrigation of desert areas: A challenging hydrogeological investigation with extensive geophysical input from TEM and MRS measurements

Ali Behroozmand, A., Teatini, P., Bjergsted Pedersen, J., Auken, E., Tosatto, O. & Vest Christiansen, A., 10 Mar 2017, In: *Hydrology and Earth System Sciences*. 21, 3, p. 1527-1545 19 p.

Detailed landfill leachate plume mapping using 2D and 3D electrical resistivity tomography - with correlation to ionic strength measured in screens

Maurya, P. K., Rønde, V., Fiandaca, G., Balbarini, N., Auken, E., Bjerg, P. L. & Christiansen, A. V., Mar 2017, In: *Journal of Applied Geophysics*. 138, p. 1-8 8 p.

Comparison of frequency-domain and time-domain spectral induced polarization methods at field scale

Maurya, P. K., Fiandaca, G., Weigand, M., Kemna, A., Christiansen, A. V. & Auken, E., 1 Jan 2017, *23rd European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers

Efficient 2D hybrid inversion of airborne frequency domain data

Auken, E., Boesen, T., Christiansen, A. V. C., Fiandaca, G. F., Pfaffhuber, A. A. & Vöge, M. V., 1 Jan 2017, *2nd European Airborne Electromagnetics Conference 2017, Held at Near Surface Geoscience Conference and Exhibition 2017*. European Association of Geoscientists and Engineers, p. 1-5 5 p.

Two-dimensional induced polarization effects on airborne time domain electromagnetic data

Lin, C., Auken, E., Fiandaca, G. H. & Christiansen, A. V., 1 Jan 2017, *2nd European Airborne Electromagnetics Conference 2017, Held at Near Surface Geoscience Conference and Exhibition 2017*. European Association of Geoscientists and Engineers, p. 21-25 5 p.

A Review of Airborne Electromagnetic Methods With Focus on Geotechnical and Hydrological Applications From 2007 to 2017

Auken, E., Boesen, T. & Christiansen, A. V., 2017, *Advances in Geophysics*. Academic Press, Vol. 58. p. 47-93 47 p. (Advances in Geophysics).

Groundwater salinity influenced by Holocene seawater trapped in incised valleys in the Red River delta plain

Larsen, F., Long Vu Tran, Van Hoang, H., Luu Thi Tran, Christiansen, A. V. & Nhan Quy Pham, 2017, In: *Nature Geoscience*. 10, 5, p. 376-381 7 p.

Optimising geological mapping of glacial deposits using high-resolution electromagnetic induction data

Strøyberg Klint, K. E., Møller, I., Maurya, P. K. & Christiansen, A. V., 2017, In: *Geological Survey of Denmark and Greenland (GEUS) Bulletin*. 38, p. 9-12 4 p.

Improved Geoarchaeological Mapping with Electromagnetic Induction Instruments from Dedicated Processing and Inversion

Christiansen, A. V., Pedersen, J. B., Auken, E., Soe, N. E., Holst, M. K. & Kristiansen, S. M., Dec 2016, In: *Remote Sensing*. 8, 12, 15 p., 1022.

2D FEM Inversion With A Moving Footprint And A hybrid 1D And 2D Forward And Derivative Implementation

Boesen, T. J., Auken, E., Vöge, M., Kirkegaard, C., Andersen, K. R., Pfaffhuber, A. A. & Christiansen, A. V., Nov 2016.

Compiling a national resistivity atlas of Denmark based on airborne and ground-based transient electromagnetic data

Barfod, A., Møller, I. & Christiansen, A. V., 13 Sept 2016, In: *Journal of Applied Geophysics*. 134, p. 199-209 10 p.

Effektiv kortlægning af råstofforekomster

Pedersen, J., Christiansen, A. V., Auken, E. & Sten, M., Sept 2016, In: *Vand & Jord*. 2016, 3, p. 108-110 3 p.

Artificial neural networks for removal of couplings in airborne transient electromagnetic data

Andersen, K. K., Kirkegaard, C., Foged, N., Christiansen, A. V. & Auken, E., May 2016, In: *Geophysical Prospecting*. 64, 3, p. 741-752 12 p.

Effect of electrode shape on grounding resistances - Part 2: Experimental results and cryospheric monitoring

Tomašková, S., Ingeman-Nielsen, T., Christiansen, A. V., Brandt, I., Dahlin, T. & Elberling, B., Jan 2016, In: *Geophysics*. 81, 1, p. 169-182

30 years of geophysical data – one groundwater model

Vilhelmsen, T. N., Christiansen, A. V., Foged, N., Marker, P. A. & Auken, E., 2016.

3D resistivity and induced polarization for leachate plume identification at a challenging field site

Maurya, P. K., Christiansen, A. V., Fiandaca, G. & Auken, E., 2016, *22nd European Meeting of Environmental and Engineering Geophysics, Near Surface Geoscience 2016*. European Association of Geoscientists and Engineers, EAGE

Addressing Current Challenges on Groundwater Model Structure through Effective Use of Geophysical Data

Vilhelmsen, T. N., Marker, P. A., Foged, N., Christiansen, A. V., Auken, E. & Bauer-Gottwein, P., 2016.

Advances in spectral inversion of time-domain induced polarization

Fiandaca, G., Auken, E. & Christiansen, A. V., 2016. 5 p.

