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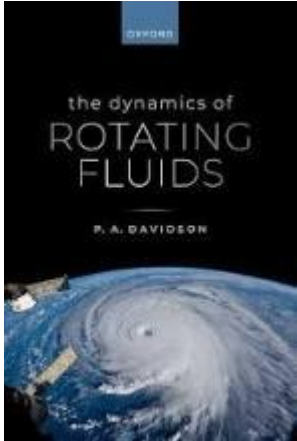
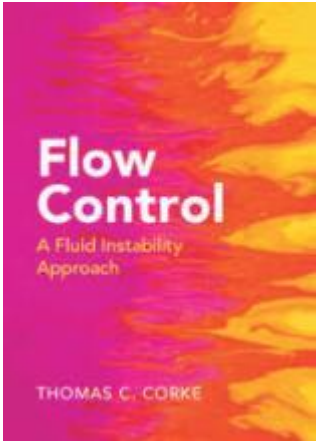
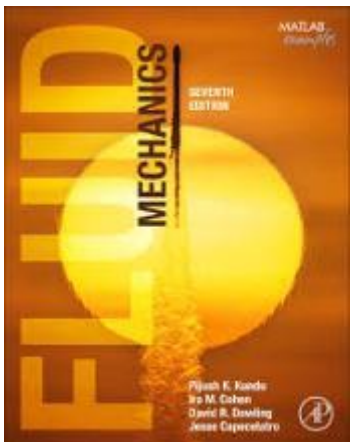
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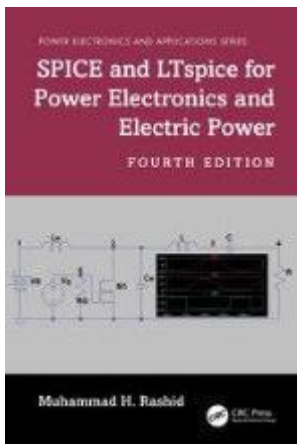
# APPLIED MECHANICS

1		<p>Dynamics of rotating fluids by Davidson P. A., Oxford: Oxford University Press, 2024. xvi, 510 p. Includes index (p. 507–510)</p> <p>ISBN: 9780198886310</p> <p>Subject Terms: Fluid dynamics; Inertial waves; Axisymmetric domain; Astrophysics; Geodynamo theory</p> <p>532.527 DAV-D</p> <p>Barcode: 180242-180243; CL; AM</p> <p><a href="#">Click here for details.</a></p>
2		<p>Flow control: a fluid instability approach by Thomas C. Corke, New York: Cambridge University Press, 2024. xiii, 466 p. Includes References and index ( p. 432-466)</p> <p>ISBN: 9781108832366</p> <p>Subject Terms: Sensors; Bluff body waves; Flow control; Velocity sensors; 3D boundary layers</p> <p>532.5 COR-F</p> <p>Barcode: 180293; CL</p> <p><a href="#">Click here for details.</a></p>
3		<p>Fluid mechanics by Pijush K. Kundu...(et al.), 7th ed., London: Elsevier, 2025. xxi, 695 p. Includes index (p. 687-695)</p> <p>ISBN: 9780128198070</p> <p>Subject Terms: Vorticity dynamics; Aerodynamics; Kinematics; Computational fluid mechanics; Turbulence</p> <p>532 -FLU</p> <p>Barcode: 180300; CL</p> <p><a href="#">Click here for details.</a></p>
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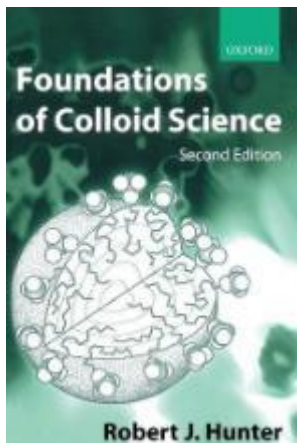
## ATMOSPHERIC SCIENCES

4		<p>Remote sensing of climate edited by Timothy Dube... (et al.), Amsterdam: Elsevier, 2024. xxi, 434 p. Includes index (p. 419-434)</p>
		<p>ISBN: 9780443217319</p>
		<p>Subject Terms: Climatology - Remote sensing; Climatology - Water resources; Climate change; Climate management; Climate variability analysis</p>
		<p>528.8:551.58 -REM</p>
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## AUTOMOTIVE RESEARCH AND TRIBOLOGY

5		<p>SPICE and LTspice for power electronics and electric power by Muhammad H. Rashid, 4th ed., Boca Raton: CRC Press, 2025. xiii, 635 p., - Power electronics and applications series. Includes index (p. 627-635)</p>
		<p>ISBN: 9781032256610</p>
		<p>Subject Terms: Power electronics; Engineering &amp; technology; Circuits &amp; devices; Electrical &amp; electronic engineering; Simulation and convergence</p>
		<p>621.311 RAS-S</p>
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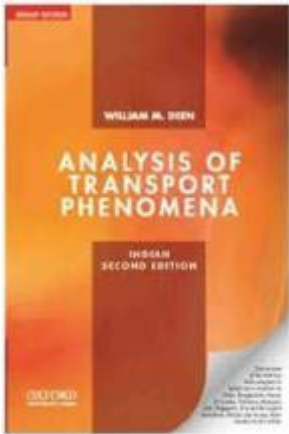
## BIOCHEMICAL ENGINEERING & BIOTECHNOLOGY

6		<p>Foundations of colloid science by Robert J. Hunter, 2nd ed., Oxford: Oxford University Press, 2001. xii, 806 p. Includes Index p. (787-806)</p>
		<p>ISBN: 9780198505020</p>
		<p>Subject Terms: Colloid; Colloidal dispersions; Electrical double layer; Micellar dynamics; Hamaker theory</p>
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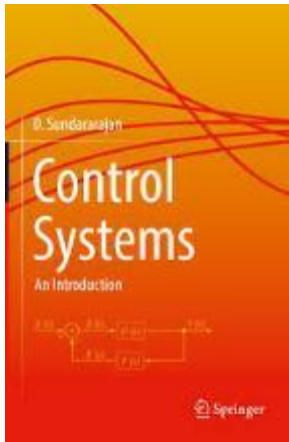

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8		<p>Lal Bahadur Shastri: past forward by Sunil Shastri, New Delhi: Konark Publishers, 2011. xii, 145 p.</p> <p>ISBN: 9788122007923</p> <p>Subject Terms: Pime minister - India - biography; India - Economic policies; Leadership - India -History; Green revolution - India - History; India - Social conditions</p> <p>929LAL SHA-L</p> <p>Barcode: 180303; CL</p> <p><a href="#">Click here for details.</a></p>
9		<p>Law relating to public service by Samaraditya Pal and Vineeta Meharia, 4th ed., Gurgaon: LexisNexis, 2021. clxiv,1024 p. Includes index (p. 997-1024)</p> <p>ISBN: 9789389991567</p> <p>Subject Terms: Civil services- India; Public policy; Administrative justice; Government services; Services law</p> <p>342:35 PAL-L</p> <p>Barcode: 180223; CL</p> <p><a href="#">Click here for details.</a></p>
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## CHEMICAL ENGINEERING

10		<p>Analysis of transport phenomena by William M. Deen, 2nd ed., New York: Oxford University Press, 2012. xviii, 606 p. Includes index p. (583-606)</p> <p>ISBN: 9780199740253</p> <p>Subject Terms: Heat and mass transfer; Fluid mechanics; Reynolds number; Turbulent flow; Vectors</p>
		66.04 DEE-A
		Barcode: 180294-180295; CL; CHE
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## ELECTRICAL ENGINEERING

