BIBLIONEWS 132

The OCA libraries newletter

THE NICE MONT-GROS LIBRARY : OPERATING MODE DURING THE RENOVATION PROJECT (2ND STEP)

The windows are finished. The installation of the parquet floor is in progress

TO NOTE

Operation of the Nice Mont-Gros library from October 23

Access to the reading room is completely prohibited during the installation of the parquet floor. The entrance hall is also temporarily inaccessible due to painting work.

Access to collections is once again possible for librarians from outside.

We invite you to continue to send us your loan requests by email and to come and collect the documents from our office via the north building after confirmation of their availability.

NEW TITLES

Earth science
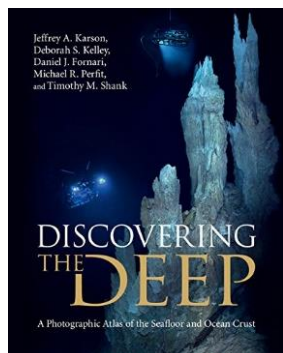
Discovering the deep : a photographic atlas of the seafloor and ocean crust / **Karson**, Jeffrey A.,; **Kelley**, Deborah S.; **Fornar**i, Daniel J., ; **Perfit**, Michael R., r; **Shank**, Timothy Mitchell , Auteurs. - Cambridge University Press (CUP), cop. 2015. - 1 vol. (xvi-414 p.) : cartes, ill., jaquette ill. en coul.; 29 cm. : ISBN : 0-521-85718-X (rel.). - ISBN 978-0-521-85718-5.

Abstract : The deep oceans and global seafloor are truly Earth's last frontier. They remain largely unexplored, yet are critical to our survival on this planet. This magnificent, full-color volume transports you to bizarre landscapes hosting exotic life forms that rival the most imaginative science fiction. Starting with a historical summary of seafloor exploration and the developing technologies used to study this extreme environment, it then describes the distinctive geologic components of the Earth's ocean floor and the unusual biological communities found along the mid-ocean ridges. This is an indispensable reference for researchers, teachers, and students of marine science, and a visually stunning resource that will enlighten and intrigue oceanographers and enthusiasts alike. A suite of online resources, including photographs and video clips, combine with the book to provide fascinating insights into the hidden world of seafloor geology and biology using the latest deep-sea imaging and geological concepts.
Sommaire : Preface : new views of Earth from below the oceans .- 1. Entering the abyss: oceanographic technology - 2. The Earth beneath the sea - 3. Diversity in seafloor spreading - 4. Hydrothermal vents - 5. Submarine volcanism: fire beneath the sea - 6. Dike intrusion and sheeted dike complexes - 7. Gabbroic rocks: clues to magmatic processes - 8. Windows into mantle processes: peridotites - 9. Future research - Index

Inv. OCA-SA-009329 – Cote KAR-01 (Géoazur library, Sophia-Antipolis)

Carte en relief. Les Alpes Françaises et ses massifs alpins. 1/650 000 / **3Dmap (Domont)** , Auteur . - Domont : 3Dmap, 2016. - 1 carte : en coul. et en relief; 61 cm x 41cm - ISBN 978-2-9557729-0-4. – Carte murale en relief

Information included on the map :
- Hydrological and natural data
– Administrative data (Roads, municipalities)
- UNESCO World Heritage sites - The most beautiful villages in France
- Legendary monuments and castles – Famous ski resorts - Thermal resorts
– Waterfalls, gorges and caves
- Glaciers and summits
– The Alpine massifs • GR Long hikes, Vias Ferratas
- Scale 1: 650,000

Inv. OCA-SA-009356 – Cote CARTE-1472 (Géoazur library, Sophia-Antipolis)

# NEW TITLES

Astronomy / Astrophysics

Histoire d'une science impossible : cosmologie et épistémologie de 1917 à nos jours / <u>Leconte</u>, Gauvain, Auteur; <u>Université Paris 1 Panthéon-Sorbonne (1971-....)</u>, Mécène (obsolète) . - Editions de la Sorbonne, 2023. - 1 vol. (280 p.) - ISBN 979-10-351-0851-9.

Abstract : « Au lieu d'une induction des principes théoriques à partir des phénomènes empiriques, on ne nous offre qu'une pseudo-science cosmythologique invertébrée et on nous enjoint de nous suicider pour éviter de mourir. » Herbert Dingle, 1937. - « L'idée d'un Univers unique, d'un Tout vraiment solidaire, correspond à une totalisation négligente, à une unification trop tôt faite, bref à une définition non systématique d'un système. » Gaston Bachelard, 1939 . - « Ce n'est pas de la science, d'après ma conception. » Karl Popper, 1994. - « La bonne méthodologie scientifique ne consiste pas en un ensemble de règles abstraites dictées par des philosophes. » Leonard Susskind, 2008 . - De quoi parlent ces scientifiques et ces philosophes en des termes aussi forts ? De la cosmologie physique, une science très particulière tant par son objet - l'Univers - que par son histoire. Elle a en effet connu, depuis un siècle, de vives controverses non seulement scientifiques mais aussi philosophiques. Comment une connaissance de la structure englobant tous les phénomènes physiques est-elle possible ? Qu'est-ce qu'une hypothèse scientifique légitime ? Une théorie doit-elle être fondée sur des observations ? Comment différencier la science de l'Univers de la métaphysique ? Ces questions, habituellement réservées aux ouvrages de philosophie, ont été débattues par les cosmologistes dans les plus prestigieuses revues scientifiques. Ce livre retrace l'histoire de ces controverses, depuis la question de l'expansion de l'Univers jusqu'à celle des univers multiples, afin de démontrer par l'exemple l'intérêt des interactions entre science et philosophie.

