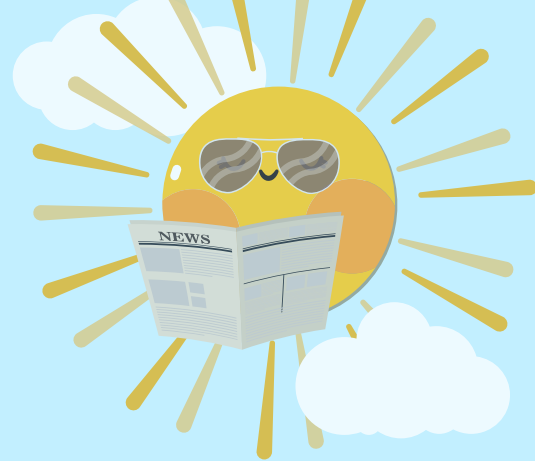




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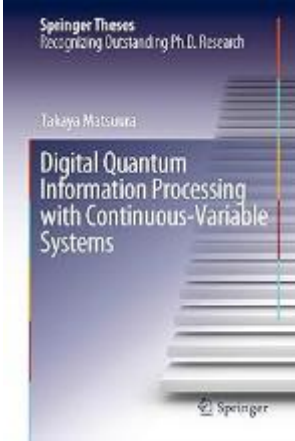
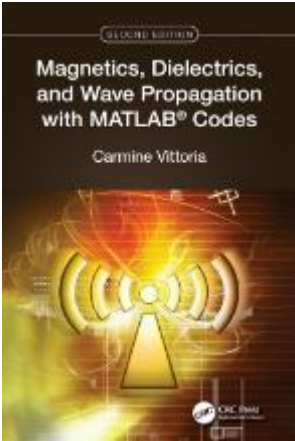
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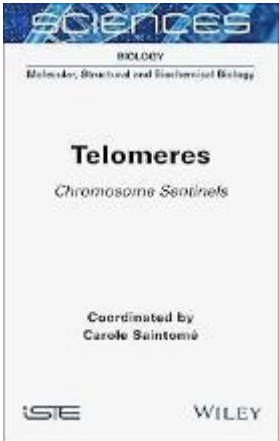
CONTENTS

Departments/Centres/School/Units	Page No.
Applied Research in Electronics	2
Biochemical Engineering and Biotechnology	2
Chemistry	3
Civil and Environmental Engineering	3
Electrical Engineering.....	3
Gratis	4
Humanities and Social Sciences	6
IITD Faculty and Staff Authored Books	7
Materials Science and Engineering	8
Mathematics	8
Mechanical Engineering	11
Optics and Photonics	12
Physics.....	12
School of Public Policy	13
Textile and Fibre Engineering	14
Theses Collections	15

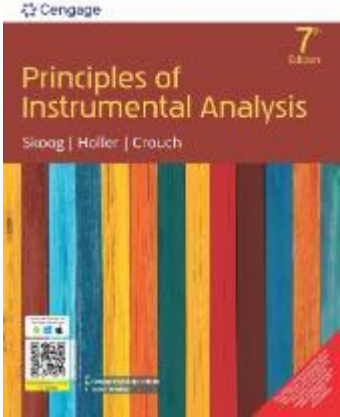
Applied Research in Electronics

1		Digital quantum information processing with continuous-variable systems by Takaya Matsuura, Singapore: Springer, 2023. xv, 160 p., - Springer theses: recognizing outstanding Ph.D. research. ISBN: 9789811982873 Subject Terms: Continuous-variable quantum system; Finite-size security proof; Optical quantum computation; Quantum gaussian operations 530.145:004 MAT-D Barcode: 181509; CL Click here for more details.
2		Magnetics, dielectrics, and wave propagation with MATLAB® codes by Carmine Vittoria, 2nd ed., Boca Raton: CRC Press, 2024. xvii, 474 p. Includes index (p. 467-474) ISBN: 9781032555690 Subject Terms: Maxwell equations; Principles of magnetism; Wave functions of atoms; ATLAD 537.87 VIT-M Barcode: 181529; CL Click here for more details.

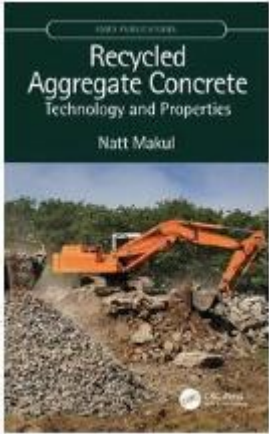
Biochemical Engineering and Biotechnology

3		Telomeres: chromosome sentinels edited by Carole Saintomé, London: ISTE, 2024. xv, 380 p., - Sciences: biology, molecular, structural and biochemical biology. Includes index (p. 377-380) ISBN: 9781789450972 Subject Terms: Telomeric structures; Telomere lengths; Sheltering complex; Telomere biology 577.2 -TEL Barcode: 181502; CL Click here for more details.