11		<p>Control systems: an introduction by D. Sundararajan, Cham: Springer, 2022. xi, 312 p. Includes bibliography and index (p. 307-312)</p> <p>ISBN: 9783030984472</p> <p>Subject Terms: Modern control engineering; Automatic control systems; Control systems with MATLAB; Linear control systems; Laplace transform</p>
		62-50 SUN-C
		Barcode: 180287; CL
		<a href="#">Click here for details.</a>
12		<p>Dynamic systems and control engineering by Nader Jalili and Nicholas W. Candelino, New York: Cambridge University Press, 2023. xxv, 920 p. Includes index (p. 915-920)</p> <p>ISBN: 9781108831055</p> <p>Subject Terms: Control theory; Engineering design; Kinematics; Robotics; Root locus techniques</p>
		621-50 JAL-D
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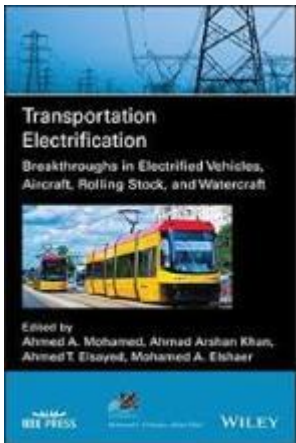


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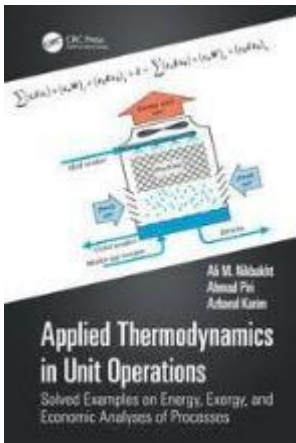
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22		<p>Transportation electrification: breakthroughs in electrified vehicles, aircraft, rolling stock, and watercraft edited by Ahmed A. Mohamed., .(et al.), Hoboken: Wiley, 2023. xxvii, 521 p., - IEEE press series on power and energy systems. Includes index (p. 499-521)</p>
		<p>ISBN: 9781119812326</p>
		<p>Subject Terms: Electric airplanes; Electric boats; Electricity in transportation; Electrical machines; Electric vehicles</p>
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## ENERGY SCIENCE AND ENGINEERING

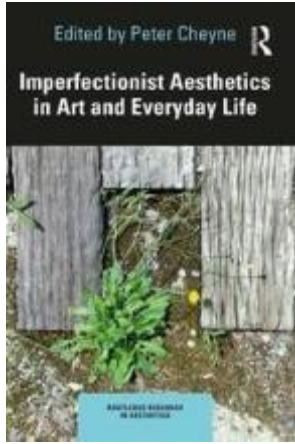

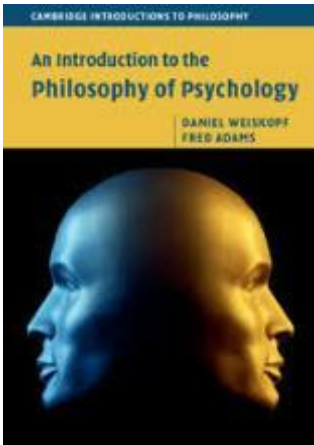
23		<p>Applied thermodynamics in unit operations: solved examples on energy, exergy, and economic analyses of processes by Ali M. Nikbakht, Ahmad Piri and Azharul Karim, Boca Raton: CRC Press, 2024. xii, 301 p. Includes index (p. 301)</p>
		<p>ISBN: 9781032543956</p>
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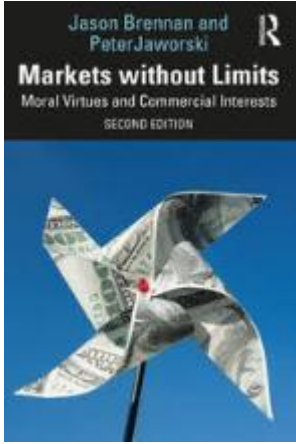
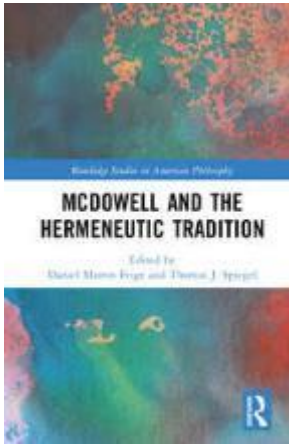
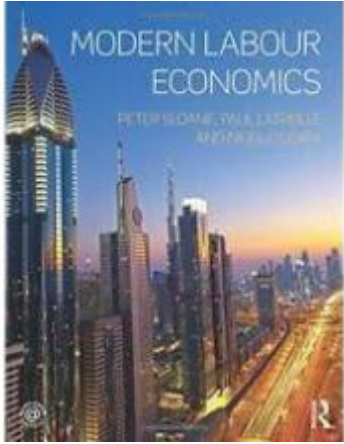
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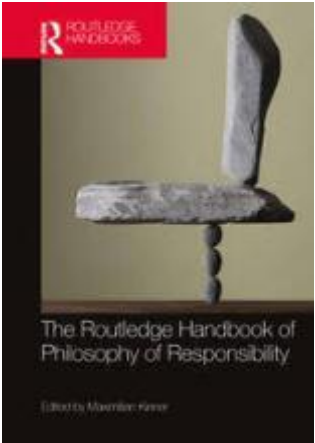

