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Nota di contenuto	1. Overview -- 2. Mathematical Background for Deep Learning -- 3. Computational Mechanics with Deep Learning -- 4. Numerical Quadrature with Deep Learning -- 5. Improvement of Finite Element Solutions with Deep Learning -- 6. Contact Mechanics with Deep Learning -- 7. Flow Simulation with Deep Learning -- 8. Further Applications with Deep Learning -- 9. Bases for Computer Programming -- 10. Computer Programming for a Representative Problem.
Sommario/riassunto	This book is intended for students, engineers, and researchers interested in both computational mechanics and deep learning. It presents the mathematical and computational foundations of Deep Learning with detailed mathematical formulas in an easy-to-understand manner. It also discusses various applications of Deep Learning in Computational Mechanics, with detailed explanations of the Computational Mechanics fundamentals selected there. Sample

programs are included for the reader to try out in practice. This book is therefore useful for a wide range of readers interested in computational mechanics and deep learning.