Table of contents : 1. La réinvention de l'Univers (1917-1932) - 2. La cosmologie est-elle une science (comme les autres) ? (1932-1939) - 3. La controverse sur le Big Bang (1948-1968) - 4. La théorie de l'inflation (1972-2000) - 5. Expliquer et prédire dans le multivers - 6. Annexes

Inv. OCA-NI- 010 – Cote 010 (OCA library , Nice Mont-Gros)
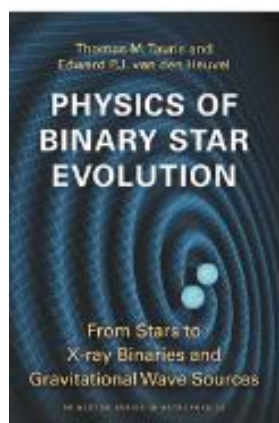
Physics of Binary Star Evolution : From Stars to X-ray Binaries and Gravitational Wave Sources   / <u>Tauris</u>, Thomas M. ; <u>Van den Heuvel, E.P.J.</u>, Auteurs . - <u>Princeton, N.J. : Princeton University Press</u>, 2023 . - ISBN 978-0-691-17908-7.

Abstract : Physics of Binary Star Evolution is an up-to-date textbook on the astrophysics and evolution of binary star systems. Theoretical astrophysicists Thomas Tauris and Edward van den Heuvel cover a wide range of phenomena and processes, including mass transfer and ejection, common envelopes, novae and supernovae, X-ray binaries, millisecond radio pulsars, and gravitational wave (GW) sources, and their links to stellar evolution. The authors walk through the observed properties and evolution of different types of binaries, with special emphasis on those containing compact objects (neutron stars, black holes, and white dwarfs). Attention is given to the formation mechanisms of GW sources--merging double neutron stars and black holes as well as ultra-compact GW binaries hosting white dwarfs--and to the progenitors of these sources and how they are observed with radio telescopes, X-ray satellites, and GW detectors (LIGO, Virgo, KAGRA, Einstein Telescope, Cosmic Explorer, and LISA). Supported by illustrations, equations, and exercises, Physics of Binary Star Evolution combines theory and observations to guide readers through the wonders of a field that will play a central role in modern astrophysics for decades to come. 465 equations, 47 tables, and 350+ figures More than 80 exercises (analytical, numerical, and computational) Over 2,500 extensive, up-to-date references(4ème de couverture)

Table of contents : 1 Introduction: The Role of Binary Star Evolution in Astrophysics - 2 Historical Notes on Binary Star Discover - 3 Orbits and Masses of Spectroscopic Binaries - 4 Mass Transfer and Mass Loss in Binary Systems - 5 Observed Binaries with Non-degenerate or White Dwarf Components - 6 Observed Binaries with Accreting Neutron Stars and Black Holes: X-ray Binaries - 7 Observed Properties of X-ray Binaries in More Detail - 8 Evolution of Single Stars - 9 Stellar Evolution in Binaries - 10 Formation and Evolution of High-mass X-ray Binaries - 11 Formation and Evolution of Low-mass X-ray Binaries - 12 Dynamical Formation of Compact Star Binaries in Dense Star Clusters - 13 Supernovae in Binaries - 14 Binary and Millisecond Pulsars Accretion-induced Collapse - 15 Gravitational Waves from Binary Compact Objects - 16 Binary Population Synthesis and Statistics - Acknowledgments - Answers to Exercises - List of Acronyms - References - Index
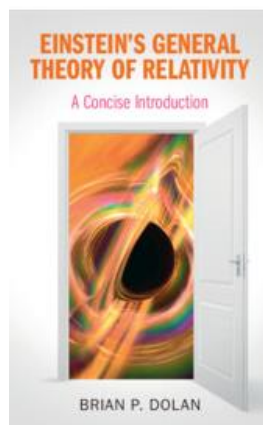
Inv. OCA-VV-002142 – Cote E2-2142 (Lagrange library, Valrose)

Inv. OCA-NI- 010687 – Cote 010687 (OCA library, Nice Mont-Gros)

# NEW TITLES

Mathematics / Physics

Einstein's General Theory of Relativity : A Concise Introduction / **Dolan**, Brian P., Auteur . - Cambridge University Press (CUP), cop. 2023. - 1 vol. (x-203 p.) - ISBN 978-1-00-926373-3.