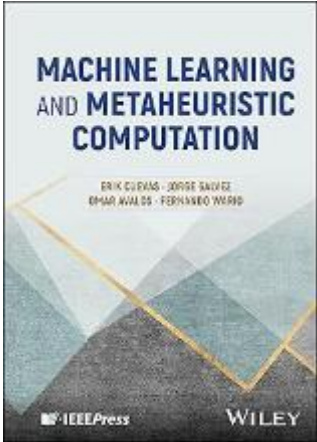
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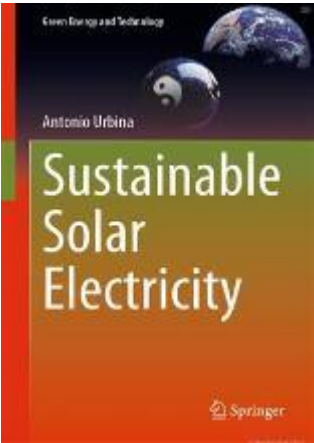
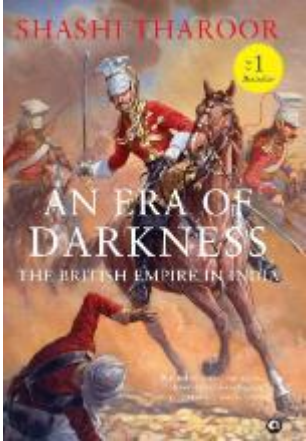
4		Principles of instrumental analysis by Douglas A. Skoog, F. James Holler and Stanley R. Crouch, 7th ed., New Delhi: Cengage, 2020. xx, 959 p. Includes index (p. 927-959) ISBN: 9789353506193 Subject Terms: Atomic spectroscopy; Molecular spectroscopy; Electroanalytical chemistry; Separation methods 543.08 SKO-P Barcode: 181512-181517; CL; TB Click here for more details.
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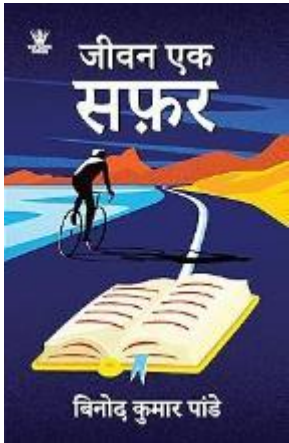
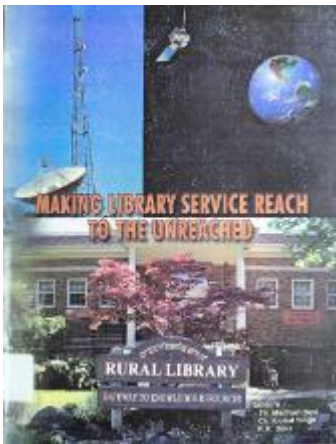
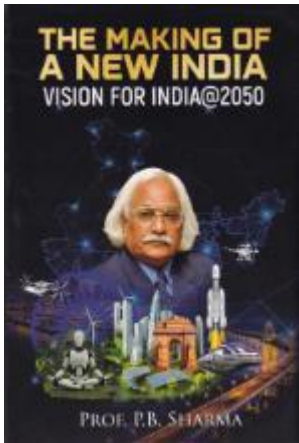
Civil and Environmental Engineering

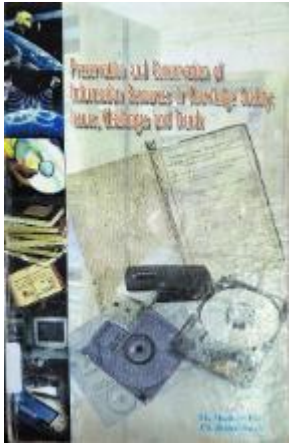
5		Recycled aggregate concrete: technology and properties by Natt Makul, Boca Raton: CRC Press, 2023. viii, 412 p., - IOM3 publications. Includes bibliography and index (p. 389-412) ISBN: 9781032189871 Subject Terms: Mechanical properties; Interfacial transition zone; Production of RAC; Materials and structure 624.012.4 MAK-R Barcode: 181530; CL Click here for more details.
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Electrical Engineering

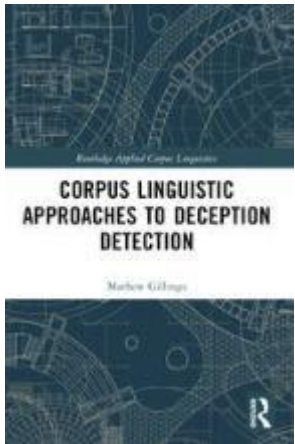
6		Machine learning and metaheuristic computation by Erik, Cuevas... (et al.), New Jersey: IEEE Press, 2025. xix, 408 p. Includes index (p. 397-408) ISBN: 9781394229642 Subject Terms: Algorithm; Regression; MATLAB; Metaheuristic techniques 510.5:004.8 -MAC Barcode: 181534; CL Click here for more details.

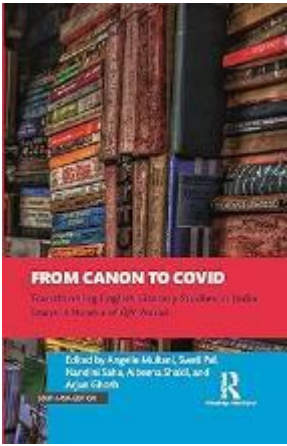
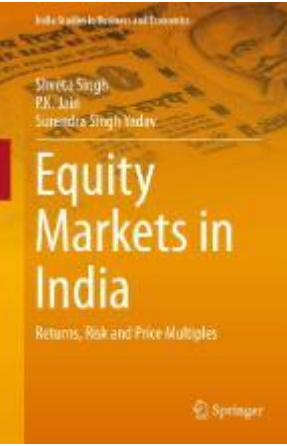
7		Sustainable solar electricity by Antonio Urbina, Cham: Springer, 2022. xvi, 301 p., - Green energy and technology. includes index (p. 297-301) ISBN: 9783030917708 Subject Terms: Photovoltaics; Electricity; PV modules; Energy 621.311.243 URB-S Barcode: 181505; CL Click here for more details.
GRATIS		
8		Digital hardware modelling using systemVerilog: course on systemVerilog hardware description language by S. B. Batra, New Delhi: PHI Learning, 2025. xvi, 195 p. Includes index (p. 193-195) ISBN: 9789354439421 Subject Terms: SystemVerilog; Finite state machine; Data path and control path; VLSI design 681.3 BAT-D Barcode: G24093; CL Click here for more details.
9		Era of Darkness: the British empire in India by Shashi Tharoor, New Delhi: Aleph Book Company, 2016. xxvi, 333 p. Includes bibliography and index (p. 319-333) ISBN: 9789383064656 Subject Terms: Looting of India; India political unity; Liberal democracy; Divide and rule 325.36:94(540) THA-E Barcode: G24094; CL Click here for more details.