An analysis of Cole-Cole parameters for IP data using Markov chain Monte Carlo

Meldgaard Madsen, L., Kirkegaard, C., Fiandaca, G., Christiansen, A. V. & Auken, E., 2016. 4 p.

An analysis of spectral content of time-domain induced polarization data using Markov chain Monte Carlo

Meldgaard Madsen, L., Fiandaca, G., Christiansen, A. V. & Auken, E., 2016.

An automated method to build groundwater model hydrostratigraphy from airborne electromagnetic data and lithological borehole logs

Marker, P. A., Foged, N., He, X., Christiansen, A. V., Refsgaard, J. C., Auken, E. & Bauer-Gottwein, P., 2016, p. 1555-1598, (*Hydrology and Earth System Sciences*).

An efficient hybrid scheme for fast and accurate inversion of airborne transient electromagnetic data

Christiansen, A. V., Auken, E., Kirkegaard, C., Schamper, C. N. C. & Vignoli, G., 2016, In: *Exploration Geophysics*. 47, 4, p. 331-340 9 p.

Anthropogenic wetlands due to over-irrigation of desert areas; A challenging hydrogeological investigation with extensive geophysical input from TEM and MRS measurements

Behroozmand, A. A., Teatini, P., Pedersen, J. B., Auken, E., Tosatto, O. & Christiansen, A. V., 2016, *Symposium on the Application of Geophysics to Engineering and Environmental Problems 2016*. Society of Exploration Geophysicists and Environment and Engineering Geophysical Society, Vol. 2016. p. 82-86

Effective and accurate processing and inversion of airborne electromagnetic data

Auken, E., Christiansen, A. V., Andersen, K. R. & Fiandaca, G., 2016. 3 p.

Is the IP response related to geology or contaminants in a leachate plume at the Grindsted Landfill, Denmark?

Møller, I., Maurya, P. K., Balbarini, N., Fiandaca, G., Christiansen, A. V., Holm, H., Rønde, V., Klint, K. E., Auken, E. & Bjerg, P. L., 2016. 3 p.

Kortlægning af sandlinser i moræneler med geofysik - kan man det?

Edsen, A., Larsen, T. H., Tuxen, N., Kern-Jespersen, H., Hamburger, N., Looms, M. C., Nielsen, L., Christiansen, A. V., Fiandaca, G., Bording, T. S., Maurya, P. K., Auken, E., Nørmark, E., Strøyberg Klint, K. E., Møller, I. & Vignoli, G., 2016, In: *Miljø og ressourcer*. 2016/4, p. 11-21 11 p., 4.

Lithological characterization of a contaminated site using Direct current resistivity and time domain Induced Polarization

Maurya, P. K., Fiandaca, G., Auken, E. & Christiansen, A. V., 2016. 3 p.

Mapping possible flowpaths of contaminants through surface and cross-borehole spectral time-domain induced polarization

Bording, T. S., Fiandaca, G., Maurya, P. K., Auken, E. & Christiansen, A. V., 2016. 4 p.

Mapping the lithotypes using the in-situ measurement of time domain induced polarization: EI-log

Auken, E., Fiandaca, G., Christiansen, A. V., Maurya, P. K. & Holm, H., 2016. 3 p.

Towards 3D inversions with full system modelling

Andersen, K. R., Auken, E. & Christiansen, A. V., 2016, *22nd European Meeting of Environmental and Engineering Geophysics, Near Surface Geoscience 2016*. European Association of Geoscientists and Engineers, EAGE

Mapping localised freshwater anomalies in the brackish paleo-lake sediments of the Machile-Zambezi Basin with transient electromagnetic sounding, geoelectrical imaging and induced polarisation

Chongo, M., Christiansen, A. V., Fiandaca, G., Nyambe, I. A., Larsen, F. & Bauer-Gottwein, P., 1 Dec 2015, In: *Journal of Applied Geophysics*. 123, p. 81-92 12 p.

Direct current (DC) resistivity and induced polarization (IP) monitoring of active layer dynamics at high temporal resolution

Doetsch, J., Ingeman-Nielsen, T., Christiansen, A. V., Fiandaca, G., Auken, E. & Elberling, B., 1 Nov 2015, In: *Cold Regions Science and Technology*. 119, p. 16-28 13 p.

Performance evaluation of groundwater model hydrostratigraphy from airborne electromagnetic data and lithological borehole logs

Marker, P. A., Foged, N., He, X., Christiansen, A. V., Refsgaard, J. C., Auken, E. & Bauer-Gottwein, P., 15 Sept 2015, In: *Hydrology and Earth System Sciences*. 19, 9, p. 3875-3890 16 p.

Airborne and ground-based transient electromagnetic mapping of groundwater salinity in the Machile-Zambezi Basin, southwestern Zambia

Chongo, M., Christiansen, A. V., Tembo, A., Banda, K. E., Nyambe, I. A., Larsen, F. & Bauer-Gottwein, P., 1 Aug 2015, In: *Near Surface Geophysics*. 13, 4, p. 383-395 13 p.

Three-dimensional geological modelling of AEM resistivity data - A comparison of three methods

Høyer, A. S., Jørgensen, F. V., Foged, N., He, X. & Christiansen, A. V., 1 Apr 2015, In: *Journal of Applied Geophysics*. 115, p. 65-78 14 p.

