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Nota di contenuto	Part I Elliptic problems -- Part II Parabolic problems -- Part III Examples of gradient discretisation methods -- Part IV Appendix.
Sommario/riassunto	This monograph presents the Gradient Discretisation Method (GDM), which is a unified convergence analysis framework for numerical methods for elliptic and parabolic partial differential equations. The results obtained by the GDM cover both stationary and transient models; error estimates are provided for linear (and some non-linear) equations, and convergence is established for a wide range of fully non-linear models (e.g. Leray–Lions equations and degenerate parabolic equations such as the Stefan or Richards models). The GDM applies to a diverse range of methods, both classical (conforming, non-conforming, mixed finite elements, discontinuous Galerkin) and modern (mimetic finite differences, hybrid and mixed finite volume, MPFA-O finite volume), some of which can be built on very general meshes.

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aubin–simon,="" discontinuous="" ascoli–arzela),="" goes=""
beyond="" gdm,="" making="" them="" potentially="" applicable=""
numerical="" schemes="" not="" (yet)="" known="" fit="" into=""
this="" framework.<span style="font-family:" ms="" mincho";mso-
bidi-font-family:="" this="" monograph="" is="" intended="" for=""
graduate="" students,="" researchers="" and="" experts="" in=""
the="" field="" of="" numerical="" analysis="" partial="" differential=""
equations.
