

## Fast boundary element methods in industrial applications

*vendredi 5 février 2016 16:05 (35 minutes)*

In this talk we consider direct and indirect boundary integral formulations for the solution of electro- and magnetostatic field computations in industrial applications. Particular interest is on the use of floating potentials in a multi-dielectric setting with high permittivity.

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This talk summarizes joint work with A. Blaszczyk and Z. Andjelic (ABB), and with D. Amann, G. Of, and P. Urthaler (TU Graz).

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References

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[1] Z. Andjelic, G. Of, O. Steinbach, P. Urthaler: Fast boundary element methods for industrial applications in magnetostatics. In: Fast Boundary Element Methods in Engineering and Industrial Applications (U. Langer, M. Schanz, O. Steinbach, W. L. Wendland eds.), Lecture Notes in Applied and Computational Mechanics, vol. 63, Springer, Heidelberg, pp. 111–143, 2012.

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[2] Z. Andjelic, G. Of, O. Steinbach, P. Urthaler: Boundary element methods for magnetostatic field problems: A critical view. Comput. Visual. Sci. 14 (2011) 117–130.

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[3] D. Amann, A. Blaszczyk, G. Of, O. Steinbach: Simulation of floating potentials in industrial applications by boundary element methods. J. Math. Ind. 4:13 (2014) 15p.

**Orateur:** Prof. STEINBACH, Olaf