10		Jeevan ek safar (जीवन एक सफ़र): by Binod Kumar Pandey, Bangalore: The Write Order Publications, 2023. 111 p. ISBN: 9789357766289 Subject Terms: Hindi literature; Life – Philosophy; Inspirational writing; Hindi poem 82-1 PAN-J Barcode: G24092; CL Click here for more details.
11		Making library service reach to the unreached edited by Th. Madhuri Devi, Ch. Ibohal Singh and K. K. Deka, Manipur: Manipur University, Canchipur, Imphal, 2011. vi, 370 p. ISBN: 9788192058306 Subject Terms: Library extension service; Rural resource sharing centre; Digital library; Rural library CD 021.6(063) -MAK Barcode: G24096; CL Click here for more details.
12		Making of a new India: a vision for India @2050 by P. B. Sharma, New Delhi: Jnanada Prakashan, 2025. 227 p. ISBN: 9788198511348 Subject Terms: World leader; Education for new India; Making India; Skilled Bharat 338.1(540) SHA-M Barcode: G24095; CL Click here for more details.

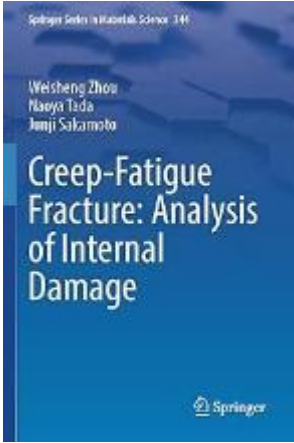
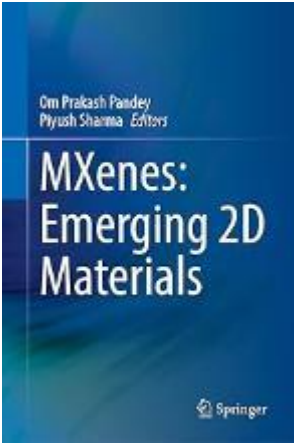
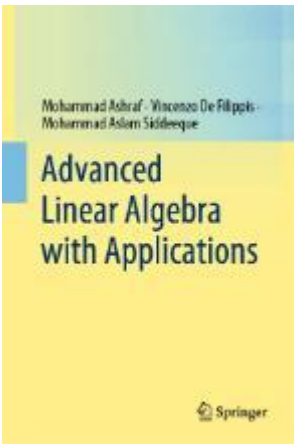
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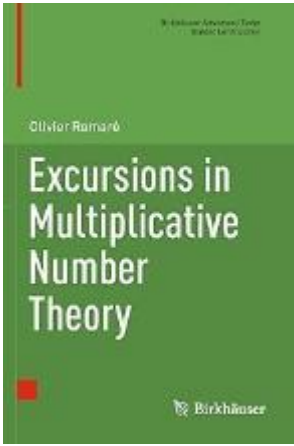
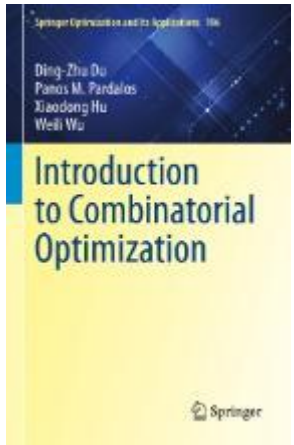
Humanities and Social Sciences

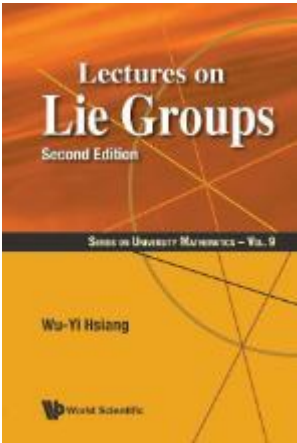
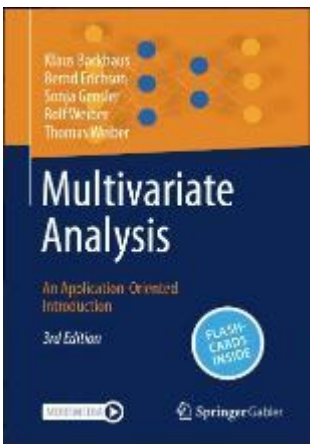
14		British writing from empire to brexit: writing, identity, and nation by Robert Spencer, Howard J. Booth and Anastasia Valassopoulos, Abingdon: Routledge, 2025. 199 p. Includes index (p. 193-199) ISBN: 9781032137865 Subject Terms: Britain; Northern Ireland; Eighteenth century; Territory 821.111(41) SPE-B Barcode: 181536; CL Click here for more details.
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		Back to Content