Abstract : Einstein's general theory of relativity can be a notoriously difficult subject for students approaching it for the first time, with arcane mathematical concepts such as connection coefficients and tensors adorned with a forest of indices. This book is an elementary introduction to Einstein's theory and the physics of curved space-times that avoids these complications as much as possible. Its first half describes the physics of black holes, gravitational waves and the expanding Universe, without using tensors. Only in the second half are Einstein's field equations derived and used to explain the dynamical evolution of the early Universe and the creation of the first elements. Each chapter concludes with problem sets and technical mathematical details are given in the appendices. This short text is intended for undergraduate physics students who have taken courses in special relativity and advanced mechanics. (4ème de couverture)

Table of contents : 1 - Introduction (pp 1-13) - 2. Metrics (pp 14-43) - 3 - Geodesics (pp 44-84) - 4 - The Geometry of Curved Spaces (pp 85-118) - 5 - Einstein's Field Equations (pp 119-125) - 6 - Solutions of Einstein's Equations in Empty Space (pp 126-138) - 7 - Cosmology and the Big Bang (pp 139-176) - Appendix A - Tensors of Type (p, q) (pp 177-177) - Appendix B - The Riemann Tensor (pp 178-186) - Appendix C - The Energy-Momentum Tensor (pp 187-191) - Appendix D - The Schwarzschild Metric (pp 192-194) - Appendix E - Robertson-Walker Space-Time (pp 195-197) - References (pp 198-198).

Inv. OCA-NI- 010657 – Cote 010657 (OCA library, Nice Mont-Gros)
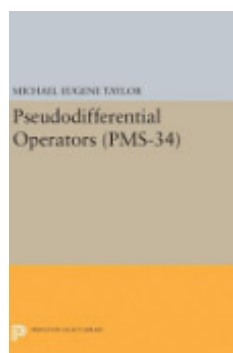
Pseudodifferential Operators (PMS-34) / **Taylor**, Michael Eugene, Auteur . - Princeton University Press, [2017], cop. 1981. - 1 vol. (xi-451 p)

Abstract : Here Michael Taylor develops pseudodifferential operators as a tool for treating problems in linear partial differential equations, including existence, uniqueness, and estimates of smoothness, as well as other qualitative properties. Originally published in 1981.

Inv. OCA-SA-009309 – Cote TAY-04 (Géoazur library, Sophia-Antipolis)
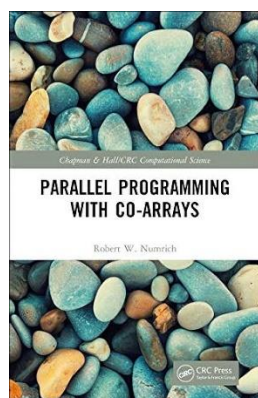
Parallel Programming with Co-arrays / Numrich, Robert W., Auteur . - London ; Boca Raton, Fla. : Chapman and Hall, 2020. - 1 vol. (viii-209 p.): ill.; 25 cm. - ISBN 978-0-367-57109-2.

Abstract : This book describes the basic techniques used to design parallel algorithms for high-performance, scientific computing. It is intended for upper-level undergraduate students and graduate students who need to develop parallel codes with little or no previous introduction to parallel computing. It is also intended as a reference manual for researchers active in the field of scientific computing. All the algorithms in the book are based on partition operators. These operators provide a unifying principle that fits seemingly disparate techniques into an overall framework for algorithm design. The book uses the co-array programming model to illustrate how to write code for concrete examples, but it emphasizes that the important concepts for algorithm design are independent of the programming model.

Table of contents : 1.Prologue - 2.The co-array programming model - 3. Partition operators - 4. Reverse partition operators - 5. Collective operations - 6. Performance modeling - 7. Partitioned matrix classes - 8. Iterative solvers for sparse matrices - 9. Blocked matrices - 10. The matrix- transpose operation - 11. The halo-exchange operation - 12. Subpartition operators - 13. Blocked linear algebra - 14. The finite element method - 15. Graph algorithms - 16. Epilogue A brief reference manual for the co- array model - Bibliography - Index

Inv. OCA-SA-009328 – Cote NUM-01 (Géoazur library, Sophia-Antipolis)

NEW TITLES

Mathematics / Physics
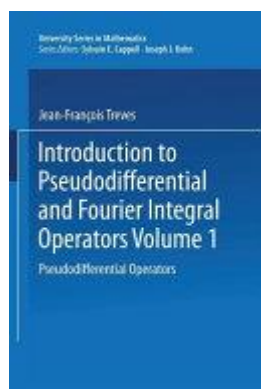
Introduction to pseudodifferential and Fourier integral operators, Volume 1. **Pseudodifferential Operators** / **Trèves,** François, Auteur . - New York : Plenum Press, 2013. - 1 vol. (XXXII-299 p.; 24 cm. - (The University series in mathematics) . **-** Reprod. de l'édition originale de : "New York : Plenum Press, 1980" . - ISBN 978-1-4684-8782-4.

