

# LISTĂ LUCRĂRI

BOGDAN SEBACHER

- **Articole publicate în jurnale cu factor de impact sau în conferințe indexate Web of Science**

1. "A probabilistic parametrization for geological uncertainty estimation using the Ensemble Kalman Filter (EnKF)", **Sebacher B.**, Hanea R.G. and A.W. Heemink, Computational Geosciences , Volume 17, Issue 5, pp 813-832, DOI 10.1007/s10596-013-9357-z, 2013.
2. "Bridging Multi Point Statistics and Truncated Gaussian Fields for Improved Estimation of Channelized Reservoirs with Ensemble Methods", **Sebacher B.**, Stordal A. and Hanea R.G., Computational Geosciences, Volume 19, Issue 2, pp 341-369, DOI 10.1007/s10596-014-9466-3, 2015.
3. "Complex geology estimation using the iterative adaptive Gaussian mixture filter", **Sebacher B.**, Stordal A. and Hanea R.G., Computational Geosciences, Volume 20, Issue 1, pp 133-148, DOI: 10.1007/s10596-015-9553-0, 2016.
4. "An adaptive pluri-Gaussian simulation model for geological uncertainty quantification", **Sebacher B.**, Hanea R.G. and Stordal A., Journal of Petroleum Science and Engineering, Volume 158, pp 494-508, DOI: 10.1016/j.petrol.2017.08.038, 2017.
5. "Channelized reservoir estimation using a low-dimensional parameterization based on high-order singular value decomposition", **Sebacher B.** and Hanea R.G. Computational Geosciences, Volume 14, Issue 24, pp 509-531, DOI <https://doi.org/10.1007/s10596-019-09856-1>, 2020
6. "Bridging deep convolutional autoencoders and ensemble smoothers for improved estimation of channelized reservoirs", **Sebacher B.**, Stefan-Adrian Toma, Mathematical Geosciences, Issue 54, Number 5, pp 903-939, DOI <https://doi.org/10.1007/s11004-022-09997-7>, 2022
7. "On the modeling of urban infrastructure deformation profiles using the applied element method and multiple hypothesis testing", **Bogdan Sebacher**, Stefan-Adrian Toma, Marin Lupoae, Mihai Lica Pura, IGARSS-International Geoscience and Remote Sensing Symposium July 22-27, 2018, pp. 874-877, Valencia, Spain.
8. "On Anomalous Deformation Profile Detection Through Supervised and Unsupervised Machine Learning", Stefan-Adrian Toma, **Bogdan Sebacher**, Adrian Focsa, Mihai Lica Pura, IGARSS-International Geoscience and Remote Sensing Symposium 28 July-2 Aug. 2019, 2019, pp. 7419-7422, Yokohama, Japan.

9. "Deformation Profile Analysis Using Uniform Manifold Approximation and Projection", Stefan-Adrian Toma, **Bogdan Sebacher**, Delia Teleaga, Adrian Focsa, M, IGARSS-International Geoscience and Remote Sensing Symposium 26 Sept.-2 Oct. 2020, 2020, Waikoloa, HI, USA.

- **Capitole de cărți**

1. "The Adaptive Plurigaussian Simulation (APS) Model Versus the Truncated Plurigaussian Simulation (TPS) Model Used in the Presence of Hard Data", **Sebacher B.**, Stordal A. and Hanea R.G., Geostatistics Valencia 2016, Series Title "Quantitative Geology and Geostatistics", Volume 19, pp 697-707, ISSN 0924-1973, DOI 10.1007/978-3-319-46819-8\_47, Publisher "Springer International Publishing" 2017 (indexata Web of Science).

