

Numerical Analysis and Optimization : An introduction to mathematical modelling and numerical simulation

Type de contenu : Texte

Titre(s) : Numerical Analysis and Optimization : An introduction to mathematical modelling and numerical simulation [Texte imprimé]
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Auteur(s) : Allaire, Grégoire

Editeur, producteur : New York : Grégoire Allaire, 2007

Description matérielle : XVI-454 p.
: 25 cm
: figures, couv. ill. en coul.

Autres classifications : NAB_01-04

Note(s) : Bibliogr., index

Résumé ou extrait : This text, based on the author's teaching at Ecole Polytechnique, introduces the reader to the world of mathematical modelling and numerical simulation. Covering the finite difference method ; variational formulation of elliptic problems ; Sobolev spaces ; elliptical problems; the finite element method ; Eigenvalue problems ; evolution problems ; optimality conditions and algorithms and methods of operational research, and including several exercises throughout, this is an ideal text for advanced undergraduate students and graduates in applied mathematics, engineering, computer science, and the physical sciences.

Sujet(s) : Mathematical modelling
Numerical analysis
Numerical simulation
optimization