Abstract : I have tried in this book to describe those aspects of pseudodifferential and Fourier integral operator theory whose usefulness seems proven and which, from the viewpoint of organization and "presentability," appear to have stabilized. Since, in my opinion, the main justification for studying these operators is pragmatic, much attention has been paid to explaining their handling and to giving examples of their use. Thus the theoretical chapters usually begin with a section in which the construction of special solutions of linear partial differential equations is carried out, constructions from which the subsequent theory has emerged and which continue to motivate it: parametrices of elliptic equations in Chapter I (introducing pseudodifferen tial operators of type 1, 0, which here are called standard), of hypoelliptic equations in Chapter IV (devoted to pseudodifferential operators of type p, 8), fundamental solutions of strongly hyperbolic Cauchy problems in Chap ter VI (which introduces, from a "naive" standpoint, Fourier integral operators), and of certain nonhyperbolic forward Cauchy problems in Chapter X (Fourier integral operators with complex phase). Several chapters-II, III, IX, XI, and XII-are devoted entirely to applications. Chapter II provides all the facts about pseudodifferential operators needed in the proof of the Atiyah-Singer index theorem, then goes on to present part of the results of A. Calderon on uniqueness in the Cauchy problem, and ends with a new proof (due to J. J. Kohn) of the celebrated sum-of-squares theorem of L. Hormander, a proof that beautifully demon strates the advantages of using pseudodifferential operators.(4^e de couverture)

Table of contents (5 chap.) : Standard Pseudodifferential Operators (Pages 1-81) - Special Topics and Applications (Pages 83-128) - Application to Boundary Problems for Elliptic Equations (Pages 129-216) - Pseudodifferential Operators of Type (?,?) (Pages 217-237) - Analytic Pseudodifferential Operators (Pages 239-299) - Back Matter (Pages xxix-xxxix)

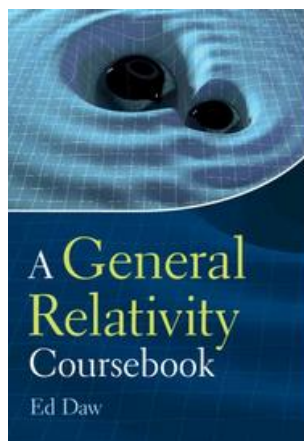**Inv. OCA-SA-009330 – Cote TRE-07 (Géoazur library, Sophia-Antipolis)**

Introduction to pseudodifferential and Fourier integral operators, Volume 2 **Fourier integral operators** / **Trèves**, François, Auteur . - New York : Plenum Press, 1982. - 1 vol. (p. 301-649 – XXV). - ISBN 978-0-306-40404-7.

Inv. OCA-SA-009331 – Cote TRE-08 (Géoazur library, Sophia-Antipolis)

NEW TITLES

Mathematics / Physics

A General Relativity Coursebook / **Daw**, **Ed.**, Auteur . - Cambridge University Press (CUP), cop. 2023. - 1 vol. (x-197 p.) - ISBN 978-1-00-924244-8.

Abstract : General relativity is a subject that most undergraduates in physics are particularly curious about, but it has a reputation for being very difficult. This book provides as gentle an introduction to general relativity as possible, leading you through the necessary mathematics in order to arrive at important results. Of course, you cannot avoid the mathematics of general relativity altogether, but, using this book, you can gain an appreciation of tensors and differential geometry at a pace you can keep up with. Early chapters build up to a complete derivation of Einstein's Equations, while the final chapters cover the key applications on black holes, cosmology and gravitational waves. It is designed as a coursebook with just enough material to cover in a one-semester undergraduate class, but it is also accessible to any numerate readers who wish to appreciate the power and beauty of Einstein's creation for themselves. (4e de couverture)

Table of contents : 1 - The Principle of Equivalence (pp 1-18) - 2 - Tensors (pp 19-42) - 3 - Matter in Space-Time (pp 43-52) - 4 - Geodesics (pp 53-82) - 5 - Einstein's Equations (pp 83-99) - 6 - Schwarzschild's Solution (pp 100-130) - 7 - Cosmology (pp 131-150) - 8 - Gravitational Waves (pp 151-178) - 9 - A Guide to Further Reading (pp 179-191) - References (pp 192-194) - Index (pp 195-197)

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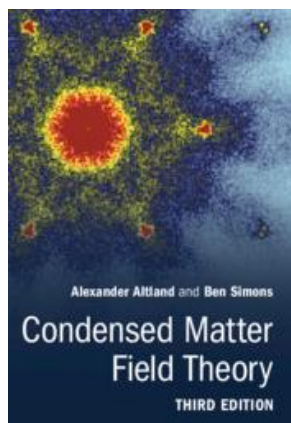
Condensed matter field theory / **Altland,** Alexander, Auteur; Simons, Ben, Auteur . - 3rd edition. - Cambridge University Press (CUP), cop. 2023. - 1 vol. (xii-812 p.). - ISBN 978-1-108-49460-1.