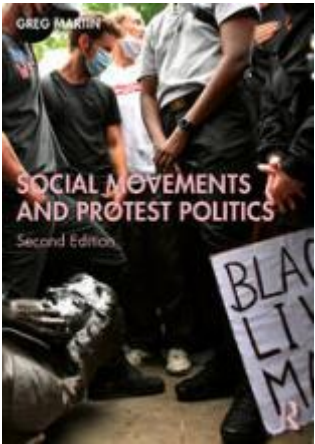


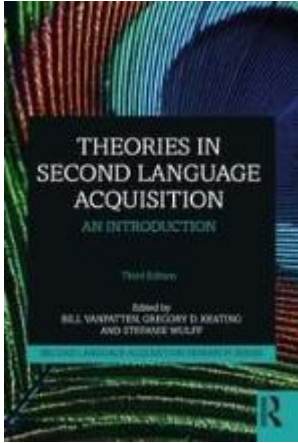
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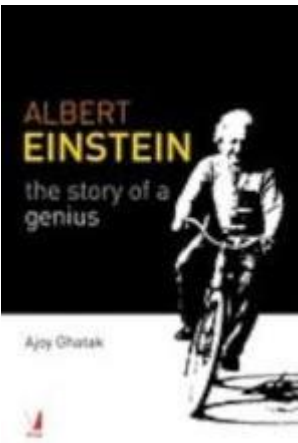
37		<p>Nyaya sutra - on philosophical method: sanskrit text, translation, and commentary by Victor A. van Bijlert, Oxon: Routledge, 2024. vii, 251 p., - Routledge hindu studies series. Includes bibliography and index (p. 245-251)</p> <p>ISBN: 9781032758381</p> <p>Subject Terms: Indian philosophy; Epistemology; Classical indian logic; Religion and philosophy; Hermeneutics</p> <p>101.1 BIJ-N</p> <p>Barcode: 180290-180291; CL; HSS</p> <p><a href="#">Click here for details.</a></p>
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39		<p>Philosophical method: a very short introduction by Timothy Williamson, Oxford: Oxford University Press, 2020. xvii, 142 p. Includes reference and index (p. 129-142)</p> <p>ISBN: 9780198810001</p> <p>Subject Terms: Philosophy - History; Philosophical analysis; Critical thinking; Comparative philosophy - Methods; Epistemology - Methods</p> <p>101.1 WIL-P</p> <p>Barcode: 180304; CL</p> <p><a href="#">Click here for details.</a></p>
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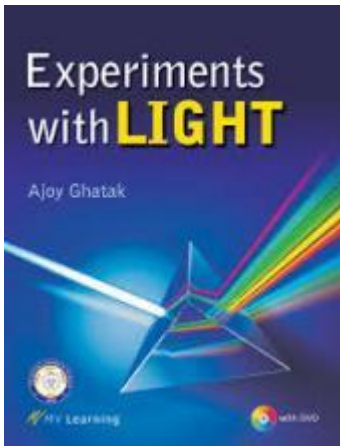
40		<p>Philosophy of fanaticism: epistemic, affective, and political dimensions edited by Leo Townsend... (et al.), New York: Routledge, 2023. vi, 343 p., - Routledge studies in contemporary philosophy. Includes index (p. 337-343)</p> <p>ISBN: 9780367634926</p> <p>Subject Terms: Epistemic dimension; Epistemology; Political dimension; Religion and philosophy; Humanities</p> <p>101.1:165 -PHI</p> <p>Barcode: 180212; CL</p> <p><a href="#">Click here for details.</a></p>
41		<p>Philosophy of symbolic forms by Ernst Cassirer, New York: Routledge, 2022. xxxv, 334 p. Includes index (p.327-334)</p> <p>ISBN: 9781032474304</p> <p>Subject Terms: Epistemology; Language and languages; Metaphysics; Philosophy; Mythology</p> <p>101.1:165.613 CAS-P</p> <p>Barcode: 180211; CL</p> <p><a href="#">Click here for details.</a></p>
42		<p>Psychology of cognition: an introduction to cognitive neuroscience by Durk Talsma, London: Routledge, 2023. xiv, 821 p. Includes reference and index (p. 713-821)</p> <p>ISBN: 9781032333618</p> <p>Subject Terms: Cognitive psychology; Consciousness and attention; Multisensory integration; Visual Perception; Psycholinguistics</p> <p>159.937 TAL-P</p> <p>Barcode: 180264; CL</p> <p><a href="#">Click here for details.</a></p>

43		<p>Routledge handbook of philosophy of responsibility edited by Maximilian Kiener, Abingdom: Routledge, 2024. xviii, 530 p., - Routledge handbooks in philosophy. Includes index (p. 526-530)</p> <p>ISBN: 9781032252391</p> <p>Subject Terms: Responsibility - Philosophy - Handbooks, manuals, etc.; Individuals and society - Handbooks, manuals, etc.; Humanities - Handbooks, manuals, etc.; Voluntary act requirement - Handbooks, manuals, etc.; Political Philosophy - Handbooks, manuals, etc.</p> <p>RL-HB 159.947.23:101(021) -ROU</p> <p>Barcode: 180272; CL</p> <p><a href="#">Click here for details.</a></p>
44		<p>Second language research: methodology and design by Alison Mackey and Susan M. Gass, 3rd ed., New York: Routledge, 2022. xviii, 523 p. Includes reference and index (p. 479-523)</p> <p>ISBN: 9781032036632</p> <p>Subject Terms: Coding; Applied Linguistics; Qualitative and quantitative reseach; Research variables, validity and reliability; Data collection measues</p> <p>81`243:001.891 MAC-S</p> <p>Barcode: 180234; CL</p> <p><a href="#">Click here for details.</a></p>
45		<p>Social movements and protest politics by Greg Martin, 2nd ed., London: Routledge, 2024. xvi, 436 p. Includes bibliography and index (p. 372-436)</p> <p>ISBN: 9780367420970</p> <p>Subject Terms: Protest movements; Social movements; Cultural studies; Political behaviour; International relations</p> <p>323.1:323.233 MAR-S</p> <p>Barcode: 180292; HSS</p> <p><a href="#">Click here for details.</a></p>
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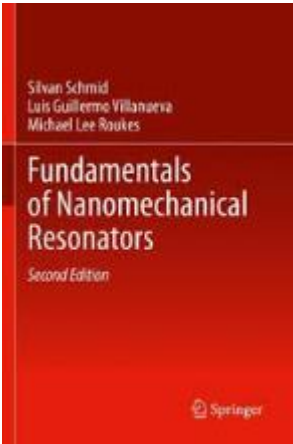
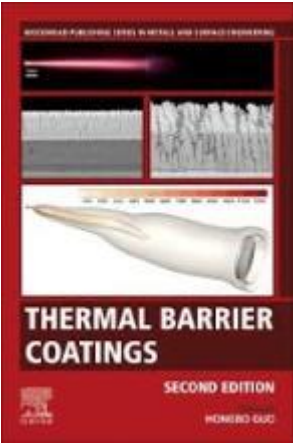
46		<p>Theories in second language acquisition: an Introduction edited by Bill VanPatten, Gregory D. Keating and Stefanie Wulff, 3rd ed., New York: CRC Press, 2020. xii, 308 p., - Second language acquisition research series. Includes index (p. 301-308)</p> <p>ISBN: 9781138587380</p> <p>Subject Terms: English language teaching; Grammar and punctuation; Education; Language and linguistics; Language and literature</p> <p>81'243 -THE</p> <p>Barcode: 180282; CL</p> <p><a href="#">Click here for details.</a></p>
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## IITD FACULTY & STAFF AUTHORED BOOKS

47		<p>Albert Einstein: the story of a genius by Ajoy Ghatak, New Delhi: Viva Books, 2024. xxiv, 194 p. Includes references (p. 185-194)</p> <p>ISBN: 9789386243973</p> <p>Subject Terms: Physicists - Biography; Genius - Case studies; Quantum theory; Theoretical physics; Innovative thinking</p> <p>5-051E GHA-A</p> <p>Barcode: 180224; CL</p> <p><a href="#">Click here for details.</a></p>
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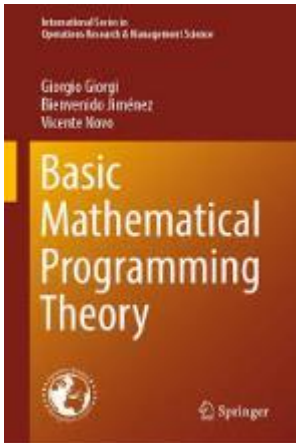
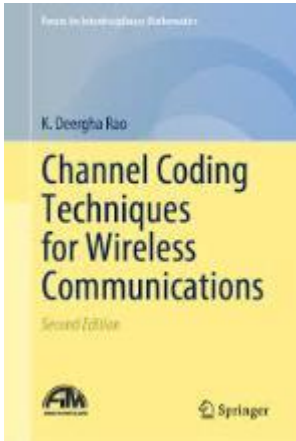
48		<p>Experiments with light by Ajoy Ghatak, London: MV Learning, 2015. x, 142 p. Includes reference (p. 139-142)</p> <p>ISBN: 9788130931661</p> <p>Subject Terms: Light - Experiments; Reflection of light; Optical waves; Photon effect; Dispersion of light</p> <p>535 GHA</p> <p>Barcode: 180225; CL</p> <p><a href="#">Click here for details.</a></p>
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# MATERIALS SCIENCE & ENGINEERING

