



LUMS

Gad and Birgit
Rausing Library

Monthly



Bulletin

No. 44 Mar 2023

Table of Contents

- News Corners
 - LUMS and Library News
- Indexing of News Papers
 - The News, Dawn, Business Recorder, The Nation
- New Book List
 - List of New Arrivals
- Journal table of Contents
 - Business, Social Sciences, Law, Science & Engineering
- Indexing of SCOPUS Publications
 - LUMS publications
- Book of the Month
 - Best seller book
- Monthly Library Statistics
 - e-databases, portals, website, circulation usage

News Corner

LUMS National Outreach Programme Visits Faisalabad

The NOP Team recently conducted successful outreach sessions in Faisalabad and adjoining cities, including Toba Tek Singh, Nakana Sahab, Jhang and Chenab Nagar. The team visited and established connections with twenty new colleges. They interacted with 1575 students from different schools and colleges, reaching out to young minds and inspiring them to pursue their academic dreams. During the outreach, the NOP team advised student counsellors inside colleges to encourage their male and female students to apply for the NOP scholarship and study at LUMS. Special emphasis was placed on encouraging female students to apply. The team also held motivational sessions for students from arts and commerce backgrounds, highlighting the opportunities available at LUMS for students from diverse academic and cultural backgrounds. The team shared success stories of LUMS students and alums, inspiring intermediate level students to dream big and work towards achieving their goals. [Read More](#)

LUMS Faculty Starts Fulbright Scholar Position at Stanford University

Dr. Muhammad Shakeel Jajja, Associate Professor at the Suleman Dawood School of Business (SDSB), has started a Fulbright Scholar position at the Graduate School of Business (GSB) at Stanford University. The Fulbright Scholar programme is highly competitive and one of the most prestigious postdoctoral fellowships worldwide.

Dr. Jajja has been associated with SDSB since 2014. He is an Associate Professor of Operations and Supply Chain Management, Director of the Executive MBA, and Founding Director of the MS in Supply Chain and Retail Management at SDSB. Prior to this, he served as Faculty Director at the Rausing Executive Development Centre (REDC), LUMS. [Read More](#)

USAID Delegation and LUMS Leadership Discuss Areas for Effective Partnerships

LUMS recently hosted a delegation from the United States Agency for International Development (USAID) to explore areas of collaboration, with a focus on climate action and capacity building. The meeting brought together LUMS' leadership and members of the USAID delegation including Counselor, Mr. Clinton D. White, Deputy Mission Director, Mr. Michael Rossman and US Consul General William K. Makaneole.

Pro Chancellor, Abdul Razak Dawood; Rector, Shahid Hussain; Vice Chancellor, Dr. Arshad Ahmad, and Vice Provost, Dr. Tariq Jadoon welcomed the delegation. The conversation encompassed a range of topics that were of relevance to both parties; a common thread in the discussion was the evident move towards collaborative efforts in developing sustainable practices, fighting climate change, and supporting Pakistan's socio-economic advancement. [Read More](#)

United States Education Foundation Pakistan Conducts Informative Session at LUMS

The Career Services Office invited United States Education Foundation Pakistan (USEFP) to LUMS on 6th March 2023, for an in-depth information session regarding the Fulbright Master's and PhD Scholarship offered to Pakistani students. The session was delivered by Ms. Rita Akhtar, Executive Director USEFP, where she provided detailed guidance on what-to-do and what-not-to-do in the application, to make sure it stands out from the rest. This was an exclusive opportunity for LUMS students and alumni to get their questions answered directly from the Director of USEFP and get their answers during the session. Ms. Rita ensured students that Pakistan is currently amongst the best places to be in to receive funding for higher education. She further mentioned that energy, water, power, and social sciences are the most in-demand sectors to be applying to for a USEFP scholarship. [Read More](#)

LUMS Signs MoU with Fauji Fresh n Freeze

LUMS and Fauji Fresh n Freeze Ltd. signed an MoU on March 8, 2023. The agreement is aimed at enhancing, creating and implementing joint initiatives that can reduce the gap between academic and industrial sectors. As part of this agreement, selected Fauji Fresh n Freeze Ltd. employees will have the opportunity to be enrolled in the Executive MBA programme offered by the Suleman Dawood School of Business (SDSB) at LUMS.

The ceremony was attended by representatives from Fauji Fresh n Freeze Ltd., including Mr. Muhammad Ahmad, Deputy General Manager, and Ms. Shanza Haider, Head HR and Shared Services. Dr. Tanveer Shehzad, Associate Dean and Associate Professor, SDSB represented LUMS. [Read More](#)

Round Table Delegation Meeting: Development of Entrepreneurship in Pakistan

The Centre for Business and Society, (CBS) LUMS, organised a round table discussion under the objective of the development and advancement of female entrepreneurship in Pakistan. The session, held on March 6, 2023 at Suleman Dawood School of Business (SDSB), LUMS, featured 21 participants from a delegation across 9 institutions. The round table session was opened by Dr. Misbah Tanveer Chaudhry, Faculty Director, CBS and Assistant Professor, SDSB, LUMS. She introduced the Centre's work, particularly emphasising on the activities and programmes conducted by CBS under the thematic focus of female entrepreneurship. This was followed by a presentation from Dr. Shahid Qureshi (Rector, GIFT University, Gujranwala), he elaborated the vision of GIFT University's academic development in entrepreneurship and the need to collaborate with various universities, including LUMS, with similar thematic pillars to synergize towards this goal. [Read More](#)