Abstract : The methods of quantum field theory underpin many conceptual advances in contemporary condensed matter physics and neighbouring fields. This book provides a praxis-oriented and pedagogical introduction to quantum field theory in many-particle physics, emphasizing the application of theory to real physical systems. This third edition is organized into two parts: the first half of the text presents a streamlined introduction, elevating readers to a level where they can engage with contemporary research literature, from the introduction of many-body techniques and functional integration to renormalization group methods, and the second half addresses a range of advanced topics including modern aspects of gauge theory, topological and relativistic quantum matter, and condensed matter physics out of thermal equilibrium. At all stages, the text seeks a balance between methodological aspects of quantum field theory and practical applications. Extended problems with worked solutions provide a bridge between formal theory and a research-oriented approach. (4ème de couverture)

Table of contents : Frontmatter (pp i-iv) - Contents (pp v-viii) - Preface (pp ix-xiv) - 1 - From particles to fields (pp 1-38) - 2 - Second quantization (pp 39-94) - 3 - Feynman path integral (pp 95-155) - 4 - Functional field integral (pp 156-192) - 5 - Perturbation theory (pp 193-241) - 6 - Broken symmetry and collective phenomena (pp 242-359) - 7 - Response functions (pp 360-408) - 8 - The renormalization group (pp 409-495) - 9 - Topology (pp 496-601) - 10 - Nonequilibrium (classical) (pp 602-692) - 11 - Nonequilibrium (quantum) (pp 693-765) - Index (pp 766-770)

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NEW TITLES

Mathematics / Physics
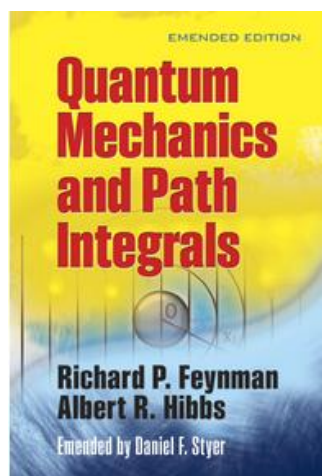
Quantum mechanics and path integrals / **Feynman**, Richard Phillips, Auteur ; Hibbs, Albert R., Auteur ; Styer, Daniel F., Editeur scientifique . - Emended edition. - New York : Dover Publications, 2010, cop. 1965. - 1 vol. (XII-371 p.): ill.; 23 cm. - : ISBN : 0-486-47722-3

Abstract : From astrophysics to condensed matter theory, nearly all of modern physics employs the path integral technique. In this presentation, the developer of path integrals and one of the best-known scientists of all time, Nobel Prize-winning physicist Richard P. Feynman, presents unique insights into this method and its applications. Avoiding dense, complicated descriptions, Feynman articulates his celebrated theory in a clear, concise manner, maintaining a perfect balance between mathematics and physics. **This emended edition of the original 1965 publication corrects hundreds of typographical errors and recasts many equations for clearer comprehension**. It retains the original's verve and spirit, and it is approved and endorsed by the Feynman family. The opening chapters explore the fundamental concepts of quantum mechanics and introduce path integrals. Subsequent chapters cover more advanced topics, including the perturbation method, quantum electrodynamics, and the relation of path integrals to statistical mechanics. In addition to its merit as a text for graduate courses in physics, this volume serves as an excellent resource for professionals.

Table of contents : The fundamental concepts of quantum mechanics -- The quantum-mechanical law of motion -- Developing the concepts with special examples -- The Schrödinger description of quantum mechanics -- Measurements and operators -- The perturbation method in quantum mechanics -- Transition elements -- Harmonic oscillators -- Quantum electrodynamics -- Statistical mechanics -- The variational method -- Other problems in probability.

Inv. OCA-NI- 010695 – **Cote 010695 (OCA library, Nice Mont-Gros)**
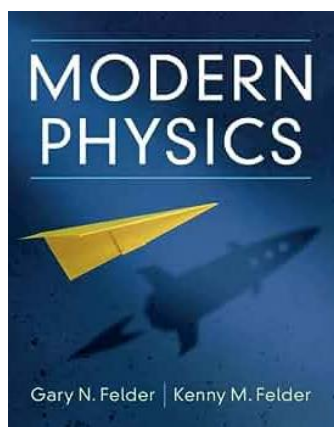
Modern physics / **Felder**, Gary N., Auteur; Felder, Kenny M., Auteur . - Cambridge University Press (CUP), cop. 2023. - 1 vol. (xix-737 p.. - ISBN 978-1-108-84289-1.

Abstract : Modern Physics intertwines active learning pedagogy with the material typically covered in an introductory survey, from the basics of relativity and quantum mechanics through recent developments in particle physics and cosmology. The flexible approach taken by the authors allows instructors to easily incorporate as much or as little active learning into their teaching as they choose. Chapters are enhanced by 'Discovery' and 'Active Reading' exercises to guide students through key ideas before or during class, while 'ConcepTests' help check student understanding and stimulate classroom discussions. Each chapter also includes extensive assessment material, with a range of basic comprehension questions, drill and practice calculations, computer-based problems, and explorations of advanced applications. A test bank and interactive animations as well as other support for instructors and students are available online. Students are engaged by an accessible and lively writing style, thorough explanations, 'Math Interludes' which account for varying levels of skill and experience, and advanced topics to further pique their interest in physics. (site web de l'éditeur)

Table of contents : Preface - 1. Relativity I: Time, space, and motion - 2. Relativity II: dynamics - 3. The quantum revolution I: from light waves to photons - 4. The quantum revolution II: matter and wavefunctions - 5. The Schrödinger equation - 6. Unbound states - 7. The hydrogen atom - 8. Atoms - 9. Molecules - 10. Statistical mechanics - 11. Solids - 12. The atomic nucleus - 13. Particle physics - 14. Cosmology - Appendices - Index.