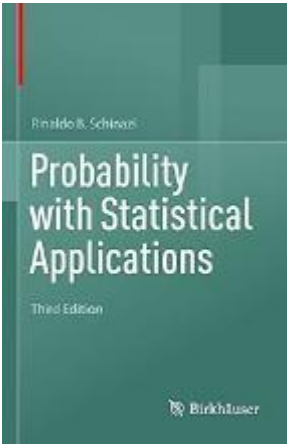
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17		Travel writing by Carl Thompson, 2nd ed., Abingdon: Routledge, 2025. 314 p., - New critical idiom. Includes Bibliography and Index (p. 285-314) ISBN: 9780367492359 Subject Terms: Travelling; Reporting the world; Revealing the self; Gender and sexuality 82.0 THO-T Barcode: 181537; CL Click here for more details.
IITD Faculty and Staff Authored Books		
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Materials Science and Engineering

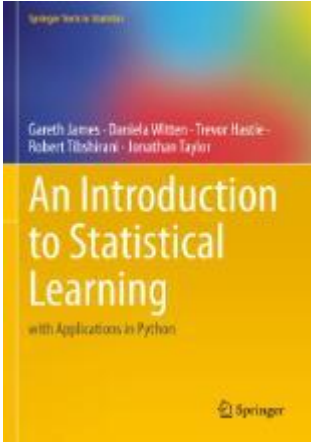
19		Creep-fatigue fracture: analysis of internal damage by Weisheng Zhou, Naoya Tada and Junji Sakamoto, Singapore: Springer, 2024. x, 176 p., - Springer series in materials science. Includes index (p. 175-176) ISBN: 9789819718818 Subject Terms: Probabilistic analysis; Dimensions and shapes; Volume density; Numerical simulation 620.17 ZHO-C Barcode: 181511; CL Click here for more details.
20		MXenes: emerging 2D materials edited by Om Prakash Pandey and Piyush Sharma, Singapore: Springer, 2024. viii, 329 p. Includes references (p. 324-329) ISBN: 9789819740635 Subject Terms: Properties of MXenes; Energy storage; Water treatment; Biomedical science 620.2 -MXE Barcode: 181507; CL Click here for more details.
Mathematics		
21		Advanced linear algebra with applications by Mohammad Ashraf, Vincenzo De Filippis and Mohammad Aslam Siddeeqe, Singapore: Springer, 2022. xvi, 495 p. Includes references and index (p. 489-495) ISBN: 9789811621666 Subject Terms: Algebraic structure; Vector spaces; Linear transformation; Dual spaces 512.64 ASH-A Barcode: 181519; CL Click here for more details.

22		Excursions in multiplicative number theory by Olivier Ramaré, Cham: Birkhäuser, 2022. xxii, 338p., - Birkhauser advanced texts basler lehrbucher. Include index (p. 331-338) ISBN: 9783030731717 Subject Terms: Arithmetic convolution; Analytical Dirichlet series; Legendre symbol; Derivatives 511.2 RAM-E Barcode: 181535; CL Click here for more details.
23		Finite elements II: galerkin approximation, elliptic and mixed PDEs by Alexandre Ern and Jean-Luc Guermond, Cham: Springer, 2021. ix, 492 p., - Texts in applied mathematics. Includes references and index (p. 471-492) ISBN: 9783030569242 Subject Terms: Galerkin approximation; Linear algebra; Sparse matrices; Maxwell's equations 517.96 ERN-F Barcode: 181504; CL Click here for more details.
24		Introduction to combinatorial optimization by Ding-Zhu Du... (et al.), Cham: Springer, 2022. xi, 402 p., - Springer optimization and its applications. Includes bibliography (p. 383-402) ISBN: 9783031105944 Subject Terms: Fibonacci search; Dynamic programming; Dinitz algorithm; Polyhedral techniques 519.16 -INT Barcode: 181520; CL Click here for more details.

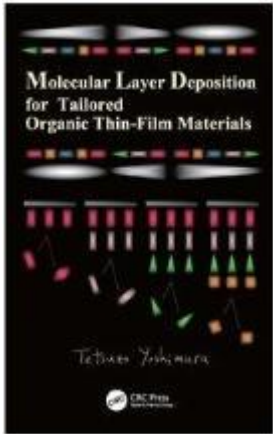
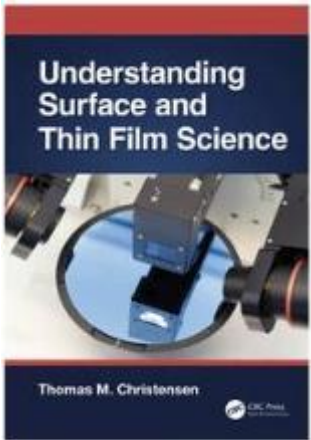
25		Lectures on lie groups by Wu-Yi Hsiang, 2nd ed., Singapore: World Scientific Publishing, 2017. viii,152 p., - Series on university mathematics. ISBN: 9789814740715 Subject Terms: Orbital geometry; Lie algebras; Geometric-algebraic approach; Linear representations 512.81 HSI-L Barcode: 181532; CL Click here for more details.
26		Linear algebra with applications by Roger Baker and Kenneth Kuttler, Singapore: World Scientific Publishing, 2014. ix, 320p. Includes bibliography and index (p. 313-320) ISBN: 9789814590532 Subject Terms: Vectors and fields; Matrices; Row operations; Equation 512.64 BAK-L Barcode: 181533; CL Click here for more details.
27		Multivariate analysis: an application-oriented introduction by Klaus Backhaus... (et al.), 3rd ed., Wiesbaden: Springer, 2025. xv, 611 p. Includes index (p. 607-611) ISBN: 9783658479305 Subject Terms: Quantitative data analysis; Regression analysis; Analysis of variance; SPSS commands 519.24 -MUL Barcode: 181521; CL Click here for more details.
		Back to Content

