

**Igor Tsukerman**

**The University of Toronto, Canada (1990 – 1995)**

# List of Publications

(Reprints of most papers available upon request)

## Books

Igor Tsukerman, [\*Computational Methods for Nanoscale Applications: Particles, Plasmons, and Waves\*](#). Springer, Nanostructure Science and Technology series, 2007.

[Second edition to be published in 2020.]

[\*Compendium on Electromagnetic Analysis. From Electrostatics to Photonics: Fundamentals and Applications for Physicists and Engineers \(in 5 Volumes\)\*](#). December 2019. Editor-in-chief: Igor Tsukerman

[\*Plasmonics and Plasmonic Metamaterials: Analysis and Applications\*](#). Gennady Shvets, Igor Tsukerman (Eds.). World Scientific Publishing Company, 2011.

## Book Chapters

1. Fritz Kretzschmar, Sascha M. Schnepf, Herbert Egger, Farzad Ahmadi, Nabil Nowak, Vadim A. Markel, Igor Tsukerman, . The power of Trefftz approximations: Finite difference, boundary difference and discontinuous Galerkin methods; nonreflecting conditions and non-asymptotic homogenization. *Lecture Notes in Computer Science*, v. 9045, pp. 50-61, 2015.
2. Gennady Shvets, Igor Tsukerman, Preface to *Plasmonics and Plasmonic Metamaterials: Analysis and Applications*, World Scientific Publishing Co., 2011, pp. xiii–xvii.
3. Masha Sosonkina and Igor Tsukerman, [\*Parallel solvers for flexible approximation schemes in multiparticle simulation\*](#), *Lecture Notes in Computer Science*, Springer: Berlin / Heidelberg, vol. 3991 (eds. Vassil N. Alexandrov, Geert Dick van Albada, Peter M.A. Sliot, Jack Dongarra), pp. 54–62, 2006. ISBN: 3-540-34379-2, ISSN: 0302-9743, DOI: 10.1007/11758501\_12.
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114. Igor Tsukerman, Vadim Markel, Sascha Schnepf, Fritz Kretschmar. The power of Trefftz methods: from finite-difference to Discontinuous Galerkin schemes and from macromolecules to metamaterials (invited plenary talk). Sixth International Conference: Application of Mathematics in Technical and Natural Sciences. Albena, Bulgaria, June 2014. <http://2014.eac4amitans.eu/>
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