

Applied Mathematics and  
Mathematical Computation 3

# Material Inhomogeneities in Elasticity

Gérard Maugin



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# Material Inhomogeneities In Elasticity

**Gérard A. Maugin**

## **Material Inhomogeneities In Elasticity:**

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*Nonlinear Acoustics - Fundamentals and Applications* B.O. Enflo,C. M. Hedberg,Leif Kari,2008-06-25 These are the proceedings of the 18th International Symposium on Nonlinear Acoustics ISNA The ISNA series held once every three years is the premier symposium devoted to the field of nonlinear acoustics Nonlinear acoustical phenomena appear when the sound amplitude is sufficiently large Then the sound wave is deformed and shocks and sound of new frequencies are created Earthquake and sonic booms are undesired nonlinear acoustical phenomena nondestructive testing and cancer sound beam therapy are useful nonlinear acoustical applications This book is unique in bringing into relief the common physical foundation of so different phenomena and applications

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Nucleation and Growth Processes in Materials Antonios Gonis,Patrice E. A. Turchi,Alan J. Ardell,2000 One of the goals of materials science is to design alloys with pre specified desirable technological properties To achieve this goal it is necessary to have a thorough understanding of the fundamental mechanisms underlying materials behavior In particular one must understand the effects on alloy properties caused by intentional changes in concentration and how the combinations of

temperature time and uncontrollable foreign impurities affect microstructure In addition to the equilibrium phase information contained in phase diagrams nonequilibrium dynamic processes and metastable phases are known to be crucial in determining materials properties This volume brings together researchers working on various aspects of nonequilibrium processes in materials to discuss current research issues and to provide guidelines for future work Particular attention was paid to understanding particle nucleation and growth both experimentally and theoretically solid state reactions nanosystems liquid solid transformations and solidification and amorphization On the theoretical side fundamental principles governing nucleation and growth and related phenomena such as coarsening and Ostwald ripening are discussed Progress is also reported on the phase field method and on Monte Carlo simulations     International Aerospace Abstracts ,1995

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