- **Articole publicate în jurnale fără factor de impact, indexate BDI**

1. "A new methodology based on finite element method (FEM) for generation of the probability field of rock types from subsurface", Marzavan S., **Sebacher B.**, Arabian Journal of Geosciences, Volume 14, Issue 10, Article number 843, 2021  
DOI: <https://doi.org/10.1007/s12517-021-07114-2> (indexat Scopus)
2. "Aspecte privind optimizarea profilului danturii angrenajelor cicloidale cu bolturi", Aristia Popovici, Florin Petrescu, **Bogdan Sebacher**, Tehnologia Inovativa, ISSN 2248-0420, Vol 3-4 pp 45:48, 2011. (indexat Google Scholar, ProQuest)
3. "Stochastic Parameterizations for Improving the Estimation of Channelized Reservoirs in an Assisted History Matching Context", **Bogdan Sebacher**, Journal of Military Technology, Volume 5, Issue 1, pp 1-13, 2022. (indexat Google Scholar)

- **Articole de Conferinta si Workshop-uri publicate in proceedings, indexate BDI**

1. "Geologically Realistic Facies Updates for a North Sea Field", R.G. Hanea, T. Ek, **B. Sebacher**, J. Satrom, D.B. Sollien, Amsterdam, 76th EAGE Conference and Exhibition, 2014 (indexat Scopus).  
DOI: 10.3997/2214-4609.20141514.
2. "Complex geology estimation using the iterative adaptive Gaussian mixture (IAGM)", ECMOR XIV-14th European Conference on the mathematics of oil recovery, **Bogdan Sebacher**, Andreas Stordal, Remus Hanea, 2014 (indexat Scopus).  
DOI: 10.3997/2214-4609.20141789
3. "An adaptive plurigaussian simulation (APS) model for geological uncertainty quantification using the ensemble Kalman filter (EnKF)", **Bogdan Sebacher**, Technical University of Civil Engineering of Bucharest, the 13th Workshop of scientific communications, department of Mathematics and Computer Science, pp 146:151, Bucharest 2014 (indexat Google scholar), ISSN 2392-6317.

4. "Application of the EnKF and the truncated Gaussian method in the geological uncertainty quantification of the channelized reservoirs", **Bogdan Sebacher**, Technical University of Civil Engineering of Bucharest, the 12th Workshop of scientific communications, department of Mathematics and Computer Science, pp 107:110, Bucharest 2013 (indexat Google scholar), ISSN 2067-3132.
5. "Quantifying the Uncertainty in the Facies Probability Cubes Using an Ensemble Kalman Filter Methodology", **B. Sebacher**, R.G. Hanea and T. Ek, Petroleum Geostatistics, Biarritz, 7-11 Septembrie 2015 (indexat Google scholar)  
DOI: 10.3997/2214-4609.201413630
6. "Consistent Joint Updates of Facies and Petrophysical Heterogeneities Using an Ensemble Based Assisted History Matching", R.G. Hanea, T. Ek and **B. Sebacher**, Petroleum Geostatistics, Biarritz, 7-11 Septembrie 2015 (indexat Google scholar).  
DOI: 10.3997/2214-4609.201413598
7. "Different Parameterizations of the Initial Ensemble for a Channelized Reservoir in an Assisted History Matching Context", ECMOR XV-15th European Conference on the mathematics of oil recovery, **Bogdan Sebacher**, Andreas Stordal, Remus Hanea, 2016 (indexat Scopus).  
DOI: 10.3997/2214-4609.201601817
8. "Channelized Reservoir Estimation Using A Low Dimensional Parameterization Based On High Order Singular Value Decomposition", **B. Sebacher**, R.G Hanea, ECMOR XVI-16th European Conference on the mathematics of oil recovery, September 3-6, 2018, Barcelona, Spain. DOI: <https://doi.org/10.3997/2214-4609.201802236>, (indexat Scopus)
9. "Conditioning the Probability Field of Facies to Facies Observations Using a Regularized Element-free Galerkin (EFG) Method", **B. Sebacher**, R.G Hanea and S. Marzavan, Petroleum Geostatistics Florence, September 2-6, 2019, DOI: <https://doi.org/10.3997/2214-4609.201902249>, (indexat Scopus).
10. "Conditioning Facies Probability Fields to Facies Observations with Convex Optimization Procedure in an Element-Free Galerkin Framework", **B. Sebacher** and R.G Hanea , ECMOR 2022, European Conference on the mathematics of oil recovery, September 2022, DOI: <https://doi.org/10.3997/2214-4609.202244071>, (indexat Scopus).
11. "Deformation profiles analysis using linear piecewise functions: detection of infrastructure instability", Stefan-Adrian Toma, **Bogdan Sebacher**, Valentin Poncos, Delia Teleaga, IGARSS 2023-2023 IEEE International Geoscience and Remote Sensing Symposium, DOI: 10.1109/IGARSS52108.2023.10282569 (indexat IEEE)
12. "History Matching of Three Facies Channelized Reservoirs Using Ensemble Smoothers with a Convolutional Autoencoder Based Parameterization", Catalin Moldovan, **Bogdan Sebacher**, Remus Hanea,