28		Probability with statistical applications by Rinaldo B. Schinazi, 3rd ed., Cham: Birkhäuser, 2022. xi, 361 p. Includes index (p. 359-361) ISBN: 9783030936341 Subject Terms: Probability space; Conditional probabilities; Binomial random variables; Combinatorics 519.2 SCH-P Barcode: 181501; CL Click here for more details.
Mechanical Engineering		
29		Fundamentals of computational fluid dynamics: the finite volume method by Clovis R. Maliska, Cham: Springer, 2023. xx, 431 p., - Fluid mechanics and its applications. Includes index (p. 425-431) ISBN: 9783031182372 Subject Terms: Fluid mechanics; Heat transfer; Numerical validation; Computational fluid mechanics 532.5 MAL-F Barcode: 181510; ME Click here for more details.
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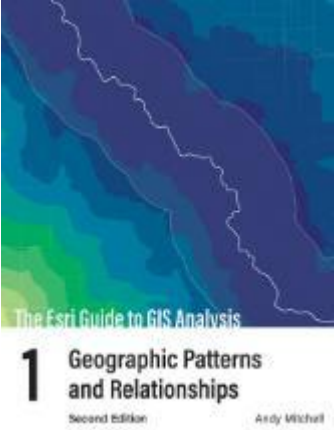
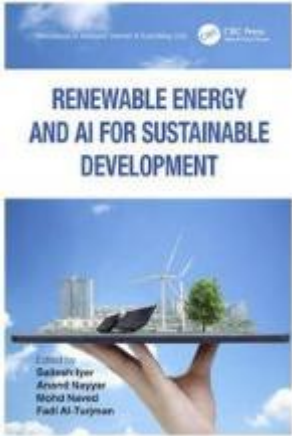
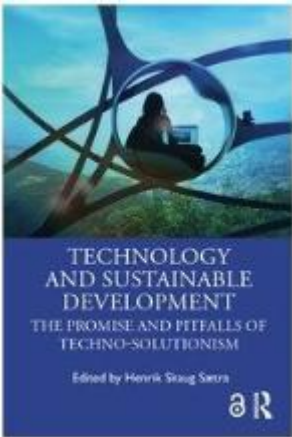
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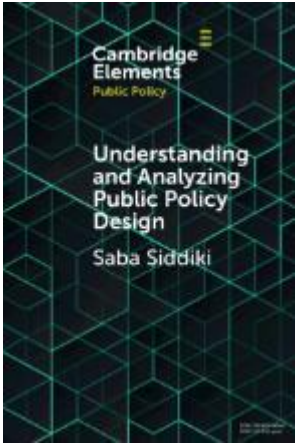
31		Introduction to statistical learning: with applications in python by Gareth James... (et al.), Cham: Springer, 2023. xv, 607 p., - Springer texts in statistics. Includes index (p. 597-607) ISBN: 9783031391897 Subject Terms: Python software; Data mining; Supervised learning; Linear regression 519.2:004.43P -INT Barcode: 181503; CL Click here for more details.
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Physics

32		Molecular layer deposition for tailored organic thin-film materials by Tetsuzo Yoshimura, Boca Raton: CRC Press, 2023. xvii, 409 p., - Optics and photonics. Includes index (p. 407-409) ISBN: 9780367555603 Subject Terms: Wavefunction control; Molecular layer; Selective MLD; SOLNET 539.216 YOS-M Barcode: 181531; CL Click here for more details.
33		Understanding surface and thin film science by Thomas M. Christensen, Boca Raton: CRC Press, 2023. xv, 356 p. Includes index (p. 353-356) ISBN: 9781032392158 Subject Terms: Atomic scale model; Pressure and vacuum; Crystal structure; Thermodynamics in solids 539.216 CHR-U Barcode: 181524; PH Click here for more details.
		Back to Content

School of Public Policy

34		Esri guide to GIS analysis: geographic patterns and relationships by Andy Mitchell, 2nd ed., Redlands: Esri Press, 2020. xi, 299 p. Includes index (p. 295-299) ISBN: 9781589485792 Subject Terms: GIS analysis; Mapping density; Spatial analysis; Regional planning 910.27:303.7 MIT-E Barcode: 181499; TB Click here for more details.
35		Renewable energy and AI for sustainable development edited by Sailesh Iyer... (et al.), Boca Raton: CRC Press, 2024. xvii, 268 p., - Innovations in intelligent internet of everything (IoE). Includes (p. 259-268) ISBN: 9781032439501 Subject Terms: Clean energy; Solar power; Plastic waster; Deep learning 502.174.3:004.85 -REN Barcode: 181525-181526; TB; SPP Click here for more details.
36		Technology and sustainable development: the promise and pitfalls of techno-solutionism edited by Henrik Skaug Saetra, New York: Routledge, 2023. x, 276 p. Includes index (p. 271-276) ISBN: 9781032350561 Subject Terms: Virtual reality; Climate engineering; Digital divide; Distribution of power 502.131.1:004 -TEC Barcode: 181528; SPP Click here for more details.