49		<p>Fundamentals of nanomechanical resonators by Silvan Schmid, Luis Guillermo Villanueva and Michael Lee Roukes, 2nd ed., Cham: Springer, 2023. xii, 207 p.</p> <p>ISBN: 9783031296277</p> <p>Subject Terms: Resonance frequency; Eigenmodes; Frequency noise; Amplitude noise; String resonators</p> <p>535.417.2 SCH-F</p> <p>Barcode: 180298; CL</p> <p><a href="#">Click here for details.</a></p>
50		<p>Introduction to transport phenomena in materials engineering by David R. Gaskell and Matthew John M. Krane, 3rd ed., Oxon: CRC Press, 2024. xx, 593 p. Includes index (p. 591-593)</p> <p>ISBN: 9780367821074</p> <p>Subject Terms: Heat - Transmission; Mass transfer; Transport phenomem; Nanoscience; Fluid dynamics</p> <p>620.1:544.62 GAS-I</p> <p>Barcode: 180297; CL</p> <p><a href="#">Click here for details.</a></p>
51		<p>Thermal barrier coatings edited by Hongbo Guo, 2nd ed., Cambridge: Elsevier, 2023. xi, 476 p., - Woodhead publishing series in metals and surface engineering. Includes index (p. 467-476)</p> <p>ISBN: 9780128190272</p> <p>Subject Terms: Ceramic coating; Coating materials; Heat resistant materials; Protective coatings; Thermal barrier coatings</p> <p>667.637.232 -THE</p> <p>Barcode: 180280; CL</p> <p><a href="#">Click here for details.</a></p>

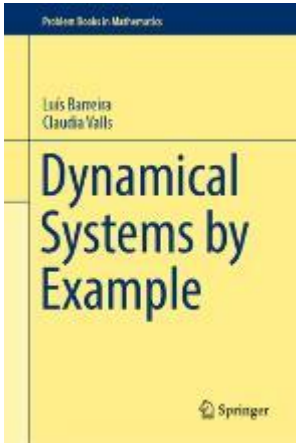


# MATHEMATICS

52	 <p>Advanced Calculus for Mathematical Modeling in Engineering and Physics With Discrete and Numerical Analogies David Stapleton</p>	<p>Advanced calculus for mathematical modeling in engineering and physics: with discrete and numerical analogies by David Stapleton, London: Academic Press, 2024. xv, 863 p. Includes index (p. 853-863)</p> <p>ISBN: 9780443222894</p> <p>Subject Terms: Calculus and trigonometry; Homogeneous linear models; Integration for advanced calculus models; Calculus of variations; Calculus with complex numbers</p> <p>517.2:519.87 STA-A</p> <p>Barcode: 180275; CL</p> <p><a href="#">Click here for details.</a></p>
53	 <p>International Series in Operations Research &amp; Management Science Giorgio Giorgi Bienvenido Jiménez Vicente Novo Basic Mathematical Programming Theory Springer</p>	<p>Basic mathematical programming theory by Giorgio Giorgi, Bienvenido Jiménez and Vicente Novo, Cham: Springer, 2023. xii, 433 p., - International series in operations research and management science. Includes index (p. 431-433)</p> <p>ISBN: 9783031303265</p> <p>Subject Terms: Convex analysis; Linear algebra; Linear programming; Quadratic programming; Vector optimization problem</p> <p>519.05 GIO-B</p> <p>Barcode: 180306; CL</p> <p><a href="#">Click here for details.</a></p>
54	 <p>Forum for Interdisciplinary Mathematics K. Deorgha Rao Channel Coding Techniques for Wireless Communications Second Edition Springer</p>	<p>Channel coding techniques for wireless communications by K. Deorgha Rao, 2nd ed., Singapore: Springer, 2019. xix, 476 p., - Forum for interdisciplinary mathematics.</p> <p>ISBN: 9789811505638</p> <p>Subject Terms: Wireless communication; Coding theory; Block codes; Turbo code; Low parity check code</p> <p>621.391 RAO-C</p> <p>Barcode: 180246-180247; CL; MA</p> <p><a href="#">Click here for details.</a></p>



