

1. Record Nr.	UNINA9910624377803321
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Titolo	Mathematics of the Weather : Polygonal Spline Local-Galerkin Methods on Spheres // by Jürgen Steppeler, Jinxi Li
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783031072383 3031072383
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (328 pages)
Collana	Springer Atmospheric Sciences, , 2194-5225
Disciplina	551.51011
Soggetti	Physical geography Mathematics Physics Earth System Sciences Applications of Mathematics Classical and Continuum Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (pages 311-316) and index.
Nota di contenuto	Chapter 1. Simple Finite Difference Schemes -- Chapter 2. Basis Functions and Simple L-Galerkin Schemes in 1-d: Galerkin -- Chapter 3. Basis Functions for Triangular Meshes -- Chapter 4. 2-d Sparse Full and Sparse Grids for Quadrilaterals -- Chapter 5. Hexagonal Grids and Hexagonal Sparse Grids -- Chapter 6. Numerical Tests -- Chapter 7. Hexagonal Options -- Chapter 8. Construction of Platonic and Related Bodies on the Sphere -- Chapter 9. Euclids Lemma and the Construction of Quasi Regular Grids on Bilinear Surfaces -- Chapter 10. Differentiation on Curved Surfaces and Modeling on Spheres, Ellipsoids and the Potato Shaped Earth -- Chapter 11. The Construction of the Hexagonal Sub Grid for a Rhomboidal Grid on the Sphere: Sparse Hexagonal Grids -- Chapter 12. Tests on the Sphere -- Chapter 13. The 3-d Small Earth Test Program -- Chapter 14. Regularization of Rhomboidal and Hexagonal Grids -- Chapter 15. Introduction to the MOW Service Library. Chapter 16. Appendix: Tutorial Programs.
Sommario/riassunto	"Mathematics of the Weather" details the mathematical techniques used

to create numerical models of the atmosphere. It explains methods which are currently considered for practical use in models for the exaflop computers ( $10^{19}$  operations per seconds). This book is a guide to developing and modifying the mathematical methods used in such models. This includes Implementations in spherical geometry. The books also concentrates on elements of Numerical Weather Predication (NWP) and Computational Fluid Dynamics (CFD). .

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