37		Understanding and analyzing public policy design by Saba Siddiki, Cambridge: Cambridge University Press, 2020. 63 p., - Cambridge elements in public policy. Includes references (p. 58-63) ISBN: 9781108739580 Subject Terms: Policy sciences; Political planning; Public administration; Environmental policy 334.02:351 SID-U Barcode: 181518; CL Click here for more details.
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Textile and Fibre Engineering

38		Fundamentals of nano-textile science edited by Prashansa Sharma, Devsuni Singh and Vivek Dave, Burlington: Apple Academic Press, 2023. xvi, 349 p. Includes index (p. 343-349) ISBN: 9781774638606 9781774638613 Subject Terms: Nanofiber production techniques; Piezoelectric nanogenerator; Nanoparticle production techniques; Nano pretreatments 677 -FUN Barcode: 181527; TT Click here for more details.
		Back to Content

THESES COLLECTIONS

Title	:	Catalytic transformation of hydrocarbons to valorized products on nanoclusters
Researcher	:	Iqra
Department	:	Department of Chemical Engineering, IITD
Year	:	2025
Supervisor	:	Haider, M. Ali (Prof.) - CHE (Guide); Pant, Kamal K. (Prof.) - CHE (Guide)
Physical description	:	xxxvii, 348 p.
Subject terms	:	Hydrocarbon transformation; Thermodynamics; DFT calculation; IR spectroscopy; Hydrogenation
Barcode	:	TH8416
Call No.	:	TH 544.47 IQR-C
Title	:	Aerosol emission inventory for residential sector of India based on fuel use survey and on-field emission measurement
Researcher	:	Jyoti Kumari
Department	:	Department of Civil and Environmental Engineering, IITD
Year	:	2025
Supervisor	:	Habib, Gazala (Prof.) - CEE (Guide)
Physical description	:	xiv, 148 p.
Subject terms	:	Indoor air pollution; Traditional cooking stove; Combustion parameters; Climate impact of aerosol; Organic and element carbon analysis
Barcode	:	TH8417
Call No.	:	TH 502.175:662 JYO-A
Title	:	Framework for assessing and integrating data, information, and knowledge in highway infrastructure life-cycle management: a data-driven decision-making approach
Researcher	:	Krishna, Chenchumurali
Department	:	Department of Civil Engineering, IITD
Year	:	2025
Supervisor	:	Ruikar, Kirti - Loughborough University, UK (Guide); Jha, Kumar Neeraj (Prof.) - EE (Guide)
Physical description	:	xxiii, 303 p.

Subject terms	:	Highway infrastructure; Structural equation model; Social network analysis; NHAI's data lake; Network survey vehicle
Barcode	:	TH8418
Call No.	:	TH 625.7:004 KRI-F
Title	:	Banking concentration and banks stability: evidence from Indian banking system
Researcher	:	Zeeshan, Md.
Department	:	Department of Management Studies, IITD
Year	:	2025
Supervisor	:	Ikeda, Eri (Asst. Prof.) - MS (Guide); Singh, Manish Kumar - IIT Roorkee (Guide)
Physical description	:	xiii, 123 p.
Subject terms	:	Banking sector; Bank sectoral risk; Bank sectoral concentration; Indian banking; Bank stability
Barcode	:	TH8419
Call No.	:	TH 336.761(540) ZEE-B
Title	:	Advanced magnetoelectric nanogenerator: a nanoscale device for biomedical, energy harvesting and electrocatalytic applications
Researcher	:	Nandan, M.
Department	:	Department of Electrical Engineering, IITD
Year	:	2025
Supervisor	:	Betal, Soutik (Asst. Prof.) - EE (Guide)
Physical description	:	xxi, 164 p.
Subject terms	:	Hallow nanosphere; Dye reduction; Anti-bacterial activity; Ultrasonic spray pyrolysis; Surface change modulation
Barcode	:	TH8420
Call No.	:	TH 537.8:620.3 NAN-A
Title	:	Integrated blockchain-based digital transformation configurations for resilience, engagement, and growth
Researcher	:	Mandal, Subhadeep
Department	:	Department of Management Studies, IITD
Year	:	2025
Supervisor	:	Kar, Arpan Kumar (Prof.) - MS (Guide); Gupta, Shivam - NEOMA Business School, France (Guide)

Physical description	:	xv, 216 p.
Subject terms	:	Blockchain technology; Blockchain-based traceability; Supply chain digitalization; Sociotechnical system theory; Growth hacking
Barcode	:	TH8421
Call No.	:	TH 004.738.5:658 MAN-I
Title	:	Investigations in transient flow in draft tube of a francis turbine during load variation
Researcher	:	Masoodi, Faiz Azhar
Department	:	Department of Energy Science and Engineering, IITD
Year	:	2025
Supervisor	:	Goyal, Rahul (Assoc. Prof.) - ESE (Guide)
Physical description	:	xxv, 241 p.
Subject terms	:	Hydraulic turbines; Spectral analysis; RANS approach; computational methodology; velocity field
Barcode	:	TH8422
Call No.	:	TH 621.224.7 MAS-I
Title	:	Preparation of flame-retardant breathable polymeric films for textile applications
Researcher	:	Meena, Mahipal
Department	:	Department of Materials Science and Engineering, IITD
Year	:	2025
Supervisor	:	Jacob, Josemon (Prof.) - MSE (Guide)
Physical description	:	xxix, 208 p.
Subject terms	:	Waterproof; Mechanical properties; Synthesis of PUI; Morphology; Flame retardancy
Barcode	:	TH8423
Call No.	:	TH 677.027.623 MEE-P
Title	:	Multifunctional responsive nanomaterials for theranostics and metal ION sequestration
Researcher	:	Nikhil Kumar
Department	:	Department of Chemistry, IITD
Year	:	2025

