

1. Record Nr.	UNINA9910463833603321
Titolo	Atom interferometry : proceedings of the International School of Physics "Enrico Fermi", course 188, Varenna on Lake Como, Villa Monastero, 15-20 July 2013 // edited by G. M. Tino and M. A. Kasevich
Pubbl/distr/stampa	Amsterdam, Netherlands : , : IOS Press, , 2014 ©2014
ISBN	1-61499-448-X
Descrizione fisica	1 online resource (807 p.)
Collana	Italian Physical Society, , 1879-8195 ; ; Course 188
Disciplina	535.4
Soggetti	Interferometry Interferometers Atoms - Optical properties Electronic books.
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 at the end of each chapters.
Nota di contenuto	<p>""Title Page""; ""Contents""; ""Preface""; ""Course group shot""; ""Interferometry with atoms""; ""Optics and interferometry with atoms: an introduction""; ""Basics of matter wave optics""; ""The wave equations""; ""Dispersion relations""; ""Phase and group velocity""; ""Path integral formulation""; ""JWKB approximation""; ""Eikonal approximation""; ""Coherence""; ""Spatial coherence""; ""Coherence in momentum space""; ""Higher-order coherence""; ""Index of refraction for matter waves""; ""Index of refraction caused by a classical potential""; ""Index of refraction from scattering""</p> <p>""Optics and interferometry using gratings""""Diffraction""; ""Diffraction in space""; ""Diffraction from nano-fabricated structures""; ""Light gratings from standing waves""; ""Diffraction in time""; ""Interferometers""; ""Three-grating Mach-Zehnder interferometer""; ""Selected experiments with beam interferometers""; ""Einstein's recoiling slit: a single photon as a coherent beamsplitter""; ""Interferometry with Bose-Einstein condensates in double-well potentials""; ""A Bose-Einstein condensate in a double-well potential: a simple model""; ""Single-particle approach""</p>

"Two-mode approximation"; "Rabi dynamics"; "Splitting"; "Time-of-flight recombination"; "In-trap recombination"; "Phase shifts";
 "Effect of interactions: Josephson dynamics, squeezing, and dephasing"; "Bose-Hubbard model with two sites"; "Mean-field treatment"; "Fluctuations and interferometry"; "Squeezing during splitting"; "Phase diffusion"; "Effective single-particle Hamiltonian";
 "Probing many-body physics by interference"; "Interference of 1D Bose gases"; "The 1D Bose gas"; "Multi-mode interference"; "Pairs of 1D Bose gases in equilibrium"
 "Theoretical description"; "Measurement of the matter wave interference contrast"; "Probing relaxation in non-equilibrium 1D Bose gases"; "Coherent splitting of a 1D Bose gas"; "Dynamics of the matter wave interference contrast"; "Prethermalization"; "Light-cone-like emergence of thermal correlations"; "Matter wave interferometry with composite quantum objects"; "Introduction and outline"; "Concepts and tools of coherent nanoparticle manipulation"; "Coherence preparation"; "Far-field diffraction at a nanomechanical grating"; "Optical gratings"
 "Measurement-induced absorptive gratings"; "Optical phase gratings"; "Matter wave interferometry in the time domain"; "From far-field to near-field diffraction and near-field interferometry"; "A unified phase-space description of three-grating matter wave interferometry"; "The Wigner function representation"; "Grating diffraction in phase space"; "Thin stationary gratings for fast particles"; "Short ionizing grating pulses"; "Classical pendant of the grating transformation"; "The Talbot self-imaging effect"; "Talbot-Lau interference in phase space"
 "Coherent description"

Sommario/riassunto

Since atom interferometers were first realized about 20 years ago, atom interferometry has had many applications in basic and applied science, and has been used to measure gravity acceleration, rotations and fundamental physical quantities with unprecedented precision. Future applications range from tests of general relativity to the development of next-generation inertial navigation systems. This book presents the lectures and notes from the Enrico Fermi school "Atom Interferometry", held in Varenna, Italy, in July 2013. The aim of the school was to cover basic experimental and theoretical

2. Record Nr.	UNINA9910974974303321
Titolo	Eye infections, blindness and myopia // Jeffrey Higgins and Dominique Truax, editors
Pubbl/distr/stampa	New York, : Nova Biomedical Books, c2009
ISBN	1-61209-766-9
Edizione	[1st ed.]
Descrizione fisica	1 online resource (xiii, 274 pages) : illustrations (some color)
Collana	Eye and vision research developments series
Altri autori (Persone)	HigginsJeffrey TruaxDominique
Disciplina	617.7/1
Soggetti	Eye - Infections Blindness Myopia Drug resistance in microorganisms Ophthalmic drugs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Role of endotamponading substances in the management of endophthalmitis / Javier A. Montero ... [et al.] -- Etiological agents of keratitis : an epidemiological study from a tertiary care center / S. Malhotra, D.K. Mehta and P. Kumar -- Design and implementation of a randomized myopia intervention trial testing the efficacy of atropine and multi-focal lenses / Yung-Feng Shih ... [et al.] -- Surgical treatment for myopic macular retinoschisis / Takayuki Baba and Shuichi Yamamoto -- Refractive, topographic and biometric changes after scleral buckling / Carlos Alexandre de Amorim Garcia ... [et al.] -- Limitations of current antibiotics for ocular infections / Keith W. Ward, Heleen H. DeCory and Praveen Tyle -- Eye infections : causes, effects and treatment / Kitthisak Kitthaweesin ... [et al.]. Ocular bacterial infections / Hiroshi Toshida and Chikako Suto -- Primary congenital glaucoma : a review / Jaime Levy -- Surgery anesthesia and blindness / Vincenzo Fodale ... [et al.] -- "Laser correction of myopia" / Leopoldo Spadea and Lucia Di Genova -- Atropine controlling myopic progression in Taiwanese schoolchildren / Yung-Feng Shih ... [et al.] -- An ON and OFF solution for myopia : how

the ionic balance underlying retinal ON and OFF systems affects ocular growth / Melanie J. Murphy, Sheila G. Crewther and David P. Crewther
-- Novel therapies for bacterial keratitis / Mary E. Marquart, Quincy C. Moore III and Richard J. O'Callaghan.

Sommario/riassunto

Bacterial eye infections are among the leading causes of vision loss and ocular morbidity, yet the widespread use of antibiotics, particularly in combating systemic infections, has led to increased resistance. This book describes studies that have reported resistance to fourth-generation fluoroquinolones used for treating ocular infections. Achieving optimal therapeutic outcomes, which will require new antimicrobial agents with less potential for promoting resistance is also discussed. This book explores endophthalmitis as an intraocular inflammation mainly involving the ocular fluids. *Pseudomonas aeruginosa* is also reviewed, which is a major opportunistic pathogen and a common cause of bacterial keratitis, especially in contact lens wearers. The new classes of antibiotics have offered alternatives to treat this otherwise antibiotic-resistant bacteria but reports of continued resistance indicate the need for novel areas such as the use of immunizations with attenuated strains of bacteria and treatment with non-antibiotic compounds. Myopia is the most common eyesight problem in the world and is often mild and there are no serious problems. However, it may sometimes lead to blindness. This book explores laser as a way to correct myopia as well as a study of myopia. Finally, this book includes two approaches to resolve myopic macular retinoschisis; one is an approach from inside the eye and the other is from outside the eye. An investigation of eyes for corneal, refractive, and biometric changes, which resulted in the conclusion that there is a statistically significant myopic shift after scleral buckling surgery, is evaluated.