Field-scale time-domain spectral induced polarization monitoring of geochemical changes induced by injected CO₂ in a shallow aquifer

Doetsch, J., Fiandaca, G., Auken, E., Christiansen, A. V., Cahill, A. G. & Jakobsen, R., 1 Mar 2015, In: *Geophysics*. 80, 2, p. WA113-WA126 14 p.

Sharp spatially constrained inversion with applications to transient electromagnetic data

Vignoli, G., Fiandaca, G., Christiansen, A. V., Kirkegaard, C. & Auken, E., 1 Jan 2015, In: *Geophysical Prospecting*. 63, 1, p. 243-255 13 p.

An overview of a highly versatile forward and stable inverse algorithm for airborne, ground-based and borehole electromagnetic and electric data

Auken, E., Christiansen, A. V., Kirkegaard, C., Fiandaca, G., Schamper, C., Behroozmand, A. A., Binley, A., Nielsen, E., Effersø, F., Christensen, N. B., Sørensen, K., Foged, N. & Vignoli, G., 2015, In: *Exploration Geophysics*. 46, 3, p. 223-235 13 p.

A system response convolution routine for improved near surface sensitivity in SkyTEM data

Andersen, K. R., Nyboe, N. S., Kirkegaard, C., Auken, E. & Christiansen, A. V., 2015, *1st European Airborne Electromagnetics Conference: Held at Near Surface Geoscience 2015*. European Association of Geoscientists and Engineers, p. 71-75 5 p.

A System Response Convolution Routine for Improved Near Surface Sensitivity in SkyTEM Data

Andersen, K. R., Nyboe, N. S., Kirkegaard, C., Auken, E. & Christiansen, A. V., 2015. 5 p.

Depth of investigation for multi-parameters inversions

Fiandaca, G., Christiansen, A. V. & Auken, E., 2015, *21st European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, p. 666-670 5 p.

Detailed leachate mapping using a 441 electrode full 3D setup using an extendable fishbone layout

Christiansen, A. V., Maurya, P., Fiandaca, G. & Auken, E., 2015, *Near Surface Geoscience 2015 - 21st European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, p. 641-645 5 p.

Detailed mapping of a leachate plume from a landfill using full-decay time-domain DC-IP

Maurya, P. K., Christiansen, A. V., Fiandaca, G., Lajaunie, M. & Auken, E., 2015, *Near Surface Geoscience 2015 - 21st European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, p. 591-595 5 p.

Direct current (DC) resistivity and induced polarization (IP) monitoring of active layer dynamics at high temporal resol

Doetsch, J., Fiandaca, G., Ingeman-Nielsen, T., Fiandaca, G., Christiansen, A. V., Auken, E. & Elberling, B., 2015, *Near Surface Geoscience 2015 - 21st European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, p. 291-295 5 p.

Geostatistical analysis of the relationship between airborne electromagnetic data and borehole lithological data

Barfod, A., Møller, I. & Christiansen, A. V., 2015. 4 p.

Mapping soil heterogeneity using spatially constrained inversion of electromagnetic induction data

Pedersen, J. B., Auken, E., Christiansen, A. V. & Kristiansen, S. M., 2015, *1st Conference on Proximal Sensing Supporting Precision Agriculture - Held at Near Surface Geoscience 2015*. European Association of Geoscientists and Engineers, p. 31-35 5 p.

Quasi-3D inversion of full size AEM datasets

Auken, E., Fiandaca, G., Kirkegaard, C. & Christiansen, A. V., 2015. 3 p.

Rapid inversion of large airborne AEM data datasets utilizing massively parallel co-processors

Kirkegaard, C., Andersen, K. R., Christiansen, A. V., Auken, E. & Boesen, T., 2015, *1st European Airborne Electromagnetics Conference - Held at Near Surface Geoscience 2015*. European Association of Geoscientists and Engineers, p. 36-40 5 p.

Sharp spatially-decoupled inversion of airborne electromagnetic data for improved model integration

Fiandaca, G., Kirkegaard, C., Foged, N., Christiansen, A. V. & Auken, E., 2015, *1st European Airborne Electromagnetics Conference - Held at Near Surface Geoscience 2015*. European Association of Geoscientists and Engineers, p. 118-122 5 p.

Utilizing massively parallel co-processors in the AarhusInv 1D forward and inverse AEM modelling code

Kirkegaard, C., Andersen, K. R., Boesen, T. J., Christiansen, A. V., Auken, E. & Fiandaca, G., 2015. 3 p.

Large-scale 3-D modeling by integration of resistivity models and borehole data through inversion

Foged, N., Marker, P. A., Christiansen, A. V., Bauer-Gottwein, P., Jørgensen, F., Høyer, A. S. & Auken, E., 4 Nov 2014, In: *Hydrology and Earth System Sciences*. 18, 11, p. 4349-4362 14 p.

An analysis of the lithology to resistivity relationships using airborne EM and boreholes

Barfod, A. A. S., Christiansen, A. V. & Møller, I., 27 Apr 2014. 1 p.

A concept for calculating accumulated clay thickness from borehole lithological logs and resistivity models for nitrate vulnerability assessment

Christiansen, A. V., Foged, N. & Auken, E., 1 Jan 2014, In: *Journal of Applied Geophysics*. 108, p. 69-77 9 p.