55		<p>Circle line study of mathematical analysis by Simone Secchi, Cham: Springer, 2022. xix, 469 p., - UNITEXT: La matematica per il 3+2.</p> <p>ISBN: 9783031197376</p> <p>Subject Terms: Calculus; Real and abstract analysis; Axiomatic set theory; Integration theory; Differentiation in banach spaces</p> <p>517 SEC-C</p> <p>Barcode: 180307; CL</p> <p><a href="#">Click here for details.</a></p>
56		<p>Classical lie algebras at infinity by Ivan Penkov and Crystal Hoyt, Cham: Springer, 2022. xiii, 239 p., - Springer monographs in mathematics (SMM). Includes bibliography and index p. (227-239)</p> <p>ISBN: 9783030896591</p> <p>Subject Terms: Lie algebras; Borel subalgebras; Kostant theorem; Lie superalgebras; Tensor modules</p> <p>512.554.3 PEN-C</p> <p>Barcode: 180308; CL</p> <p><a href="#">Click here for details.</a></p>
57		<p>Continued fractions and signal processing by Tomas Sauer, Switzerland: Springer, 2021. xvii, 263 p., - Springer undergraduate texts in mathematics and technology. Includes reference and index (p. 253-263)</p> <p>ISBN: 9783030843625</p> <p>Subject Terms: Continued fractions; Signal processing; Prony's problem; Orthogonal polynomials; Rational filters</p> <p>621.391 SAU-C</p> <p>Barcode: 180248-180249; CL; MA</p> <p><a href="#">Click here for details.</a></p>
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58		<p>Cultural history of mathematics edited by David E. Rowe and Joseph W. Dauben, Vol. I. - VI., London: Bloomsbury, 2024. xvi, 262 p., - Cultural histories series. Include bibliography and index (v.p.)</p> <p>ISBN: 9781350063129</p> <p>Subject Terms: Mathematics - History; Mathematics and civilization; Mathematical and worldviews; Quantum and relativistic physics; Mathematical sciences</p> <p>51:930.85 -CUL</p> <p>Barcode: 180236-180241; CL</p> <p><a href="#">Click here for details.</a></p>
59		<p>Dynamical systems by example by Luis Barreira and Claudia Valls, Switzerland: Springer, 2019. ix, 223 p., - Problem books in mathematics. Includes reference and index (p. 217-223)</p> <p>ISBN: 9783030159146</p> <p>Subject Terms: Problems dynamical systems; Topological dynamics; Ergodic theory; Low-dimensional dynamics; Hyperbolic dynamics</p> <p>517.938 BAR-D</p> <p>Barcode: 180250; CL</p> <p><a href="#">Click here for details.</a></p>
60		<p>Elements of discrete mathematics: numbers and counting, groups, graphs, orders lattices by Volker Diekert... (et al.), Berlin: De Gruyter, 2024. xvi, 261 p., - De gruyter graduate. Includes bibliography and index (p. 251-261)</p> <p>ISBN: 97831111060699</p> <p>Subject Terms: Algebraic structures; Elementary number theory; Combinatorics; Generating functions; Graph theory</p> <p>512.817 -ELE</p> <p>Barcode: 180229; CL</p> <p><a href="#">Click here for details.</a></p>
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61		<p>Guide to spectral theory: applications and exercises by Christophe Chevrry and Nicolas Raymond, Cham: Birkhauser, 2021. xx, 258 p., - Birkhauser advanced texts basler lehrbucher. Includes bibliography and index (p. 251-258)</p> <p>ISBN: 9783030674618</p> <p>Subject Terms: Differential equations; Functional analysis; Linear operators; Mathematical physics; spectral theory of linear operators</p> <p>517.984 CHE-G</p> <p>Barcode: 180251-180252; CL; MA</p> <p><a href="#">Click here for details.</a></p>
62		<p>Harmonic analysis of operators on hilbert space by Béla Sz.-Nagy...(et al.), 2nd ed., New York: Springer, 2010. xiv, 474 p., - Universitext (UTX). Includes bibliography and index (441-474)</p> <p>ISBN: 9781441960931</p> <p>Subject Terms: Functional calculus; Hilbert Space; Invariant Subspaces; Operator valued analytic functions; Unitary dilations</p> <p>517.982.22 NAG-H</p> <p>Barcode: 180301; CL</p> <p><a href="#">Click here for details.</a></p>
63		<p>Introduction to optimization: with applications in machine learning and data analytics by Jeffrey Paul Wheeler, Boca Raton: CRC Press, 2024. xxv, 448 p., - Textbooks in mathematics. Includes bibliography and index (p. 433-448)</p> <p>ISBN: 9780367425500</p> <p>Subject Terms: Mathematical optimization; Applied mathematics; Operations research; Statistical computing; Combinatorial optimization</p> <p>519.863 WHI-I</p> <p>Barcode: 180283; CL</p> <p><a href="#">Click here for details.</a></p>
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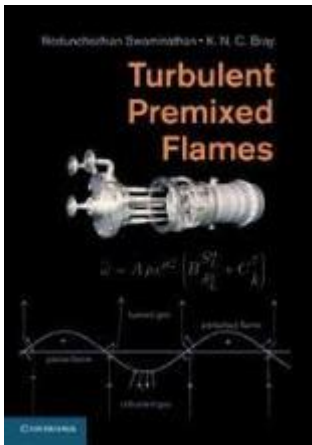
64		<p>Introduction to probability and statistics for engineers and scientists by Sheldon M. Ross, 6th ed., London: Elsevier, 2020. xvi, 687 p. Includes index (p. 673-687)</p> <p>ISBN: 9780128243466</p> <p>Subject Terms: Applied mathematics; Mathematical statistics; Elements of probability; Parameter estimation; Hypothesis testing</p> <p>519.21 ROS-I</p> <p>Barcode: 180284-180285; CL; MA</p> <p><a href="#">Click here for details.</a></p>
65		<p>Matrix algebra: theory, computations and applications in statistics by James E. Gentle, 3rd ed., Cham: Springer, 2024. xxxii, 693 p., - Springer texts in statistics. Includes bibliography and index p. (667-693)</p> <p>ISBN: 9783031421433</p> <p>Subject Terms: Matrix; Vector space; Linear algebra; Numerical analysis; Optimization</p> <p>512.7 GEN-M</p> <p>Barcode: 180302; CL</p> <p><a href="#">Click here for details.</a></p>
66		<p>Network data envelopment analysis: foundations and extensions by Chiang Kao, 2nd ed., Cham: Springer, 2023. xvii, 475 p., - International series in operations research and management science (ISOR). Includes index p. (473-475)</p> <p>ISBN: 9783031275920</p> <p>Subject Terms: Data analysis; Data envelopment analysis; Network systems; Performance evaluation; Dynamic systems</p> <p>621.391 KAO-N</p> <p>Barcode: 180309; CL</p> <p><a href="#">Click here for details.</a></p>
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67		<p>Proof and the art of mathematics by Joel David Hamkins, London: MIT Press, 2020. xxvi, 208 p. Includes bibliography and index (p. 199-208)</p> <p>ISBN: 9780262539791</p> <p>Subject Terms: Mathematical logic; Number theory; Graph theory; Game theory; Real analysis</p> <p>51 HAM-P</p> <p>Barcode: 180286; CL</p> <p><a href="#">Click here for details.</a></p>
68		<p>Statistical foundations of actuarial learning and its applications by Mario V. Wüthrich and Michael Merz, Cham: Springer, 2023. xii, 605 p., - Springer actuarial. Includes bibliography and index (p. 577-605)</p> <p>ISBN: 9783031124112</p> <p>Subject Terms: Deep learning; Actuarial modeling; Artificial neural networks; Regression modeling; Estimation theory</p> <p>519.2:004.85 WUT-S</p> <p>Barcode: 180253; CL</p> <p><a href="#">Click here for details.</a></p>
69		<p>Topology and approximate fixed points by Afif Ben Amar and Donal O'Regan, Cham: Springer, 2022. xiii, 251 p., - Developments in mathematics. Includes References and index (p. 239-251)</p> <p>ISBN: 9783030922030</p> <p>Subject Terms: Topological vector spaces; Weak topology; Ultrametric spaces; Approximate fixed point nets; Approximate fixed point sequences</p> <p>515.12 AMA-T</p> <p>Barcode: 180310; CL</p> <p><a href="#">Click here for details.</a></p>
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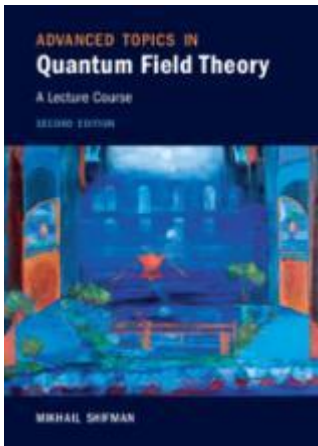


# MECHANICAL ENGINEERING

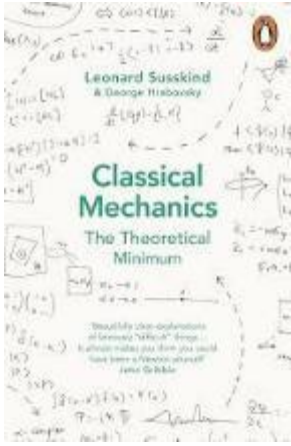
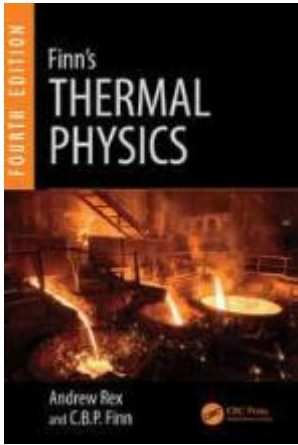
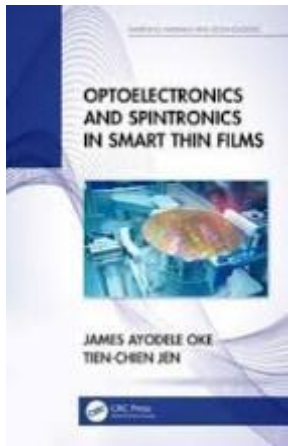
70		<p>Practical guide to digital manufacturing: first-time-right for designs of products, machines, processes and system integration by Zhuming Bi, Cham: Springer, 2021. xi, 424p.</p>
		<p>ISBN: 9783030703066</p>
		<p>Subject Terms: Computer integrated manufacturing systems; Motion simulation; Digital twin; Virtual design; Virtual testing</p>
		<p>67.02:004 BI-P</p>
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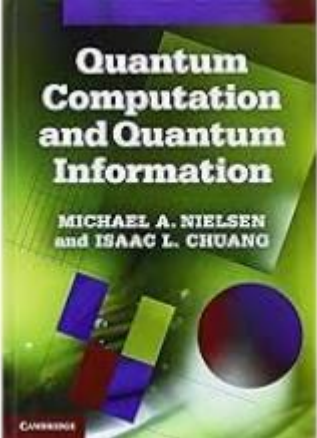
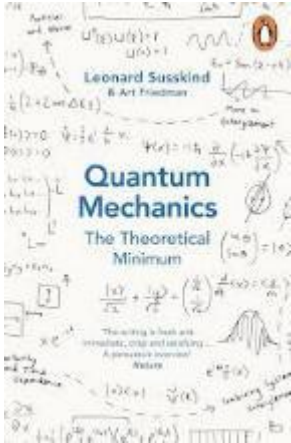
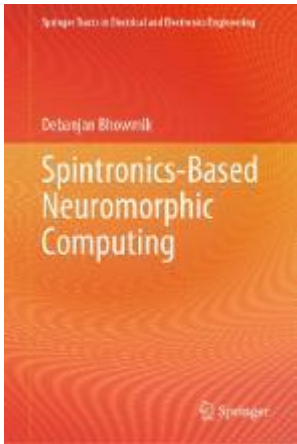
71		<p>Turbulent premixed flames edited by Nedunchezhian Swaminathan and K. N. C. Bray, Cambridge: Cambridge University Press, 2013. xvi, 421 p. Includes index (p. 415-421)</p>
		<p>ISBN: 9781107679061</p>
		<p>Subject Terms: Combustion instabilities; Flame surface density; Lean flames in practice; Turbulent flow; Combustion instabilities</p>
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# PHYSICS