• **Articole de Conferință și Workshop-uri publicate în proceedings, neindexate BDI**

1. "Inverse modeling using the ensemble Kalman filter (EnKF). Application in reservoir engineering", **Bogdan Sebacher**, Mircea Ariciuc, Simpozionul national de utilaje pentru constructii, Editia XVIII, SINUC 15-16 decembrie 2011, format electronic, ISBN 978-973-100-195-1.
2. "History matching of channelized reservoirs in the context of multiple point geostatistical (MPS) simulation using a probabilistic parameterization", **Bogdan Sebacher**, Daniel Tudor, Simpozionul national de utilaje pentru constructii, Editia XIX, SINUC 12-13 decembrie 2013, format electronic, ISSN 2285 - 9209.
3. "Truncated Gaussian model for uncertainty quantification of the sand holes in a shale reservoir in an ensemble Kalman filter (EnKF) framework", **Bogdan Sebacher**, Daniel Tudor, Simpozionul national de utilaje pentru constructii, Editia XIX, SINUC 12-13 decembrie 2013, format electronic, ISSN 2285 - 9209.
4. "Estimation of the facies distribution of a reservoir using Ensemble Kalman Filter", **Bogdan Sebacher**, Ion Mierlus Mazilu, Technical University of Civil Engineering of Bucharest, the 11th Workshop of scientific communications, department of Mathematics and Computer Science, Bucharest 2011, ISBN 978-973-100-202.
5. "A normal score parameterization for channelized reservoirs estimation using the iterative adaptive Gaussian mixture filter", **Bogdan Sebacher**, Technical University of Civil Engineering of Bucharest, the 13th Workshop of Scientific Communications, Department of Mathematics and Computer Science, pag 167:173, ISSN 2067-3132, Bucharest 23 mai 2015.
6. "Low-dimensional parameterization of channelized reservoirs using high order singular value decomposition (HOSVD)", **Bogdan Sebacher**, Technical University of Civil Engineering of Bucharest, the 14th Workshop of Scientific Communications, Department of Mathematics and Computer Science, Bucharest 27 Mai 2017.
7. "Image reconstruction with a convolutional autoencoder as support for a data assimilation model", Catalin-Ionut Moldovan, **Bogdan Sebacher**, ISIM & ISWIM 2023, 23-26 June 2023, Bucharest

• **Prezentări la Conferințe și Workshop-uri fără Proceedings**

1. "EnKF for estimating the probability of occurrence of the facies at a certain location", **Sebacher, B.**, Hanea, R.G., Heemink A., EnKF Workshop 20-22 June 2011, Ulvik, Norway (poster). <http://enkf.iris.no/>
2. "Complex geology estimation using EnKF. A probabilistic approach", **Sebacher, B.**, Hanea, R.G., Heemink A., EnKF Workshop 2012, Os

(Bergen), 18-20 June 2012, Norway.