Inv. OCA-NI- 010698 – **Cote 010698 (OCA library, Nice Mont-Gros)**

NEW TITLES

Mathematics / Physics
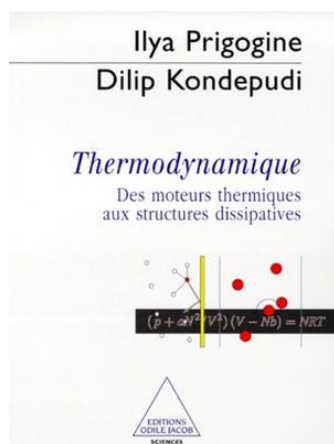
Thermodynamique, des moteurs thermiques aux structures dissipatives / **Prigogine**, Ilya, Auteur; **Kondepudi**, Dilip K., Auteur; Pahaut, Serge, Traducteur . - Paris : Odile Jacob, cop. 1999. - 1 vol. (366 p.) - ISBN 978-2-7381-0646-9.

Abstract : « Il s'agit de La Thermodynamique de Prigogine, autrement dit de son livre fondamental qui sous-tend tous ses essais philosophiques. D'ailleurs, il conclut par quelques pages sur le temps qui reprennent ses conclusions de La Fin des certitudes. Chacun des vingt chapitres comporte à la fin une série d'exemples et une série d'exercices non corrigés afin de familiariser le lecteur avec le matériel théorique présenté. Après avoir expliqué l'application de la thermodynamique aux réactions chimiques, il expose sa théorie des structures dissipatives comme le sens profond de la discipline qu'elle implique tout entière et dont elle fait comprendre le ressort caché. » (4e de couverture)

Inv. OCA-NI- 010699 – Cote 010699 (OCA Library, Nice Mont-Gros)

General / Science
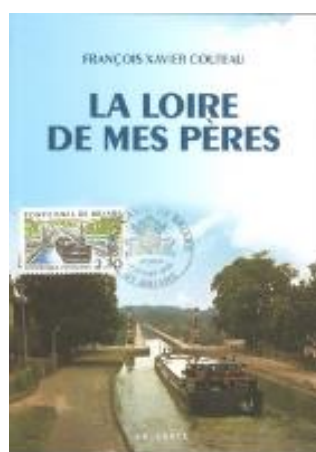
La Loire de mes pères / **Couteau,** François Xavier, Auteur . - La Crèche : La Geste, 2023. - 1 vol. (300 p.): ill., phot. en coul.; 22 cm. - ISBN 979-10-353-2140-6.

Abstract : "La Loire de mes pères est l'histoire d'une saga familiale dont le fleuve ligérien, tantôt sauvage, tantôt canalisé, superbe toujours, devient l'allégorie d'une navigation dans le temps.François Xavier Couteau décrit une Loire éternelle depuis les Mauges d'où proviennent ses ancêtres, closiers et sabotiers en forêt, puis artisans de village. Se fixant dans le bocage, certains au Puy du fou, ils ont traversés les guerre de Vendée. Au XIXe siècle, les prémices de l'industrialisation et le développement de l'instruction publique façonneront parmi leurs descendants d'autres destins, forgeant des générations d'intellectuels. Au XXe siècle, la quête de la connaissance poussera l'un d'eux, le père de l'auteur, vers les étoiles, aux confins de l'univers.... Un livre vivant et plein d'humanité" (Source : 4e de couverture)

See in particular : the Life of Paul Couteau (1923-2014) astronomer at the Nice observatory (p. 212-240) and   the photos . : Article de Nice Matin (p.234) - Site de l'observatoire de Nice (photo Marc Heller) (p.235) - La grande coupole Bischoffsheim (p.235) - Appolon [restauré à la feuille d'or] (p.236) - La lunette avec son objectif de 76 cm : photo Maxime Couteau (p.236) - Paul Couteau à l'oculaire (p.237) - Vue de Nice depuis l'observatoire (p.238) - La maison familiale sur le site de l'observatoire [= maisons jumelles] (p.238) - Photographie des enfants de Paul Couteau pris à la grande coupole (p.239) - Voir aussi présentation / hommage de l'auteur à Marie-Madeleine (19..-2022) sa mère, épouse de Paul Couteau (p.282) suivi d'une brève Histoire des enfants de Paul Couteau (p.283)

Inv. OCA-NI-010660 – Cote 010660 (OCA library, Nice Mont-Gros)

NEW TITLES

General / Science

Henri Poincaré et la relativité : 1900, 1905, 1912 : trois moments de sa reflexion / **Bracco**, Christian , Auteur; **Provost**, Jean-Pierre , Auteur
. - London [UK] : ISTE Editions Ltd, 2023. - 1 vol. (vii-249 p). - ISBN 978-1-78405-950-7