Automatic generation of groundwater model hydrostratigraphy from AEM resistivity and boreholes

Marker, P. A., Foged, N., Christiansen, A. V., Auken, E. & Bauer-Gottwein, P., 1 Jan 2014, *Near Surface Geoscience 2014 - 20th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers

Inverting for lithology using resistivity models and boreholes

Christiansen, A. V., Foged, N. & Auken, E., 1 Jan 2014, *Near Surface Geoscience 2014 - 20th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers

Iterative modelling of AEM data based on a priori information from seismic and borehole data

Høyer, A. S., Jørgensen, F., Lykke-Andersen, H. & Christiansen, A. V., 1 Jan 2014, In: *Near Surface Geophysics*. 12, 5, p. 635-650 16 p.

Geofysikken i Naturstyrelsens grundvandskortlægning

Mose Jensen, M-B., Auken, E. & Vest Christiansen, A., 2014, In: *Vand & Jord*. 21, 2, p. 48-52 4 p.

Imaging subsurface migration of dissolved CO₂ in a shallow aquifer using 3-D time-lapse electrical resistivity tomography

Auken, E., Doetsch, J., Fiandaca, G., Christiansen, A. V., Gazoty, A., Cahill, A. G. & Jakobsen, R., 2014, In: *Journal of Applied Geophysics*. 101, p. 31-41 11 p.

Incorporation of Magnetic Resonance Sounding data into groundwater model through coupled and joint inversion

Vilhelmsen, T. N., Behroozmand, A. A., Christensen, S., Auken, E. & Christiansen, A. V., 2014.

3-D time-lapse electrical resistivity monitoring of injected CO₂ in a shallow aquifer

Doetsch, J. A. J. A., Auken, E., Christiansen, A. V. C. A. V. C. & Fiandaca, G. G., 1 Jan 2013, *19th European Meeting of Environmental and Engineering Geophysics 2013, Near Surface Geoscience 2013*. Bochum: European Association of Geoscientists and Engineers, p. 304-308 5 p.

Airborne Transient EM Methods and Their Applications for Coastal Groundwater Investigations

Schamper, C., Pedersen, J. B., Auken, E., Christiansen, A. V., Vittecoq, B., Deparis, J., Jaouen, T., Lacquement, F., Nehlig, P., Perrin, J. & Reninger, P. A., 1 Jan 2013, *Coastal Research Library*. Springer, p. 121-153 33 p. (Coastal Research Library, Vol. 7).

Sharp spatially constrained inversion

Vignoli, G. G., Fiandaca, G. G., Christiansen, A. V. C. A. V. C., Kirkegaard, C. C. & Auken, E., 1 Jan 2013, *19th European Meeting of Environmental and Engineering Geophysics 2013, Near Surface Geoscience 2013*. Bochum: European Association of Geoscientists and Engineers, p. 420-424 5 p.

Test-site calibration and validation of airborne and ground-based TEM systems

Foged, N., Auken, E., Christiansen, A. V. & Sørensen, K. I., 1 Jan 2013, In: *Geophysics*. 78, 2, p. E95-E106 12 p.

Voxel inversion of airborne EM data

Fiandaca, G. G., Auken, E., Christiansen, A. V. C. A. V. C. & Kirkegaard, C. C., 1 Jan 2013, *19th European Meeting of Environmental and Engineering Geophysics 2013, Near Surface Geoscience 2013*. Bochum: European Association of Geoscientists and Engineers, p. 415-19 5 p.

A comprehensive study of the parameter determination in a joint MRS and TEM data analysis scheme

Behroozmand, A., Dalgaard, E. B., Christiansen, A. V. & Auken, E., 2013, In: *Near Surface Geophysics*. 11, 5, p. 557-567 11 p.

A method for cognitive 3D geological voxel modelling of AEM data

Jørgensen, F., Møller, R. R., Nebel, L., Jensen, N., Christiansen, A. V. & Sandersen, P., 2013, In: Bulletin of Engineering Geology and the Environment. 72, 3-4, p. 421-432 12 p.

Data repeatability and acquisition techniques for Time-Domain Spectral Induced Polarization

Legaz, A., Fiandaca, G., Pedersen, J. B., Auken, E. & Christiansen, A. V., 2013, In: Near Surface Geophysics. 11, 4, p. 391-406 16 p.

Mapping and modelling of complex geological large-scale structures ("KOMPLEKS")

Høyer, A-S., Jørgensen, F., Lykke-Andersen, H., Møller, I-L., Christiansen, A. V. & Piotrowski, J. A., 2013. 1 p.

Mini-SkyTEM - et nyt kortlægningsværktøj

Pedersen, J. B., Flemming, E., Flemming, J., Auken, E., Schamper, C. N. C. & Christiansen, A. V., 2013, In: Vand & Jord. 20, 3, p. 118-121 4 p.

Processing and inversion of commercial helicopter time-domain electromagnetic data for environmental assessments and geologic and hydrologic mapping

J.E., P., Auken, E., Schamper, C. N. C., Christiansen, A. V., Kalscheuer, T. & Green, A. G., 2013, In: Geophysics. 78, p. E149-E159 10 p.

Resolving spectral information from time domain induced polarization data through 2-D inversion

Fiandaca, G., Ramm, J., Binley, A., Gazoty, A., Christiansen, A. V. & Auken, E., 2013, In: Geophysical Journal International. 192, 2, p. 631-646 16 p.

Origin and extent of fresh groundwater, salty paleowaters and recent saltwater intrusions in Red River flood plain aquifers, Vietnam

Tran, L. T., Larsen, F., Pham, N. Q., Christiansen, A. V., Tran, N., Vu, H. V., Tran, L. V., Hoang, H. V. & Hinsby, K., 1 Nov 2012, In: Hydrogeology Journal. 20, 7, p. 1295-1313 19 p.

