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LIST OF 10 SELECTED PUBLICATIONS (30 August 2024)

- 1) J. P. Kaipio, V. Kolehmainen, E. Somersalo and M. Vauhkonen. "Statistical inversion and Monte Carlo sampling methods in electrical impedance tomography". *Inverse Problems*, Vol. 16, pages 1487-1522, (2000) (In 2014 the manuscript was in the list of 30 most cited papers of the 30 year history of the journal *Inverse Problems*).
- 2) V. Kolehmainen, M. Lassas and P. Ola. "Inverse conductivity problem with an imperfectly known boundary", *SIAM Journal on Applied Mathematics*. Vol. 66, pages 365 – 383, (2005).
- 3) V. Kolehmainen, A. Vanne, S. Siltanen, S. Järvenpää, J. P. Kaipio, M. Lassas and M. Kalke. "Parallelized Bayesian inversion for three dimensional dental x-ray imaging". *IEEE Transactions on Medical Imaging*. Vol. 25, pages 218-228, (2006). DOI: [10.1109/TMI.2005.862662](https://doi.org/10.1109/TMI.2005.862662)
- 4) V. Kolehmainen, M. Lassas, K. Niinimäki and S. Siltanen. "Sparsity-promoting Bayesian inversion" *Inverse Problems* Vol. 28 (2012) 025005. (doi:10.1088/0266-5611/28/2/025005) (The manuscript was selected among the 2012 highlights of *Inverse Problems* by the editorial board)
- 5) K. Niinimäki, M. Lassas, K. Hämäläinen, A. Kallonen, V. Kolehmainen, E. Niemi and S. Siltanen. "Multiresolution parameter choice for total variation regularized tomography". *SIAM J. Imaging Science*. Vol. 9, No. 3, pp. 938-974, (2016).
- 6) A. Lipponen, J. M. J. Huttunen, S. Romakkaniemi, H. Kokkola and V. Kolehmainen. "Correction of model reduction errors in simulations". *SIAM Journal on Scientific Computing* 40-1 (2018), pp. B305-B327 <https://doi.org/10.1137/15M1052421>.
- 7) Juan P. Agnelli, Ville Kolehmainen, Matti J. Lassas, Petri Ola, and Samuli Siltanen. Simultaneous Reconstruction of Conductivity, Boundary Shape, and Contact Impedances in Electrical Impedance Tomography. *SIAM Journal of Imaging Sciences*, 2021 14:4, 1407-1438.
- 8) V Candiani, N Hyvönen, J P Kaipio and V Kolehmainen. Approximation error method for imaging the human head by electrical impedance tomography. *Inverse Problems*, 2021, 37, 125008
- 9) Henri Taskinen, Arttu Väisänen, Lauri Hatakka, Timo H. Virtanen, Timo Lähivaara, Antti Arola, Ville Kolehmainen and Antti Lipponen. High-resolution post-process corrected satellite AOD. *Geophysical Research Letters*, 2022, Vol. 49, No. 18, Published online (15 September 2022): <https://doi.org/10.1029/2022GL099733>
- 10) Toivanen, Jussi; Paldanius, Antti; Dekdoud, Bachir; Candiani, Valentina; Hänninen, Asko; Savolainen, Tuomo; Strbian, Daniel; Forss, Nina; Hyvönen, Nuutti; Hyttinen, Jari and Kolehmainen, Ville. A Simulation-based Feasibility Study of Monitoring of Intracerebral Hemorrhages and Detection of Secondary Hemorrhages Using Electrical Impedance Tomography. *Journal of Medical Imaging*, Vol. 11 (1), 2024. DOI10.1117/1.JMI.11.1.014502