Supervisor	:	Datta, Anupama - Institute of Nuclear Medicine and Allied Sciences, DRDO (Guide); Singh, Jai Deo (Prof.) - CHY (Guide)
Physical description	:	xxix, 304 p.
Subject terms	:	Biomedical applications; Chemicals; Hemolysis assay; Radiochemical yield; Nanoparticle synthesis
Barcode	:	TH8424
Call No.	:	TH 544.163 NIK-M
Title	:	Congruent number problems, their generalization and some related topics
Researcher	:	Sahoo, Sonamani
Department	:	Department of Mathematics, IIT Delhi
Year	:	2025
Supervisor	:	Sharma, R. K. (Prof.) - MA (Guide); Sarma, Ritumoni (Prof.) - MA (Guide)
Physical description	:	xiii, 81 p.
Subject terms	:	Linear algebra; Number theory; Monsky matrices; Quadratic number; Solvability conditions
Barcode	:	TH8425
Call No.	:	TH 512.533.2 SAH-C
Title	:	Operational aspects of modular multilevel converter (MMC) based topologies for MVDC/HVDC
Researcher	:	Sarkar, Sukrashis
Department	:	Department of Electrical Engineering, IITD
Year	:	2025
Supervisor	:	Das, Anandarup (Prof.) - EE (Guide)
Physical description	:	xxii, 197 p.
Subject terms	:	Direct current technology; MVDC application; Arm energy balancing; SM capacitor; Fault current limiter
Barcode	:	TH8426
Call No.	:	TH 621.314.2 SAR-O
Title	:	Advancing pathogen diagnostics using surface enhanced Raman spectroscopy (SERS) with glancing angle deposition fabricated substrates for microbial detection
Researcher	:	Senapati, Sneha
Department	:	School of Interdisciplinary Research, IITD

Year	:	2025
Supervisor	:	Singh, J. P. (Prof.) - PH (Guide); Kulkarani, Smita S. - Indian Council of Medical Research, New Delhi (Guide)
Physical description	:	xxx, 250 p.
Subject terms	:	Thermal evaporation technique; Adsorption and hydrophobicity; ML model training; Statistical analysis; Plasma samples
Barcode	:	TH8427
Call No.	:	TH 616-078 SEN-A
Title	:	Study of digital payments in India
Researcher	:	Batra, Chetna
Department	:	Department of Management Studies, IITD
Year	:	2025
Supervisor	:	Sharma, Seema (Prof.) - MS (Guide)
Physical description	:	xix, 175 p.
Subject terms	:	Cashless economies; Electronic transactions; Internet banking; Transaction transparency; Economic modernization
Barcode	:	TH8428
Call No.	:	TH 336.71:004.738.5(540) BAT-S
Title	:	Control of wind-driven-DFIG-SPV array-battery based microgrids with synchronization
Researcher	:	Chakraborty, Subhadip
Department	:	Department of Electrical Engineering, IITD
Year	:	2025
Supervisor	:	Singh, Bhim (Prof.) - EE (Guide); Panigrahi, Bijaya Ketan (Prof.) - EE (Guide)
Physical description	:	xxxiii, 419 p.
Subject terms	:	Renewable energy based microgrids; Wind and solar powered microgrids; Double fed induction generators; Solar photovoltaic arrays; Bidirectional converter based microgrids
Barcode	:	TH8429
Call No.	:	TH 621.311.245 CHA-C
Title	:	Biodegradable polymeric nanoparticles mediated stimuli-responsive delivery of chemotherapeutic agents for breast cancer therapy

Researcher	:	Gupta, Priya
Department	:	Centre for Biomedical Engineering, IITD
Year	:	2025
Supervisor	:	Singh, Harpal (Prof.) - CBME (Guide); Kulshreshtha, Ritu (Prof.) - BEB (Guide)
Physical description	:	xxxix, 212 p.
Subject terms	:	Surgery; Stem cell therapy; Immunotherapy; Radiation therapy; Apoptosis study
Barcode	:	TH8430
Call No.	:	TH 618.19:616-006.6 GUP-B
Title	:	Unravelling the charge generation pathways in hybrid perovskites for solar cell applications
Researcher	:	Gupta, Satakshi
Department	:	IIT Delhi and University of Queensland
Year	:	2025
Supervisor	:	Sunil Kumar (Prof.) - PH (Guide); Shaw, Paul - University of Queensland (Guide); Burn, Paul (Prof.) - University of Queensland (Guide)
Physical description	:	xxii, 164 p.
Subject terms	:	Inverted perovskite solar cell; Additive engineering; Transient absorption spectroscopy; Transient reflection spectroscopy; Methylammonium lead triiodide
Barcode	:	TH8431
Call No.	:	TH 621.311.243 GUP-U
Title	:	Molecular dynamics study of structure formations in strongly coupled plasma
Researcher	:	Mamta
Department	:	Department of Physics, IITD
Year	:	2025
Supervisor	:	Das, Amita (Prof.) - PH (Guide)
Physical description	:	xv, 120 p.
Subject terms	:	Ultracold plasma; Dusty plasma; Three-dimensional (3D) system; Crystalline structures; Debye shielding profile
Barcode	:	TH8432
Call No.	:	TH 533.95 MAM-M