<http://enkf.iris.no/>

3. "Adaptive plurigaussian truncation scheme for geological uncertainty quantification using the EnKF", **Sebacher, B.**, Hanea, R.G., Heemink A., EnKF Workshop 27-29 May 2013, Steinsland, Norway.  
<http://enkf.iris.no/>
4. "Complex geology estimation using the iterative adaptive Gaussian mixture", **Sebacher, B.**, Stordal, A., Hanea, R.G., EnKF Workshop 2014, Os (Bergen), 23-25 June 2014, Norway.  
<http://enkf.iris.no/>
5. "Consistent joint updates of facies maps and petrophysical heterogeneity using an ensemble based assisted history matching", Remus Hanea, Torbjorn Ek, **Bogdan Sebacher**, EnKF Workshop 2015 Flam (Norway) June 8-10, 2015.  
<http://enkf.iris.no/>.
6. "Facies estimation and uncertainty quantification coupling an adaptive plurigaussian methodology with a Kalman filtering framework", **Bogdan Sebacher**, Remus Hanea, Torbjorn Ek, EnKF Workshop 2015 Flam (Norway) June 8-10, 2015 (poster).  
<http://enkf.iris.no/>.
7. "History matching of channelized reservoirs using ensemble based methods", **Sebacher, B.**, Stordal, A., Hanea, R.G., SIAM Conference on Mathematical and Computational Issues in the Geosciences 17-20 June, 2013, Padova, Italy.  
[http://meetings.siam.org/sess/dsp\\_programsess.cfm?SESSIONCODE=16495](http://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=16495).
8. "Channelized geology estimation with EnKF. A probabilistic approach", **Sebacher, B.**, Hanea, R.G., Heemink A., SPE Heavy Oil: Industry Best Practices and Case Studies, 12-14 November 2012 Bucharest.
9. "Complex geology estimation using EnKF. A probabilistic approach", **Bogdan Sebacher**, A 15-a Conferinta a Societatii de Probabilitati si Statistica din Romania, Bucuresti 27 aprilie 2012.  
<http://csm.ro/spsr/news.php?id=20>.
10. "An adaptive plurigaussian simulation (APS) model for geological uncertainty quantification using the Ensemble Kalman Filter (EnKF)", **Bogdan Sebacher**, A 17-a Conferinta a Societatii de Probabilitati si Statistica din Romania, Bucuresti 25 aprilie 2014.  
<http://csm.ro/spsr/news.php?id=31>.
11. "Uncertainty quantification of complex geology using the iterative adaptive Gaussian mixture filter (IAGM).", **Bogan Sebacher**, A 18-a Conferinta a Societatii de Probabilitati si Statistica din Romania, Bucuresti 8 mai 2015.  
<http://csm.ro/spsr/manifestari.php>.
12. "Different parameterizations of the initial ensemble for a channelized reservoir in an Assisted History Matching context", **Sebacher, B.**, Stordal, A., Hanea, R.G., EnKF Workshop 2016 Ulvik (Norway) June 20-22, 2016.  
<http://www.iris.no/enkf/enkf-homepage>

13. "Conditioning facies probability fields to soft data with a regularized Element-free Galerkin (EFG) method", **Bogdan Sebacher**, Roxana Dobre, Silvia Marzavan, International Conference on Applied and Pure Mathematics - ICAPM 2023, Iasi 9-12 November 2023.

• **Cărți Publicate**

1. "Culegere de probleme de tip grila pentru admiterea in invatamantul superior", Dana Simona Bereanu, Anca Ileana Lupas, Silvia Marzavan, Simona Roatesi, **Bogdan Sebacher**, Iuliana Sprintu, Editura Academiei Tehnice Militare, ISBN 978-973-640-260-9, Bucuresti, 2017.
2. "Aplicatii de laborator in Mathematica si Mathcad". Iuliana Florentina Iatan, **Bogdan Sebacher**, Conspress 2014, ISBN 978-973-100-323-8.
3. "Data Assimilation under Geological Constraints", **Bogdan Marius Sebacher**, Gildeprint, Enschede 2014, ISBN 978-94-6186-405-5.

Bucuresti, January 29, 2024