LUMS Senior Leadership Visits Netsol Technologies

A delegation from LUMS visited Netsol Technologies to meet Mr. Salim Ghauri, CEO, Netsol Technologies, and discuss potential collaboration opportunities. Representatives included members of the LUMS senior leadership, Dr. Arshad Ahmad, Vice Chancellor, Dr. Suleman Shahid, Assistant Professor, Computer Science Department, Ms. Nuzhat Kamran, Director, Office of Advancement, and Mr. Anas Ashraf Ali, Head of Development.

NETSOL Technologies is a leader in providing innovative IT solutions to the global asset finance and leasing industry. For the past four decades, NETSOL has facilitated numerous businesses in finding their competitive edge and streamlining their business operations. NETSOL Technologies has a rich history of innovation and is regarded as a pioneer and dynamic leader in the global asset finance and leasing industry. [Read More](#)

LUMS and PharmEvo Explore Avenues for Collaboration

On March 6, 2023, a meeting was held at LUMS with representatives from PharmEvo (Pvt.) Ltd., a Karachi-based company engaged in manufacturing and marketing of high-quality pharmaceutical and nutraceutical products, to discuss potential avenues for collaboration. Syed Jamshed Ahmed, Deputy CEO, Dr. Masood Jawaid, Director Medical Affairs and Learning Innovations, and Mr. Mohsin Sheraz Ali, Director Marketing from PharmEvo met with Dr. Tariq Jadoon, Provost, Ms. Nuzhat Kamran, Director, Office of Advancement, Ms. Aisha Azhar, Director, Rausing Executive Development Centre, and Mr. Anas Ashraf Ali, Head of Development, Office of Advancement at LUMS.

PharmEvo representatives discussed the company's CSR initiatives under its Institute of Leadership Excellence, including courses aimed at inculcating leadership qualities in medical practitioners. They expressed interest in collaborating with faculty at LUMS to design and develop customised training programmes, workshops, and certificate courses for physicians on healthcare leadership and innovation. Additionally, they offered to provide intellectual, social, and financial capital for the publication of local case studies in the same area. [Read More](#)

U.S.-Pakistan Think Big Summit: Hybrid Poster Competition Session

In celebration of International Women's Day, leaders in the private sector, academia, and civil society convened for a hybrid virtual event on March 7, 2023 to highlight shared challenges and opportunities to advance women's economic empowerment in Pakistan in the wake of the COVID-19 pandemic. The event was co-hosted by WEConnect International, the Centre for Business and Society (CBS) at LUMS, Texas A&M University, the U.S. Chamber of Commerce's U.S.-Pakistan Business Council, S&P Global, and Vital Voices Global Partnership. As a part of the international summit, CBS organised a poster competition event, with the thematic focus on 'The Gendered Impacts of COVID-19: Keeping Women at the Heart of a Post-Pandemic Economy'. The contest invited students from across LUMS to design one-page posters. The shortlisted submissions were invited to present at CBS' Hybrid Poster Competition Session, held at LUMS on the day of the summit. [Read More](#)

INDEXING OF NEWSPAPERS

Agricultural General:

- Engro Fertilizers Limited. BR, 01st Feb 2023.
- Fertiliser efficiency. BR, 17th March 2023.
- Cotton: huge output shortfall projected. BR, 19th March 2023.
- Agri sector needs to adopt demand-driven business models. Daily Dawn, 07th March 2023.
- NA committee approves amendment to trade control of flora and fauna bill. Daily Dawn, 08th March 2023.
- Rethinking Pakistan`s agriculture. Daily Dawn, 16th March 2023.
- Fix agriculture to get rid of external deficit Salim. Daily Dawn, 17th March 2023.
- The need to increase farmers` loowledge. Daily Dawn, 20th March 2023.
- ECC okays uniform procurement price of wheat crop at Rs3900 40kg. The Nation, 02nd March 2023.
- Better processing, marketing to make agri products competitive. The Nation, 05th March 2023.
- Farmers struggle amid rising input costs, insufficient market availability. The Nation, 08th March 2023.
- Pakistan, Belarus hold Joint Working Group meeting on Agri Cooperation. The Nation, 08th March 2023.
- ECC approves assigning wheat procurement target of 1.80MMT at price of Rs3,90040kg. The Nation, The Nation, 09th March 2023.
- Minister calls for improving agricultural productivity through farm mechanization. The Nation, 14th March 2023.
- Farmers urged to register for govt`s crop insurance initiatives. The Nation, 15th March 2023.
- ECC directs Petroleum Division to supply indigenous gas to urea plants till May 31. The Nation, 16th March 2023.
- Balochistan ideal for cultivation of drought-tolerant olive trees. The Nation, 19th March 2023.
- Utilisation of wasteland stressed to boost food production. The Nation, 24th Marth 2023.
- Over 30pc of potato seed requirements can be met from tissue culture labs at NARC. The Nation, 26th March 2023.
- Corporate farming, agri research ensure food security, strengthen economy. The Nation, 27 March 2023.
- Rain partially damages 16,000 acres standing wheat crop in Layyah. The Nation, 27th March 2023. The Nation, 28 March 2023.
- Irsa advisory body unable to finalise water availability criteria for Kharif. The Nation, 31st March 2023.
- Cotton arrivals plunge 34.5 percent in February. The News, 04th March 2023.
- Poor seeds cost Pakistan \$1bn annually PAC. The News, 07th March 2023.
- PARC uses aeroponics technology to boost potato production. The News, 26th March 2023.
- Reviving agricultural growth. The News, 31st March 2023.