On the value of including x-component data in 1D modeling of electromagnetic data from helicopterborne time domain systems in horizontally layered environments

Kirkegaard, C., Foged, N., Auken, E., Christiansen, A. V. & Sørensen, K., 1 Sept 2012, In: Journal of Applied Geophysics. 84, p. 61-69 9 p.

A comprehensive study of the parameter determination in a joint MRS and TEM data analysis scheme

Behroozmand, A., Dalgaard, E. B., Christiansen, A. V. & Auken, E., Sept 2012. 1 p.

Improvement in MRS parameter estimation by joint and laterally constrained inversion of MRS and TEM data

Behroozmand, A. A., Auken, E., Fiandaca, G. & Christiansen, A. V., 1 Jul 2012, In: Geophysics. 77, 4, p. WB191-WB200 10 p.

Application of time domain induced polarization to the mapping of lithotypes in a landfill site

Legaz, A., Fiandaca, G., Pedersen, J. B., Auken, E., Christiansen, A. V. & Pedersen, J. K., 29 Jun 2012, In: L W - Landwirtschaftliches Wochenblatt Hessen, Rheinland-Pfalz. Hessenbauer (Ausgabe Nord). 77, 3, p. 1793-1804 10 p.

Time Domain Induced Polarization: Full-decay forward modeling and 1D laterally constrained inversion of Cole-Cole parameters

Fiandaca, G., Auken, E., Christiansen, A. V. & Legaz, A., May 2012, In: Geophysics. 77, 3, p. E213-E225 13 p.

Application of time domain induced polarization to the mapping of lithotypes in a landfill site

Gazoty, A., Fiandaca, G., Pedersen, J., Auken, E., Christiansen, A. V. & Pedersen, J. K., 1 Jan 2012, In: Hydrology and Earth System Sciences. 16, 6, p. 1793-1804 12 p.

A global measure for depth of investigation

Christiansen, A. V. & Auken, E., 2012, In: Geophysics. 77, 4, p. WB171-WB177 7 p.

Efficient full decay inversion of MRS data with a stretched-exponential approximation of the T2* distribution

Behroozmand, A., Auken, E., Fiandaca, G., Christiansen, A. V. & Christensen, N. B., 2012, In: Geophysical Journal International. 190, 2, p. 900-912 13 p.

Full Waveform Modelling of Time Domain Induced Polarization

Fiandaca, G., Auken, E., Christiansen, A. V. & Legaz, A., 2012. 6 p.

Improvement in MRS parameter estimation - a closer step toward hydrogeological interpretations

Behroozmand, A., Auken, E., Fiandaca, G. & Christiansen, A. V., 2012.

Layered and Laterally Constrained 2D Inversion of Time Domain Induced Polarization Data

Fiandaca, G., Ramm, J., Auken, E., Binley, A. & Christiansen, A. V., 2012. 5 p.

Mapping of landfills using time-domain spectral induced polarization data: The Eskelund case study

Gazoty, A., Fiandaca, G., Pedersen, J. B., Auken, E. & Christiansen, A. V., 2012, In: Near Surface Geophysics. 10, 6, p. 575-586 17 p.

MRS parameter estimation - improvement by joint and laterally constrained inversion of MRS and TEM data

Behroozmand, A., Auken, E., Fiandaca, G. & Christiansen, A. V., 2012.

Mapping the Eskelund landfill using time-domain spectral induced polarization data

Legaz, A., Fiandaca, G., Pedersen, J. B., Auken, E. & Christiansen, A. V., 1 Jun 2011, In: CLIWAT newsletter. Issue 5, p. 5-6 2 p.

Employing airborne electromagnetics for spatial and temporal hydrogeophysical monitoring: A view from opposite ends of the globe

Viezzoli, A., Munday, T. & Christiansen, A. V., 1 Jan 2011, *Proceedings of the Symposium on the Application of Geophysics to Engineering and Environmental Problems, SAGEEP*. p. 270-280 11 p.

Importance of transmitter waveform and receiver transfer function modelling in time domain induced polarization

Fiandaca, G., Auken, E., Christiansen, A. V. & Gazoty, A., 1 Jan 2011.

Hybrid Inversion of Airborne TEM Data – Mixed Precision Responses for Tunable Performance and Accuracy

Kirkegaard, C., Christiansen, A. V. & Auken, E., 2011. 4 p.

Joint inversion of MRS and TEM data

Behroozmand, A., Auken, E., Fiandaca, G. & Christiansen, A. V., 2011.

A global measure for depth of investigation

Christiansen, A. V. & Auken, E., 6 Sept 2010, *A Global Measure for Depth of Investigation*. Zürich: EAGE Near Surface Division, 5 p.

1D Laterally constrained inversion of towedarray Capacitive Resistivity Imaging data

Kuras, O., Christiansen, A. V., Beamish, D. & Ogilvy, R. D., 1 Jan 2010.

A global measure for depth of investigation in EM and DC modeling

Christiansen, A. V. & Auken, E., 2010, *A global measure for depth of investigation in EM and DC modeling*. Sydney: ASEG, 4 p.

