

1. Record Nr.	UNINA9911002560103321
Autore	Lwin Ko Ko
Titolo	Handling of Geospatial Data with QGIS : A Basic and Practical Visual Learning Material for Geospatial Data Processing, Analysis and Visualisation / / by Ko Ko Lwin, Yuji Murayama
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	981-9624-24-X
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (106 pages)
Collana	Springer Textbooks in Earth Sciences, Geography and Environment, , 2510-1315
Altri autori (Persone)	MurayamaYuji
Disciplina	910
Soggetti	Geography Geographic information systems Geographical Information System
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. QGIS Fundamentals -- 2. QGIS Installation and Tutorial Data Preparation -- 3. QGIS Essentials -- 4. Creating Your Own GIS Data with QGIS -- 5. Geoprocessing in QGIS -- 6. Spatial Analysis and 3D Visualisation -- 7. Automation (Batch Processing and Model Designer) -- 8. Customisation.
Sommario/riassunto	This textbook introduces QGIS software and shows how to use it step-by-step using many illustrations. Some topics can be understood by viewing a figure, without the need to read texts. The purposes, functions, and potential applications of the software are also explained. The book is a good first step to understand the theories on GIS through practice. With the increasing use of GIS (geographic information systems/science) in the arenas of education and research, the need for this book is becoming apparent. Students and researchers in various disciplines have noted that GIS is a powerful tool for acquiring, exploring, analyzing, and visualizing geospatial data for their work. Some of their data come from geospace in the form of coordinates; of course, we are living in a world with coordinates. Wherever we move, whatever we do, we can be located by coordinates, as everything is at rest, moving, or happening in space. Although GIS has been used for a long time in many professional fields, such as land surveying, urban

and regional development, transportation planning, hydrology, environmental management, and so on, the use of GIS by the public is fairly recent. Following the emergence of global positioning systems, wireless communication technologies, and nano-scale microchip technologies, GIS is now a commonplace. Together with advanced technologies and user-friendly software development, the use of GIS has moved from desktop to laptop to mobile devices, and from professionals to academics to the public. Moreover, QGIS is increasingly used by students, researchers, and professionals on a daily basis due to its free and open-source geographic information system, community-based software development, user-friendliness, and the many plugins that are available to enhance the capabilities of this software.

2. Record Nr.	UNINA9911018828203321
Autore	Chen Chin-Lin
Titolo	Foundations for guided-wave optics / / Chin-Lin Chen
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2007
ISBN	9786610721306 9781280721304 1280721308 9780470042229 0470042222 9780470042212 0470042214
Descrizione fisica	1 online resource (482 p.)
Disciplina	621.36/92
Soggetti	Optical wave guides
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	FOUNDATIONS FOR GUIDED-WAVE OPTICS; CONTENTS; PREFACE; 1 BRIEF REVIEW OF ELECTROMAGNETICS AND GUIDED WAVES; 1.1 Introduction; 1.2 Maxwell's Equations; 1.3 Uniform Plane Waves in

Isotropic Media; 1.4 State of Polarization; 1.5 Reflection and Refraction by a Planar Boundary between Two Dielectric Media; 1.5.1 Perpendicular Polarization; 1.5.2 Parallel Polarization; 1.6 Guided Waves; 1.6.1 Transverse Electric Modes; 1.6.2 Transverse Magnetic Modes; 1.6.3 Waveguides with Constant Index in Each Region; Problems; References; 2 STEP-INDEX THIN-FILM WAVEGUIDES; 2.1 Introduction
 2.2 Dispersion of Step-Index Waveguides 2.2.1 Transverse Electric Modes; 2.2.2 Transverse Magnetic Modes; 2.3 Generalized Parameters; 2.3.1 The a , b , c , d , and V Parameters; 2.3.2 The bV Diagram; 2.3.3 Cutoff Thicknesses and Cutoff Frequencies; 2.3.4 Number of Guided Modes; 2.3.5 Birefringence in Thin-Film Waveguides; 2.4 Fields of Step-Index Waveguides; 2.4.1 Transverse Electric Modes; 2.4.2 Transverse Magnetic Modes; 2.5 Cover and Substrate Modes; 2.6 Time-Average Power and Confinement Factors; 2.6.1 Time-Average Power Transported by TE Modes; 2.6.2 Confinement Factor of TE Modes 2.6.3 Time-Average Power Transported by TM Modes 2.7 Phase and Group Velocities; Problems; References; Bibliography; 3 GRADED-INDEX THIN-FILM WAVEGUIDES; 3.1 Introduction; 3.2 Transverse Electric Modes Guided by Linearly Graded Dielectric Waveguides; 3.3 Exponentially Graded Dielectric Waveguides; 3.3.1 Transverse Electric Modes; 3.3.2 Transverse Magnetic Modes; 3.4 The WKB Method; 3.4.1 Auxiliary Function; 3.4.2 Fields in the R Zone; 3.4.3 Fields in the L Zone; 3.4.4 Fields in the Transition Zone; 3.4.5 The Constants; 3.4.6 Dispersion Relation; 3.4.7 An Example
 3.5 Hocker and Burns' Numerical Method 3.5.1 Transverse Electric Modes; 3.5.2 Transverse Magnetic Modes; 3.6 Step-Index Thin-Film Waveguides versus Graded-Index Dielectric Waveguides; Problems; References; 4 PROPAGATION LOSS IN THIN-FILM WAVEGUIDES; 4.1 Introduction; 4.2 Complex Relative Dielectric Constant and Complex Refractive Index; 4.3 Propagation Loss in Step-Index Waveguides; 4.3.1 Waveguides Having Weakly Absorbing Materials; 4.3.2 Metal-Clad Waveguides; 4.4 Attenuation in Thick Waveguides with Step-Index Profiles; 4.5 Loss in $TM(0)$ Mode
 4.6 Metal-Clad Waveguides with Graded-Index Profiles Problem; References; 5 THREE-DIMENSIONAL WAVEGUIDES WITH RECTANGULAR BOUNDARIES; 5.1 Introduction; 5.2 Fields and Modes Guided by Rectangular Waveguides; 5.3 Orders of Magnitude of Fields; 5.3.1 The $E(y)$ Modes; 5.3.2 The $E(x)$ Modes; 5.4 Marcattili Method; 5.4.1 The $E(y)$ Modes; 5.4.2 The $E(x)$ Modes; 5.4.3 Discussions; 5.4.4 Generalized Guide Index; 5.5 Effective Index Method; 5.5.1 A Pseudowaveguide; 5.5.2 Alternate Pseudowaveguide; 5.5.3 Generalized Guide Index; 5.6 Comparison of Methods; Problems; References
 6 OPTICAL DIRECTIONAL COUPLERS AND THEIR APPLICATIONS

Sommario/riassunto

A classroom-tested introduction to integrated and fiber optics This text offers an in-depth treatment of integrated and fiber optics, providing graduate students, engineers, and scientists with a solid foundation of the principles, capabilities, uses, and limitations of guided-wave optic devices and systems. In addition to the transmission properties of dielectric waveguides and optical fibers, this book covers the principles of directional couplers, guided-wave gratings, arrayed-waveguide gratings, and fiber optic polarization components. The material is fully classroom-tested and