72		<p>Advanced topics in quantum field theory: a lecture course by Mikhail Shifman, 2nd ed., Cambridge: Cambridge University Press, 2022. xviii, 717 p. Includes index p. (712-717)</p>
		<p>ISBN: 9781108840422</p>
		<p>Subject Terms: Quantum theory; Gauge theories; Notations; Physics; Monopoles</p>
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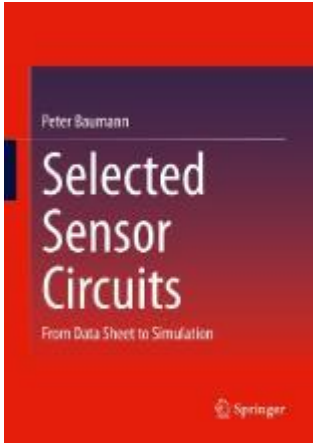
73		<p>Classical mechanics: the theoretical minimum by Leonard Susskind and George Hrabovskyy, London: Penguin, 2013. xi, 238 p. Includes index (p. 229-238)</p> <p>ISBN: 9780141976228</p> <p>Subject Terms: Classical physics; Motion; Energy; Hamiltonian mechanics; Vibrations and waves</p> <p>531.01 SUS-C</p> <p>Barcode: 180266-180267; CL; PH</p> <p><a href="#">Click here for details.</a></p>
74		<p>Finn's thermal physics by Andrew Rex and C.B.P. Finn, 4th ed., Boca Raton: CRC Press, 2024. xxii, 386 p. Includes index (p. 377-386)</p> <p>ISBN: 9781032289823</p> <p>Subject Terms: Thermodynamics; Physical chemistry; Magnetic systems; Quantum statistics; Applied mathematics</p> <p>536.7 REX-F</p> <p>Barcode: 180258-180259; CL; PH</p> <p><a href="#">Click here for details.</a></p>
75		<p>Optoelectronics and spintronics in smart thin films by James Ayodele Oke and Tien-Chien Jen, Boca Raton: CRC Press, 2024. xiii, 229 p., - Emerging materials and technologies. Includes index (p. 223-227)</p> <p>ISBN: 9781032362205</p> <p>Subject Terms: Material science; Smart nanomaterials and thin films; Optics and optoelectronics; Laser and optical engineering; Electromagnetics and microwaves</p> <p>621.38:620.3 OKE-O</p> <p>Barcode: 180262-180263; CL; PH</p> <p><a href="#">Click here for details.</a></p>
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76		<p>Quantum computation and quantum information by Michael A. Nielsen and Isaac L. Chuang, New Delhi: Cambridge University Press, 2024. xxxi, 676 p. Includes bibliography and index (p. 649-676)</p> <p>ISBN: 9781107619197</p> <p>Subject Terms: Quantum algorithms; Quantum information; Quantum mechanics; Linear algebra; Quantum fourier transform</p> <p>530.145:004 NIE-Q</p> <p>Barcode: 180268; PH</p> <p><a href="#">Click here for details.</a></p>
77		<p>Quantum mechanics: the theoretical minimum by Leonard Susskind and Art Friedman, London: Penguin, 2015. xx, 364 p. Includes index (p. 353-364)</p> <p>ISBN: 9780141977812</p> <p>Subject Terms: Condensed matter; Quantum theory; Quantum computing; Wave mechanics; Mathematical physics</p> <p>530.145 SUS-Q</p> <p>Barcode: 180269-180270; CL; PH</p> <p><a href="#">Click here for details.</a></p>
78		<p>Spintronics-based neuromorphic computing by Debanjan Bhowmik, Singapore: Springer, 2024. xv, 126 p., - Springer tracts in electrical and electronics engineering.</p> <p>ISBN: 9789819744442</p> <p>Subject Terms: Nanomagnetism and spintronics; Artificial intelligence; Neuroscience; Nano oscillator; Spin-orbit torque devices</p> <p>612.82:004 BHO-S</p> <p>Barcode: 180256-180257; CL; PH</p> <p><a href="#">Click here for details.</a></p>
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## RURAL DEVELOPMENT & TECHNOLOGY

79		<p>Biofuel technologies for a sustainable future: India and beyond edited by Yashvir Singh, Prateek Negi and Wei Hsin Chen, Gistrup: River Publishers, 2023. xix, 228 p., - River publishers series in energy sustainability and efficiency. Includes index (p. 225-226)</p> <p>ISBN: 9788770226349</p> <p>Subject Terms: Clean energy; Energy transition; Environmental conservation and protection; Renewable energy sources; Environmental science</p> <p>662.767.2 -BIO</p> <p>Barcode: 180254; CL</p> <p><a href="#">Click here for details.</a></p>
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## SENSORS INSTRUMENTATION & CYBER-PHYSICAL SYSTEM ENGINEERING

80		<p>Selected sensor circuits: from data sheet to simulation by Peter Baumann, Wiesbaden: Springer, 2023. ix, 281 p. Includes reference and index (p. 275-281)</p> <p>ISBN: 9783658382117</p> <p>Subject Terms: Temperature sensors; Optoelectronic devices; Detectors; Electrical engineering; Electronic circuits and systems</p> <p>621.382:681.586 BAU-S</p> <p>Barcode: 180260-180261; TB; SENSE</p> <p><a href="#">Click here for details.</a></p>
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## THESES COLLECTIONS

Title	:	Comprehensive analysis of the D2-line spectroscopic features in thermal rubidium vapor
Researcher	:	Bala, Rajni
Department	:	Department of Physics, IITD
Year	:	2024
Supervisor	:	Venkataraman, Vivek (Assist. Prof.) - PH (Guide)
Physical description	:	141 p.
Subject terms	:	Doppler-free spectroscopy; Electric dipole hyperfine transitions; Quantum memories: Polarization spectroscopy: Atomic spectroscopy
Barcode	:	TH7945
Call No.	:	TH 543.42:546.35 BAL-C
Title	:	Experimental characterization of direct injection ethanol-gasoline sprays in a constant volume chamber
Researcher	:	Gaur, Anurag
Department	:	Department of Energy Science and Engineering, IITD
Year	:	2024
Supervisor	:	Saha, Kaushik (Asst. Prof.) - ESE (Guide)
Physical description	:	xxiii, 194 p.
Subject terms	:	Laser based technique; Macroscopic spray morphology; Diffused back illumination: LED based Mie scattered: Mechanism of spray formation
Barcode	:	TH7946
Call No.	:	TH 621.43.038 GAU-E
Title	:	Perceptual and neural mechanisms of static and dynamic stereopsis in binocular visual impairments
Researcher	:	Lohia, Kritika
Department	:	Department of Electrical Engineering, IITD
Year	:	2024
Supervisor	:	Gandhi, Tapan Kumar (Assoc. Prof.) - EE (Guide); Saxena, Rohit - AIIMS, New Delhi (Guide); Sinha, Pawan - Massachusetts Institute of Technology, USA (Guide)
Physical description	:	xxvii, 203 p.
Subject terms	:	Random-dot stereogram; Digital stereoacuity; Blood oxygenation level dependent: Stereoscopic depth perception: MRI acquisition
Barcode	:	TH7947
Call No.	:	TH 612.84 LOH-P