Evaluation of landfill disposal boundaries by means of induced polarization and electrical resistivity imaging

Legaz, A., Christiansen, A. V., Auken, E., Pedersen, J. & Fiandaca, G., 2010, *Evaluation of landfill disposal boundaries by means of induced polarization and electrical resistivity imaging*. Copenhagen: Nordrocs

Increased accuracy for quantitative modelling of Airborne EM data through detailed description of system transfer function and spatially constrained inversion

Viezzoli, A., Christiansen, A. V. & Auken, E., 2010, In: Australian Society of Exploration Geophysicists (ASEG). Extended Abstracts. 1, p. 1-3 3 p.

Validating SkyTEM Data Against Ground-based TEM Data at the Danish National Test Site by Upward Continuation

Foged, N., Christiansen, A. V. & Auken, E., 2010. 5 p.

Integrated management and utilization of hydrogeophysical data on a national scale

Møller, I., Søndergaard, V. H., Jørgensen, F., Auken, E. & Christiansen, A. V., 1 Oct 2009, In: Near Surface Geophysics. 7, 5-6, p. 647-659 13 p.

Evaluation of landfill disposal boundary by means of induced polarization and electrical resistivity imaging

Legaz, A., Christiansen, A. V., Auken, E. & Viezzoli, A., 1 Jan 2009, *Near Surface 2009 - 15th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, EAGE, (Near Surface 2009 - 15th European Meeting of Environmental and Engineering Geophysics).

Laterally constrained inversion of TEMPEST data from eyre Peninsula Area, South Australia

Auken, E., Christiansen, A. V. C., Viezzoli, A. V., Fitzpatrick, A. F. & Munday, T. M., 1 Jan 2009, *Near Surface 2009 - 15th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, EAGE, (Near Surface 2009 - 15th European Meeting of Environmental and Engineering Geophysics).

An integrated processing scheme for high-resolution airborne electromagnetic surveys, the SkyTEM system

Auken, E., Christiansen, A. V., Westergaard, J., Kirkegaard, C., Foged, N. & Viezzoli, A., 2009, In: Exploration Geophysics. 40, 2, p. 184-192 9 p.

A Single Software For Processing, Inversion, And Presentation Of Aem Data Of Different Systems: The Aarhus Workbench

Auken, E., Christiansen, A. V. & Viezzoli, A., 2009, In: Australian Society of Exploration Geophysicists (ASEG). Extended Abstracts. 1, 6 p.

Constrained Inversion Of Aem Data For Mapping Of Bathymetry, Seabed Sediments And Aquifers

Viezzoli, A., Auken, E. & Christiansen, A. V., 2009.

Increased accuracy in mineral and hydrogeophysical modelling of HTEM data via detailed description of system transfer function and constrained inversion

Viezzoli, A., Christiansen, A. V. & Auken, E., 2009. 4 p.

Large scale mapping of groundwater resources using a highly integrated set of tools

Søndergaard, V., Auken, E. & Christiansen, A. V., 2009.

Laterally constrained inversion of helicopter-borne frequency-domain electromagnetic data

Siemon, B., Auken, E. & Christiansen, A. V., 2009, In: Journal of Applied Geophysics. 67, 3, p. 259-268 10 p.

Accuracy of Airborne TEM Data for Quasi-Layered Modeling

Auken, E., Christiansen, A. V., Foged, N. & Sørensen, K. I., 2008, *AEM2008, 5th International Conference on Airborne Electromagnetics, Finland*.

A resolution study of buried valleys using laterally constrained inversion of TEM data

Auken, E., Christiansen, A. V., Jacobsen, L. & Sørensen, K. I., 2008, In: Journal of Applied Geophysics. 2008, 65, p. 10-20 11 p.

Averaging and lateral resolution for continuous TEM methods

Foged, N., Auken, E. & Christiansen, A. V., 2008, *14th European Meeting of Environmental and Engineering Geophysics, Kraków, Poland*.

Bathymetry, Seabed Sediments and Aquifers, Imaging with Constrained Inversion of Airborne EM Data

Viezzoli, A., Christiansen, A. V. & Foged, N., 2008, *14th European Meeting of Environmental and Engineering Geophysics, Kraków, Poland*.

Experience from Two Resistivity Inversion Techniques Applied in Three Cases of Geotechnical Site Investigation

Wisén, R., Christiansen, A. V., Dahlin, T. & Auken, E., 2008, In: *Journal of Geotechnical and Geoenvironmental Engineering*. 134, 12, p. 1730-1742 13 p.

Presenting a free, highly flexible inversion code

Christiansen, A. V. & Auken, E., 2008, *SEG, Las Vegas 2008*.

Preserving horizontality using topography-corrected laterally constrained inversion

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2008.

Quasi 3-D inversion of electromagnetic data

Auken, E., Christiansen, A. V., Viezzoli, A. & Simon, B., 2008, *SEG, Las Vegas 2008*.

Quasi-3D modeling of airborne TEM data by Spatially Constrained Inversion

Viezzoli, A., Christiansen, A. V., Auken, E. & Sørensen, K. I., 2008, In: *Geophysics*. 73, 3, p. F105-F113 9 p.

Spatially Constrained Inversion for Quasi 3D Modeling of AEM Data

Viezzoli, A., Christiansen, A. V. & Auken, E., 2008, *EEGS' Annual Meeting, Philadelphia, Pennsylvania*.

Spatially Constrained Inversion Of Hem Data: The Banda Aceh Case Study

Viezzoli, A., Simon, B., Christiansen, A. V. & Auken, E., 2008, *AEM2008, 5th International Conference on Airborne Electromagnetics, Finland*.