Abstract: « Savant universaliste comme Gauss, dont il est considéré comme l'égal pour les mathématiques, Henri Poincaré (1854-1912) a promu l'importance de l'idée de relativité en physique dès 1889 à propos de l'optique de Fresnel. Il y associe en 1900 le « temps local » de Lorentz, puis en 1905 les notions modernes de « groupe de symétrie » et d'« invariant » qu'il applique à l'électromagnétisme, la dynamique et la gravitation.
Cet ouvrage introduit et commente en détail l'article méconnu de 1900 de Poincaré en hommage à Lorentz, puis sa communication de 1905 à l'Académie des sciences et ses dernières réflexions en 1912 sur la signification physique du principe de relativité. Il offre pour la première fois au lecteur un résumé complet et fidèle du difficile Mémoire de Palerme de 1905 où sont développés les aspects mathématiques. Une introduction générale permet de mieux saisir la personnalité singulière de Poincaré et la place qu'occupe aujourd'hui la relativité en physique. » (4ème de couverture)

Description of the structure of the book : « Le livre est composé de trois parties, précédées d'une introduction générale et d'une préface précisant l'intention de l'ouvrage et sa nouveauté. La première partie traite d'un article relativement méconnu de Poincaré : "La théorie de Lorentz et le principe de réaction" (jubilé pour Lorentz en 1900). À partir des travaux de Lorentz et de leur problématique encore liée à l'éther, Poincaré développe une relativité au premier ordre en V/c où les principes généraux de la physique issus de la mécanique sont étendus à l'électrodynamique. Nous avons reproduit le texte original de Poincaré accompagné de nombreuses notes qui précisent sa démarche et rendent les calculs plus lisibles pour un lecteur contemporain. La seconde partie reproduit le court texte du CRAS du 5 juin 1905 "Sur la dynamique de l'électron", avec des notes annonçant le contenu du Mémoire de Palerme qui suivra quelques semaines plus tard. En complément de ce texte, nous proposons un résumé du Mémoire qui reprend (avec des notations modernes) les calculs de Poincaré et respecte sa démarche et ses commentaires. Poincaré obtient l'invariance des équations de Maxwell et de la loi dynamique de Lorentz par les "transformations de Lorentz" en s'attachant à leur propriété de groupe, donnant la transformation correcte des forces et la première expression du lagrangien libre relativiste. La troisième partie traite de qui allait être l'avant-dernière conférence de Poincaré, "L'espace et le temps", le 4 mai 1912. Poincaré y revient sur la "relativité physique" et livre une analyse originale de la validité du principe de relativité : un principe local. Chacune des trois parties est précédée d'une introduction spécifique permettant de placer les contributions de Poincaré dans leur contexte historique et de les rendre accessibles à tout lecteur cultivé non spécialiste. Six annexes et des photographies viennent compléter l'ouvrage. Voir la table des matières et l'introduction : https://www.istegroup.com/fr/produit/henri-poincare-et-la-relativite-1900-1905-1912" (source : auteurs)

Inv. OCA-NI-010700 – Cote 010700 (OCA library, Nice Mont-Gros)
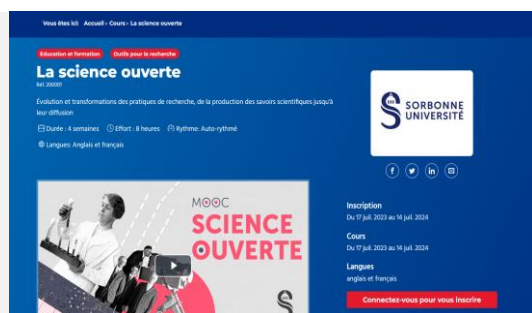
GUIDES & TOOLS

OPEN SCIENCE

Bibliothèque de la Science ouverte

Source : MESR, Ouvrir la science

Contents : reference resources on open science : to understand and in practice. Site available in French and English

Link (FR) : https://www.ouvrirlascience.fr/category/ressources
Link (GB) : https://www.ouvrirlascience.fr/category/resources/

MOOC Science ouverte (Version 2)

Source : **Alliance Sorbonne université**

Registration: from July 17, 2023 to July 14, 2024
Course : from Jul 17, 2023 to Jul 14, 2024

Languages : french and english

Course outline (modules) : Introduction – Publication – Research data – Evaluation, trust, integrity – Participatory science – Science and society – Perspective This version 2 now offers content on scientific integrity

Link : https://www.fun-mooc.fr/fr/cours/la-science-ouverte/

La différence entre accès gratuit et open access

Source : Institut Pasteur, 12 oct. 2023

Contents : quelle est la différence entre accès gratuit et Open Access ? Qu'est-ce que cela implique pour l'auteur et le lecteur ?

Link : https://openscience.pasteur.fr/2023/10/12/la-difference-entre-acces-gratuit-et-open-access/

GUIDES & TOOLS

OPEN SCIENCE

Webinaire Udice du 26 sept. 2023 - Comment préserver les droits d'auteur sur mes travaux de recherche ?