Title	:	Platform development for characterization of critical quality attributes of biopharmaceutical products
Researcher	:	Malani, Himanshu
Department	:	Department of Chemical Engineering, IITD
Year	:	2024
Supervisor	:	Rathore, Anurag S. (Prof.) - CHE (Guide)
Physical description	:	xxi, 133 p.
Subject terms	:	Microbial systems; Bioactive protein; Host cell protein analysis: Monoclonal antibody therapeutics: Bacterial strain
Barcode	:	TH7948
Call No.	:	TH 661.12 MAL-P
Title	:	Finite deformation modeling and analysis of structural instabilities in thin magnetoelastic sheets
Researcher	:	Mishra, Awantika
Department	:	Department of Applied Mechanics, IITD
Year	:	2024
Supervisor	:	Santapuri, Sushma (Assoc. Prof.) - AM (Guide)
Physical description	:	xxi, 161 p.
Subject terms	:	Magnetorheological elastomers; Electro-magneto mechanical membrane; Nondimensional governing equation: Axisymmetric cylindrical membrane: Magnetic elastic coefficient
Barcode	:	TH7949
Call No.	:	TH 620.178.6 MIS-F
Title	:	Production of fuels and chemicals through catalytic co-pyrolysis of waste biomass and waste plastics
Researcher	:	Nandakumar, T.
Department	:	Department of Chemical Engineering, IITD
Year	:	2024
Supervisor	:	Pant, Kamal K (Prof. ) - CHE (Guide); Sanat Kumar - CSIR- Indian Institute of Petroleum, Dehradun (Guide); Upadhyayula, Sreedevi (Prof.) - CHE (Guide)
Physical description	:	xix 284 p.
Subject terms	:	Co-pyrolysis; Synergic effect; Metal-modified HZSM: TGA kinetics: Metal modified -N/ doped RGO catalyst
Barcode	:	TH7950
Call No.	:	TH 662.7 NAN-P

Title	:	Development and implementation of control strategies for production of biotherapeutic products
Researcher	:	Nitika
Department	:	Department of Chemical Engineering, IITD
Year	:	2024
Supervisor	:	Rathore, Anurag S. (Prof.) - CHE (Guide)
Physical description	:	xxvi, 181 p.
Subject terms	:	Biopharmaceutical manufacturing; Coiled flow inversion reactor; Granulocyte colony stimulating factor: Control of process chromatography: Raman spectroscopy
Barcode	:	TH7951
Call No.	:	TH 615:604.2 NIT-D
Title	:	Design, fabrication, and characterization of liquid crystal infiltrated electro-optic devices and fiber optic sensors
Researcher	:	Rahul
Department	:	Department of Physics, IITD
Year	:	2024
Supervisor	:	Sinha, Alok (Prof.) - PH (Guide)
Physical description	:	xxiii, 171 p.
Subject terms	:	Liquid crystal alignment; Optical waveguide; Microlens arrays: Fiber optic acoustic sensors: Photolithography
Barcode	:	TH7952
Call No.	:	TH 535.3:681.586 RAH-D
Title	:	Determination of formwork stripping time for reinforced cement concrete members at various temperatures
Researcher	:	Shankar, Siddharth
Department	:	Department of Civil Engineering, IITD
Year	:	2024
Supervisor	:	Jha, Kumar Neeraj (Prof.) - CE (Guide); Jain, A. K. (Prof.) - CE (Guide)
Physical description	:	xxvii, 241 p.
Subject terms	:	Admixtures; Ambient temperature; Cost analysis: Destructive test: Horizontal and vertical formwork
Barcode	:	TH7953
Call No.	:	TH 624.012.45 SHA-D



Title	:	Response of African easterly waves to a changing climate
Researcher	:	Dombo, Tomviezibe Cephas
Department	:	Centre for Atmospheric Sciences, IITD
Year	:	2024
Supervisor	:	AchutaRao, Krishna M. (Prof.) - CAS (Guide); Sukumaran, Sandeep (Assoc. Prof.) - CAS (Guide)
Physical description	:	xxii, 158 p.
Subject terms	:	Climate change; Climatology; Intertropical convergence zone: Precipitation extremes: Spatial genesis
Barcode	:	TH7954
Call No.	:	TH 551.583(267.25) DOM-R
Title	:	Hydroconversion of triglycerides to fuel
Researcher	:	Farooqui, Saleem Akhtar
Department	:	Department of Chemical Engineering, IITD
Year	:	2024
Supervisor	:	Haider, M. Ali (Prof.) - CHE (Guide); Sinha, Anil K. - CSIR IIP, Dehradun (Guide)
Physical description	:	xix, 142 p.
Subject terms	:	Bio-fuels; Reaction chemistry; Hydroprocessing catalyst: Exothermicity: Aromatics
Barcode	:	TH7955
Call No.	:	TH 662.756 FAR-H
Title	:	Development of a framework for construction and demolition waste management in India using building information modeling
Researcher	:	Gupta, Sakshi
Department	:	Department of Civil Engineering, IITD
Year	:	2024
Supervisor	:	Jha, Kumar Neeraj (Prof.) - CE (Guide); Vyas, Gayatri (Assist. Prof) - CE (Guide)
Physical description	:	xxv, 276 p.
Subject terms	:	Construction and demolition waste; Waste management; Sustainable construction practices: Environmental management in construction: Construction industry
Barcode	:	TH7956
Call No.	:	TH 628.477(540) GUP-D

Title	:	Studying the contribution of Punjab to the capital of India, megacity Delhi using WRF-CHEM with the improved edgar emission inventory prepared from the ground-based data
Researcher	:	Katiyar, Arpit
Department	:	Department of Civil Engineering, IITD
Year	:	2024
Supervisor	:	Kota, Sri Harsha (Assoc. Prof.) - CE (Guide)
Physical description	:	xxvi, 300 p.
Subject terms	:	Air pollution; Bottom up approach; Domestic emissions: Vehicular: Road dust
Barcode	:	TH7957
Call No.	:	TH 628.53(540.15) KAT-S
Title	:	Near-field coupled asymmetric terahertz metasurfaces and their applications
Researcher	:	Kaur, Sukhvinder
Department	:	Department of Physics, IITD
Year	:	2024
Supervisor	:	Varshney, R. K. (Prof.) - PH (Guide); Chowdhury, Dibakar Roy (Prof.) - PH (Guide)
Physical description	:	xxxv, 235 p.
Subject terms	:	Asymmetric metasurfaces; Wave propagation; Terahertz technology: Optical engineering: Plasmonic
Barcode	:	TH7958
Call No.	:	TH 537.8:535.34 KAU-N
Title	:	Explaining seismic response and fragility of RC frames through machine learning
Researcher	:	Latif, Iqra
Department	:	Department of Civil Engineering, IITD
Year	:	2024
Supervisor	:	Banerjee, Arnab (Assist. Prof.) - CE (Guide); Surana, Mitesh (Assist. Prof.) - CE (Guide)
Physical description	:	xxix, 207 p.
Subject terms	:	Machine learning; Seismic response; Structural fragility analysis: Reinforced concrete frames: Structural dynamics
Barcode	:	TH7959
Call No.	:	TH 624.042.7:004.85 LAT-E