Delaunay triangulation-based Spatially Constrained Inversion for quasi 3D modelling of airborne TEM data

Christiansen, A. V., Viezzoli, A., Auken, E. & Sørensen, K. I., 2008.

Enhancing the resolution of the subsurface by joint inversion of x- and z-component SkyTEM data

Auken, E., Foged, N., Christiansen, A. V. & Sørensen, K. I., 2008.

Processing and inversion of SkyTEM data for high resolution hydrogeophysical surveys

Auken, E., Westergaard, J., Christiansen, A. V. & Sørensen, K. I., 2008.

SPATIALLY CONSTRAINED INVERSION FOR QUASI 3-D MODELLING OF AEM DATA

Auken, E., Viezzoli, A., Christiansen, A. V. & Sørensen, K. I., 2008.

Delaunay triangulation-based spatially constrained inversion for quasi 3D modeling of airborne TEM data

Viezzoli, A., Christiansen, A. V. & Auken, E., 1 Jan 2007, *Near Surface 2007 - 13th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, EAGE, (Near Surface 2007 - 13th European Meeting of Environmental and Engineering Geophysics).

Preserving horizontality using topography corrected laterally constrained inversion

Christiansen, A. V., Auken, E., Andersen, H. & Sørensen, K., 1 Jan 2007, *Near Surface 2007 - 13th European Meeting of Environmental and Engineering Geophysics*. European Association of Geoscientists and Engineers, EAGE, (Near Surface 2007 - 13th European Meeting of Environmental and Engineering Geophysics).

From resistivity to clay thickness - An inversion approach

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2007, *Ikke angivet*. EEGS

Mutually and laterally constrained inversion of CVES and TEM data: a case study

Christiansen, A. V., Auken, E., Foged, N. & Sørensen, K. I., 2007, In: *Near Surface Geophysics*. p. 115-123 8 p.

Geofysisk tolkning af SkyTEM målinger ved Give med anvendelse af nyudviklet tolkningsmetode til fladedækkende data

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2006, Århus: Geofysisk afdeling, Geologisk Institut, Aarhus Universitet. 13 p.

Geofysisk tolkning af SkyTEM målinger ved Stevnstrup med anvendelse af nyudviklet tolkningsmetode til fladedækkende data

Christiansen, A. V. & Westergaard, J., 2006, Århus: Geologisk Institut, Aarhus Universitet. 14 p.

Mapping aquifer vulnerability

Sørensen, K. I., Christiansen, A. V. & Auken, E., 2006, *Ikke angivet*. EEGS

Processing, inversion, and management of SkyTEM data for groundwater investigations

Auken, E., Foged, N., Westergaard, J., Christiansen, A. V. & Sørensen, K. I., 2006, *Ikke angivet*. BGR, Hannover

Spatially Constrained Inversion of Area Covering Datasets

Christiansen, A. V., Auken, E., Sørensen, K. I. & Foged, N., 2006, *Ikke angivet*. EAGE Near Surface Division

Structural mapping of large aquifer structures

Auken, E., Sørensen, K. I. & Christiansen, A. V., 2006, *Ikke angivet*. EEGS

Structural mapping of large watersheds

Auken, E., Christiansen, A. V. & Sørensen, K. I., 2006, *Ikke angivet*. XVI International Conference on Computational Methods in Water Resources

The challenges in developing airborne transient systems for groundwater explorations

Sørensen, K. I., Foged, N., Westergaard, J., Christiansen, A. V. & Auken, E., 2006, *Ikke angivet*. BGR, Hannover

The transient electromagnetic method

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2006, *Groundwater Geophysics. A tool for hydrogeology*. p. 179-224 45 p.

Why not x in airborne TEM

Auken, E., Christiansen, A. V. & Sørensen, K. I., 2006, *Ikke angivet*. EAGE Near Surface Division

First data of a new radiomagnetotelluric (RMT) device and a new inversion approach

Gronefeld, G. V., Tezkan, B., Auken, E. & Christiansen, A. V., 2005. 1 p.

From resistivity to geophysical clay thickness: Workshop. Hydrogeophysics - A tool for sustainable use of groundwater resources

Christiansen, A. V., Auken, E., Sørensen, K. I., Jørgensen, F. & Johnsen, R., 2005. 1 p.

Fysisk lertykkelse estimeret ved brug af geostatistiske metoder - præsentation af konceptet og en kortlægning

Christiansen, A. V., Auken, E. & Jørgensen, F., 2005, *ATV - Jord og grundvand*. p. 1-7

GeoStatistical Estimation of Structural Vulnerability

Christiansen, A. V., Auken, E., Sørensen, K. I., Jørgensen, F. & Johnsen, R., 2005. 1 p.

GeoStatistical Estimation of Structural Vulnerability - Modellen

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2005.

GeoStatistical Estimation of Structural Vulnerability - SSV oversigt

Christiansen, A. V., Auken, E. & Sørensen, K. I., 2005.

Large scale mapping of aquifer covering layers using geoelectrical methods

Sørensen, K. I., Auken, E. & Christiansen, A. V., 2005.

Laterally and Mutually Constrained Inversion of Surface Wave Seismic Data and Resistivity Data

Wisén, R. & Christiansen, A. V., 2005, In: Journal of Environmental & Engineering Geophysics. 10, p. 251-262

Laterally Constrained 1D-Inversion of 3D TEM Data

Christiansen, A. V., Auken, E. & Jacobsen, L., 2005, *Proceedings of SAGEEP 2005, Atlanta, EEGS.*

Piecewise 1D laterally constrained inversion of resistivity data.