Source : **UDICE.org** (an alliance of 10 major French universities) ,   29 sept. 2023

Contents : The Open Science working group organized a webinar to explore the mechanisms for transferring copyright to publishers and the solutions proposed to retain the rights to re-use its research work according to the principles of cOAlitionS. You will find the presentation and the complete recording of the webinar
Link : https://www.udice.org/2023/09/29/comment-preserver-les-droits-dauteur-sur-mes-travaux-de-recherche/

Données et recherches participatives : Enjeux et recommandations issues d'exemples de projets de recherches participatives **/** Kenneth Maussang, Hélène Jouguet, Thomas Jouneau, Jean-François Martin, Nicolas Larrousse

Source : Comité pour la science ouverte (CoSo), 28 sept. 2023 ⟨hal-04221292⟩

Contents : The objective of this document is to provide recommendations for researchers who wish to initiate a participatory research project, whatever the discipline.

Link :   https://hal-lara.archives-ouvertes.fr/OUVRIR-LA-SCIENCE/hal-04221292v1

GUIDES & TOOLS

OPEN SCIENCE

Guide proposé par le GTSO Couperin - Décrire ses jeux de données dans les règles du FAIR : accompagner les chercheurs à l'utilisation des métadonnées / **Bracco**, Laetitia ; **Brenel,** Mireille ; Du Pasquier, Delphine ; Gauvrit, Gaëlle ; Heude, Cyril ; Lemeltier, Doriane ; Rousselot, Céline ; Zuindeau, Luc

Source : Zenodo.org, sept. 2023

Contents : This practical sheet is intended for higher education and research establishments and organizations. Its aim is to facilitate support for researchers in their work of documenting research data.

Link : https://zenodo.org/records/8376581

USEFUL LINKS

SCIENTIFIC TRAVEL STORIES

2 exhibitions, *Conquering the unknown : journey through the history of exploration through scholarly travel stories from the Heritage Library of the Irish Cultural Center* and *Horizon Lines : travel and scholarly relationships, 15th-20th century* were held respectively at the Irish Cultural Center and at the Sainte-Geneviève library from September to December 2022, as part of the thematic year on scholarly travel organized by the Sainte-Geneviève library (source : BNF)

 Both exhibitions are accessible online on each site

Carnets de voyages

Source : Bibliothèque Sainte Geneviève **, Paris**

Content : journey through the collections, meeting famous or anonymous travelers or in search of trade routes

Link : https://genovefa.bsg.univ-paris3.fr/s/voyages-savants/page/Carnet_de_Voyages

USEFUL LINKS

## SCIENTIFIC TRAVEL STORIES

Conquérir l'inconnu

Source : Centre culturel irlandais. Portail des collections

Contents : history of exploration through scientific travel stories from the Heritage Library of the Irish Cultural Center

Link : https://archives.centreculturelirlandais.com/espace-numerique/expositions-virtuelles/conquerir-linconnu

SCIENTIFIC AND TECHNICAL INFORMATION NEWS

SCIENTIFIC HERITAGE (SAFEGARDING & DISTRIBUTION)
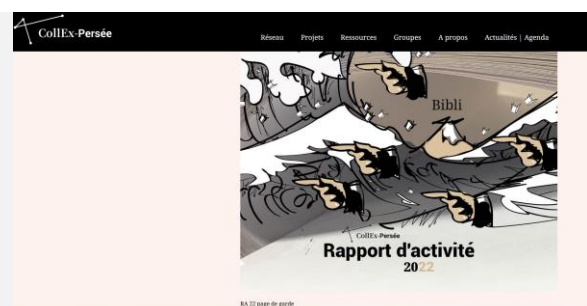
Collex-Persée. Rapport d'activité 2022

Source : Pierre Paul Zaliot, président du Groupement d'intérêt scientifique (GIS) CollEx-Persée, Mis en ligne le 4 octobre 2023

Contents : The GIS Collex-Persée, created in 2017, aims to facilitate the digitization of French scientific heritage and its conservation. It supports collaborative approaches to digitization, metadata enrichment and development of corpus services. This 5th report presents the 2022 activity results. It establishes a roadmap for the following years with 4 base programs: enriched digitization (led by Persée), mapping and reporting, scientific archives, and acquisitions.

Link : https://www.collexpersee.eu/rapport-dactivite-2022/

SCIENTIFIC AND TECHNICAL INFORMATION NEWS

FRENCH UNIVERSITY LIBRARIES (ROLES)

Arabesque n. 111, oct-nov-dec 2023 : Sciences et société : un nouveau champ d'action pour les bibliothèques

Source : Agence bibliographique de l'Enseignement supérieur (ABES)

Contents : Strengthening the visibility of science in society as well as the dialogue between science and citizens has become a societal issue. This file studies the role that libraries can play in this process.

Link : **https://abes.fr/publications/revue-arabesques/arabesques-111/**

Livre blanc de la documentation dans l'enseignement supérieur et la recherche — Plan BU 2030

Source : ADBU , 22 sept. 2023

Contents : evaluation report of French university libraries. Comparisons with other European countries

Link : https://www.enssib.fr/bibliotheque-numerique/notices/71519-livre-blanc-de-la-documentation-dans-l-enseignement-superieur-et-la-recherche

OBSERVATOIRE DE LA CÔTE D'AZUR
UNIVERSITÉ CÔTE D'AZUR

Library