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List of Publications

1 Published or submitted

1. M. Emelianenko, D. Golovaty, D. Kinderlehrer, S. Ta'asan, *"Texture evolution via continuous time random walk theory"*, Center for Nonlinear Analysis, No. 06-CNA-011, 2006

2. M. Emelianenko, D. Golovaty, D. Kinderlehrer, S. Ta'asan, *"Grain boundary evolution: new perspectives"*, Center for Nonlinear Analysis, No. 06-CNA-010, 2006

3. Q. Du, M. Emelianenko, *"Uniform convergence of a multilevel energy-based quantization scheme"*, Domain Decomposition Methods in Science & Engineering XVI, Lecture Notes in Computational Science & Engineering, V 55, Springer-Verlag, New York, 2007

4. Q. Du, M. Emelianenko *"Uniform convergence of a nonlinear energy-based multilevel quantization scheme via centroidal Voronoi tessellations"*, under revision for SIAM J. Numer. Anal., 2006

5. Q. Du, M. Emelianenko and L. Ju *"Convergence properties of the Lloyd algorithm for computing the centroidal Voronoi tessellations"*, SIAM J. Numer. Anal., 44, Issue 1 (2006), 102-119

6. M. Emelianenko, Z.-K. Liu and Q. Du *"A New Algorithm for the Automation of Phase Diagram Calculation"*, Comp. Mater. Sci., 35, issue 1 (2006), 61-74 (In ScienceDirect Top 25 Hottest Articles)

7. Q. Du, M. Emelianenko *"Acceleration schemes for computing the centroidal Voronoi tessellations"*, Numer. Linear Algebra Appl.,13, Issue 2-3 (Special Issue on Multigrid Methods) (2006), 173-192

8. Q. Du, M. Emelianenko, H.-C. Lee and X. Wang *"Ideal point distributions, best mode selections and optimal spatial partitions via centroidal Voronoi tessellations"*, in proceedings of the 2nd International Symposium on Voronoi Diagrams in Sciences and Engineering (refereed), Seoul, Korea, Oct 2005 (VD2005), pp. 325-333, 2005

9. M. Yacoubi, M. Emelianenko, N. Gautam *"Pricing in next generation network queuing model to guarantee QoS"*, Perform. Evaluation, **5**, issue 1 (2003), 59-84 (In Top 10 downloads from Performance Evaluation website in 2003)

10. E.B. Dushanov, M. Emelianenko and G.Yu. Konovalova, *"On formats of the representation of real numbers and algorithm for automatic declaration of constants of the computer real arithmetic"*, J. Comput. Meth. Sci. Eng., **2**, issue 1-2 (2002), 57-62

2 In preparation

1. *"Toward a statistical theory of texture"*, with Shlomo Ta'asan, David Kinderlehrer and Dmitry Golovaty

2. *Boltzmann-type kinetic approach to grain growth dynamics*, with Shlomo Ta'asan, David Kinderlehrer and Dmitry Golovaty

3. *"Automation of High-dimensional Phase Diagram Calculation"*, with Zi-Kui Liu and Qiang Du

4. *"Uniformly convergent two-dimensional nonlinear quantization scheme"*, with Ludmil Zikatanov and Qiang Du