Auken, E., Christiansen, A. V., Jacobsen, B. H., Foged, N. & Sørensen, K. I., 2005, In: Geophysical Prospecting. 53, p. 497-506 10 p.

Structural aquifer mapping using transient electromagnetic methods: (1) introduction to transient EM - basics physics, sources of error and interpretation, (2) groundbased TEM and SkyTEM: Workshop. Hydrogeophysics - A tool for sustainable use of groundwater resources

Sørensen, K. I., Auken, E. & Christiansen, A. V., 2005.

Optimizing a layered and laterally constrained 2D inversion of resistivity data using Broyden's update and ID derivatives

Christiansen, A. V. & Auken, E., 1 Jan 2004, In: Journal of Applied Geophysics. 56, 4, p. 247-261 15 p.

Integrated Inversion of CVES and TEM Data Using Lateral Constraints

Christiansen, A. V., Foged, N., Auken, E. & Sørensen, K. I., 2004, Utrecht, The Netherlands: EAGE-NS, p. 0-0.

Integreret analyse af geofysiske data - morgendagens geofysik

Christiansen, A. V., 2004, In: Geologisk Tidsskrift. 2004-2, p. 0-0

Interpretation of a Hydrogeophysical Survey - Data from the Highresolution SkyTEM System

Sørensen, K. I., Sørensen, B., Christiansen, A. V. & Auken, E., 2004, Utrecht, The Netherlands: EAGE-NS, p. 0-0.

Kombineret LCI-tolkning af MEP og TEM data - Koncept og tolkningseksempler: GeoFysikSamarbejdet

Foged, N., Christiansen, A. V., Auken, E. & Sørensen, K. I., 2004, Geologisk Institut, Aarhus Universitet. 20 p.

Laterally Constrained 1D-Inversion of 3D TEM Data

Auken, E., Christiansen, A. V., Jacobsen, L. & Sørensen, K. I., 2004, Utrecht, The Netherlands, p. 0-0.

Lateral sambunden tolkning af transiente elektromagnetiske data: GeoFysikSamarbejdet

Jacobsen, L., Christiansen, A. V., Auken, E. & Sørensen, K. I., 2004, Geologisk Institut, Aarhus Universitet. 22 p.

Layered and laterally constrained 2D inversion of resistivity data

Auken, E. & Christiansen, A. V., 2004, In: Geophysics. p. 752-761

Optimizing a layered and laterally constrained 2D inversion of resistivity data using Broyden's update and 1D derivatives
Christiansen, A. V. & Auken, E., 2004, In: Journal of Applied Geophysics. 56, p. 247-261 15 p.

Processering og 1D-tolkning af MEP-data målt med gradient-array-konfigurationer: GeoFysikSamarbejdet
Foged, N., Christiansen, A. V., Auken, E. & Sørensen, K. I., 2004, Geologisk Institut, Aarhus Universitet. 11 p.

Processering og 1D-tolkning af MEP-data målt med gradient-array-konfigurationer: GeoFysikSamarbejdet
Foged, N., Christiansen, A. V., Auken, E. & Sørensen, K. I., 2004, Geologisk Institut, Aarhus Universitet. 11 p.

A quantitative appraisal of airborne and ground-based transient electromagnetic (TEM) measurements in Denmark
Christiansen, A. V. & Christensen, N. B., 2003, In: Geophysics. 68, p. 523-534 12 p.

2-D Laterally Constrained inversion (LCI) of resistivity data
Christiansen, A. V., Auken, E., Sørensen, K. I. & Smith, J. T., 2002, p. 0-0, 4 p.

2-D Laterally Constrained Inversion (LCI) of resistivity data
Christiansen, A. V., Auken, E., Sørensen, K. I. & Smith, T., 2002, p. 0-0, 4 p.

Application and analysis of airborne transient electromagnetic methods in Denmark - The role of On-time data
Christiansen, A. V. & Christensen, N. B., 2002, p. 0-0, 37 p.

A quantitative appraisal of airborne and ground-based transient electromagnetic (TEM) measurements in Denmark
Christiansen, A. V. & Christensen, N. B., 2002, In: Geophysics (online). p. 0-0

En sammenligning af flybåren og jordbaseret TEM
Christiansen, A. V. & Christensen, N. B., 2001, p. 471-480, 10 p.

Quantitative interpretation and analysis of airborne transient electromagnetic data in Denmark
Christiansen, A. V. & Christensen, N. B., 2001, p. 0-0, 2 p.

Rapport til Ringkjøbing Amt om tolkning af flybårne TEM data fra Ringkjøbing Amt
Christiansen, A. V., 2001, Geologisk Institut, Aarhus Universitet.

Short note on the inversion of airborne TEM data from Albuquerque, New Mexico
Christiansen, A. V., 2001

Sikring af luftbårne elektromagnetiske data fra Fyns Amt
Poulsen, L. H., Christiansen, A. V. & Christensen, N. B., 2001, Geologisk Institut, Aarhus Universitet.

Sikring af luftbårne elektromagnetiske data fra Ringkjøbing Amt
Poulsen, L. H., Christiansen, A. V. & Christensen, N. B., 2001, Geologisk Institut, Aarhus Universitet.