Title	:	Reduced-order model and neural operators for stochastic mechanics problems under parametric uncertainty
Researcher	:	Navaneeth N.
Department	:	Department of Applied Mechanics, IITD
Year	:	2025
Supervisor	:	Chakraborty, Souvik (Assoc. Prof.) - AM (Guide)
Physical description	:	xxxii, 258 p.
Subject terms	:	Simulation methods; Surrogate modeling; Deep-learning methods; Unsupervised learning; Time-dependent reliability analysis
Barcode	:	TH8433
Call No.	:	TH 53.082:519.873 NAV-R
Title	:	Investigation of the magneto-transport and superconducting properties of half Heusler thin films
Researcher	:	Srivastava, Shivangi
Department	:	Department of Physics, IITD
Year	:	2025
Supervisor	:	Chatterjee, Ratnamala (Prof.) - PH (Guide)
Physical description	:	xvi, 120 p.
Subject terms	:	Spin-orbit coupling; Topological classification; Sample preparation methods; Effect of f-electron doping; Magneto-transport properties
Barcode	:	TH8434
Call No.	:	TH 539.216 SRI-I
Title	:	Experimental investigations into ultrasonic assisted 3D printing of carbon fiber polymer composites
Researcher	:	Verma, Naveen Kumar
Department	:	Department of Mechanical Engineering, IITD
Year	:	2025
Supervisor	:	Pandey, Pulak Mohan (Prof.) - ME (Guide)
Physical description	:	xxxi, 206 p.
Subject terms	:	Composite materials; Manufacturing techniques; Mechanical and microstructural methods; Fracture morphology; Power window helical gear

Barcode	:	TH8435
Call No.	:	TH 621.7:681.62 VER-E
Title	:	Defect-engineered metal oxide-based nanostructures for energy conversion and storage applications
Researcher	:	Ajay
Department	:	Department of Chemistry, IITD
Year	:	2025
Supervisor	:	Ingole, Pravin P. (Prof.) - CHY (Guide)
Physical description	:	xxiv, 145 p.
Subject terms	:	Electrochemical energy storage devices; PEC devices and mechanism; BiFeO ₃ nanoparticulate films; Electron microscopy; PEPS effects
Barcode	:	TH8436
Call No.	:	TH 620.9:620.3 AJA-D
Title	:	Study on creep behaviour of plant fibre/epoxy composites
Researcher	:	Bhattacharyya, Debarati
Department	:	Department of Textile and Fibre Engineering, IITD
Year	:	2025
Supervisor	:	Baheti, Vijaykumar Narayandas (Assoc. Prof.) - TFE (Guide)
Physical description	:	xxii, 188 p.
Subject terms	:	Chemical treatments of plant fibres; Microwave irradiation; TEMPO oxidation; FTIR analysis of jute; Mechanical properties of plant fibres
Barcode	:	TH8437
Call No.	:	TH 677.1/.3 BHA-S
Title	:	Carbon dioxide (CO ₂) variability and its drivers over south Asia and global tropics
Researcher	:	Das, Chiranjit
Department	:	Centre of Atmospheric Sciences, IITD
Year	:	2025
Supervisor	:	Kunchala, Ravi Kumar (Assoc. Prof.) - CAS (Guide)
Physical description	:	xxi, 148 p.
Subject terms	:	Transport model; NASA CMS-Flux model; Meridional propagation; MICRO4-ACTM; Environmental drivers

Barcode	:	TH8438
Call No.	:	TH 502.3(5-13) DAS-C
Title	:	Functional materials for energy storage and conversion devices: insights from first-principles and molecular dynamics simulations
Researcher	:	Kala, Jyotsana
Department	:	Department of Physics, IITD
Year	:	2025
Supervisor	:	Haider, M. Ali (Prof.) - CHE (Guide); Mani, Brajesh Kumar (Assoc. Prof.) - PHY (Guide)
Physical description	:	xxvi, 208 p.
Subject terms	:	Solid oxide fuel cells; Thomas-fermi model; Thermodynamics ensembles; Kohn-sham equations; Thermostats
Barcode	:	TH8439
Call No.	:	TH 620.91:620.1 KAL-F
Title	:	Strategic development of metal-free one-pot stepwise reactions: a regioselective approach towards C-C and C-X bond formation
Researcher	:	Pragya
Department	:	Department of Chemistry, IITD
Year	:	2025
Supervisor	:	Hazra, Chinmoy Kumar (Assoc. Prof.) - CHY (Guide)
Physical description	:	xiv, 321 p.
Subject terms	:	Cyclization reactions; Plausible mechanism; Substrate scope evaluation; Synthetic utility; 4-Aryle-hydrocoumarin
Barcode	:	TH8440
Call No.	:	TH 542.9 PRA-S
Title	:	Real-time flood inundation modelling through physics-based machine learning
Researcher	:	Sasanapuri, Santosh Kumar
Department	:	Department of Civil and Environmental Engineering, IITD
Year	:	2025
Supervisor	:	T., Dhanya, C. (Prof.) - CEE (Guide); Gosain, A. K. (Prof.) - CEE (Guide)
Physical description	:	xviii, 146 p.

Subject terms	:	Hydrodynamics models; Lower godavari river; Model hyperparameterization; PINNs design; Flood modelling
Barcode	:	TH8441
Call No.	:	TH 627.516:004.85 SAS-R
Title	:	Development of fluorine-retentive approaches to synthesize fluoro-tethered oxindoles
Researcher	:	Sharma, Ruchi
Department	:	Department of Chemistry, IITD
Year	:	2025
Supervisor	:	Yadav, M. Ramu (Assoc. Prof.) - CHY (Guide)
Physical description	:	xx, 189 p.
Subject terms	:	Modulation of lipophilicity; Hydrolysis of ester; Mechanistic investigation; Crystal structure of compound; CF ₃ -Acrylamides
Barcode	:	TH8442
Call No.	:	TH 542.057 SHA-D
Back to Content		