Title	:	Evaluation of microplastic pollution in the Indian northwest coastal area: seasonal effects, co-contaminants, and remediation
Researcher	:	Maurya, Ankita C.
Department	:	Department of Chemistry, IITD
Year	:	2024
Supervisor	:	Khare, S. K. (Prof.) - CHY (Guide); Siddhanta, Soumik (Assist. Prof.) - CHY (Guide)
Physical description	:	xxxvii, 295 p.
Subject terms	:	Microplastics; Coastal pollution; Sustainable coastal management: Pollution remediation techniques: Coastal ecology
Barcode	:	TH7960
Call No.	:	TH 502.175 MAU-E
Title	:	Adoption of emerging technologies and its impact on firm competitiveness: a comparative study of services and manufacturing industry
Researcher	:	Singh, Kumari Surabhi
Department	:	Department of Management Studies, IITD
Year	:	2024
Supervisor	:	Dhir, Sanjay (Prof.) - MS (Guide); Chikhale, Mayur (Prof.) - MS (Guide)
Physical description	:	xviii, 281 p.
Subject terms	:	Emerging technologies; Innovation management; Industrial Innovation: Anthropomorphism: Firm competitiveness
Barcode	:	TH7961
Call No.	:	TH 658:338.45 SIN-A
Title	:	Multiphysics simulations of DC non-transferred arc thermal plasma torch for optimal performance
Researcher	:	Yadav, Akash
Department	:	Department of Mechanical Engineering, IITD
Year	:	2024
Supervisor	:	Mayank Kumar (Assoc. Prof.) - ME (Guide); Kar, Satyananda (Assoc. Prof.) - ESE (Guide)
Physical description	:	xi, 97 p.
Subject terms	:	Thermal plasma; Plasma torch performance; Plasma torch simulation: Computational fluid dynamics: Arc plasma systems
Barcode	:	TH7962
Call No.	:	TH 621.78/.79 YAD-M

Title	:	Enhancing the grid support capability of wind farms
Researcher	:	Bhyri, Akshay Kumar
Department	:	IIT Delhi and University of Queensland
Year	:	2024
Supervisor	:	Senroy, Nilanjan (Prof.) -EE (Guide); Saha, Tapan Kumar (Prof.) - University of Queensland (Guide)
Physical description	:	xvi,107 p.
Subject terms	:	Doubly fed induction; Frequency response; Grid code: Optimization: Mathematical programming
Barcode	:	TH7963
Call No.	:	TH 621.548 BHY-E

Title	:	Development of La <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.95</sub> Nb <sub>0.05</sub> O <sub>3-5</sub> and Sr <sub>2</sub> CoNbO <sub>6-5</sub> cathodes for oxygen reduction reaction in solid oxide fuel cell
Researcher	:	Dhongde, Vicky Rahul
Department	:	Department of Chemical Engineering, IITD
Year	:	2024
Supervisor	:	Basu, Suddhasatwa (Prof.) - CE (Guide); Haider, M Ali (Assoc. Prof.) - CE (Guide)
Physical description	:	xxiii, 186 p.
Subject terms	:	Solid oxide fuel cells - Cathodes; Oxygen reduction reaction; Electrochemical performance: Perovskite oxides: Mixed ionic-electronic conductors (MIECs)
Barcode	:	TH7964
Call No.	:	TH 621.352.6 DHO-D

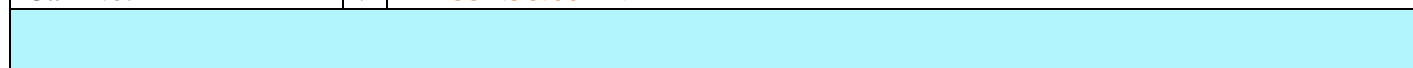
Title	:	Characterization and modeling of advanced CMOS devices at cryogenic temperatures
Researcher	:	Gupta, Sumreti
Department	:	Department of Electrical Engineering, IITD
Year	:	2024
Supervisor	:	Dixit, Abhisek (Prof.) - EE (Guide)
Physical description	:	xxvi, 190 p.
Subject terms	:	Quantum computing; Cryogenic characterization; Cryogenic temperatures: Low- temperature electronics: Device simulation
Barcode	:	TH7965
Call No.	:	TH 621.3.049.774 GUP-C

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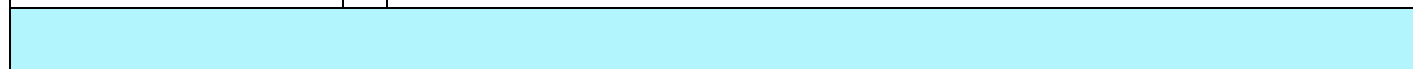
Title	:	Salivary exosomes mediated diagnostic signatures and phytotherapeutics for breast cancer
Researcher	:	Gupta, Sunny
Department	:	Kusuma School of Biological Sciences, IITD
Year	:	2024
Supervisor	:	Patel, Ashok Kumar (Assoc. Prof.) - SBS (Guide)
Physical description	:	xxiii, 198 p.
Subject terms	:	Liquid biopsy; Immunohistochemistry; Breast cancer diagnosis: Cancer therapeutics: Fluorescence microscopy
Barcode	:	TH7966
Call No.	:	TH 618.19-006 GUP-S



Title	:	Improvements in the surface and boundary layer processes for the India-centric climate simulations
Researcher	:	Namdev, Prabhakar
Department	:	Centre for Atmospheric Sciences, IITD
Year	:	2024
Supervisor	:	Sharan, Maithili (Prof.) - CAS (Guide); Mishra, Saroj Kanta (Prof.) - CAS (Guide)
Physical description	:	xxix, 298 p.
Subject terms	:	Atmospheric boundary layer; Surface processes; Atmospheric science: Climate modeling: Environmental science
Barcode	:	TH7967
Call No.	:	TH 551.58:004 NAM-I



Title	:	Spin-orbit torque based heterostructures for MRAM applications and neuromorphic computing
Researcher	:	Ojha, Durgesh Kumar
Department	:	Department of Physics, IITD
Year	:	2024
Supervisor	:	Chatterjee, Ratnamala (Prof.) - PH (Guide); Tseng, Yuan-Chieh (Prof.) National Yang Ming Chiao Tung University, Hsin-Chu- Taiwan (Guide)
Physical description	:	xxviii, 163 p.
Subject terms	:	Magnetization switching; Spin hall effect; Heavy metals alloys: Self-spin orbit torque: Artificial synapse
Barcode	:	TH7968
Call No.	:	TH 612.82:004 OJH-S





Title	:	Assessment of geotechnical reuse potential and sustainable management of legacy waste: a comprehensive study from two Indian dumpsites
Researcher	:	Parida, Debaprakash
Department	:	Department of Civil Engineering, IITD
Year	:	2024
Supervisor	:	Datta, Manoj (Prof.) - CE (Guide); Ramana, G. V. (Prof.) - CE (Guide)
Physical description	:	xxxviii, 222 p.
Subject terms	:	Legacy waste management; Geotechnical engineering; Waste management practices: Physico-chemical characteristics: Environmental sustainability
Barcode	:	TH7969
Call No.	:	TH 628.4 PAR-A

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