Auto and Allied:

- TPL Trakker (Private) Limited. BR, 06th March 2023.
- Auto raw material, CKD. BR, 09th March 2023.
- Honda Atlas shuts production to end-March on import difficulties. BR, 09th March 2023.
- Automobile. BR, 16th March 2023.
- E-vehicles. BR, 24th March 2023.
- Industry for grabbing Africa, non-traditional markets for auto parts export. The Nation, 11th March 2023.
- Motorbikes, three wheelers' sale drops 31.71pc in 8 months. The Nation, 19th March 2023.
- Electric vehicles' import in jeopardy over LC issues. The News, 03rd March 2023.
- Car sales plunge 80pc in February. The News, 14th March 2023.
- Honda Atlas jacks up car prices up to Rs1 million. The News, 15th March 2023.
- Ghandhara Tyre suspends production on inventory shortages. The News, 21st March 2023.
- Auto financing falls for eighth straight month in February. The News, 22nd March 2023.
- Electric buses to be launched on more routes in Karachi. The News, 25th March 2023.
- Delivery of vehicles' smart cards to owners. The News, 31st March 2023.

Banking Pakistan:

- SCBPL launches first 'Sustainable Trade Export LC' programme. BR, 25th March 2023.

Cement and Construction:

- Ghani Glass Limited. BR, 15th March 2023.
- Lucky Cement completes Rs4.35bn buyback exercise. Daily Dawn, 18th March 2023.
- Bestway Cement commences production of cement at its greenfield plant in Mianwali. The Nation, 30th March 2023.

Chemical and Pharmaceutical Industry:

- Feroz1888 Mills Limited. BR, 17th March 2023.
- Rupee devaluation. The Nation, 15th March 2023.

Communication & Transportations:

- Number of 3G, 4G users increases by 1.35 million. BR, 28th March 2023.
- Mobile industry facing serious shortage of raw materials, components. The Nation, 04th March 2023.
- Mobile phones import decreases over 68pc to \$447m in 8 months. The Nation, 24th March 2023.

Economic Budget, Condition:

- IMF conditionalities. BR, 01st Mar 2023.
- Policy rate hiked by 300bps to 20pc to tame inflation. BR, 03rd March 2023.
- Inflation out of control. BR, 06th March 2023.

- Land grab in Karachi inflicts \$2.9bn loss on economy annually, claims FPCCI. BR, 07th March 2023.
- Debt relief for developing countries. BR, 13th March 2023.
- The challenge of rising interest rates. BR, 26th March 2023.
- Moody's cuts Pakistan credit ratings to Caa3. Daily Dawn, 01st March 2023.
- Talks begin tomorrow to hammer out IMF deal. Daily Dawn, 05th March 2023.
- Rupee falls despite rise in SBP forex reserves. Daily Dawn, 10th March 2023.
- Delay in IMF deal may cause Pakistan to pause repayments, warns report. Daily Dawn, 14th March 2023.
- Loss-making govt firms borrowed Rs142.3bn. Daily Dawn, 19th March 2023.
- Govt bonds fail to attract dollars despite record returns. Daily Dawn, 22nd March 2023.
- Moody's downgrades Pak rating to Caa3. The Nation, 01st March 2023.
- SPI-based weekly inflation falls by 0.30 percent. The Nation, 04th March 2023.
- Govt collects Rs896.4 billion non tax revenue in first half. The Nation, 12th March 2023.
- Economy facing challenges of low growth, falling reserve, high inflation. The Nation, 20th March 2023.
- ECC approves immediate release of 25,000 MTs of wheat to GB. The Nation, 22nd March 2023.
- FBR facing Rs215bn shortfall in tax target. The News, 01st March 2023.
- High inflation isn't going away, says finance ministry. The News 01st March 2023.
- Crashing economy. The News, 08th March 2023.
- 25pc GST imposed on 'luxury' items. The News, 09th March 2023.
- Taxation and inflation. The News, 14th March 2023.
- FPCCI urges govt to seek 'concessional' loans. The News, 19th March 2023.
- Commerce minister assures exporters of addressing tax-related issues. The News, 20th March 2023.
- FPCCI slams govt's economic team on 'IMF programme delay'. The News, 26th March 2023.

Economic Development, Planning:

- FATF. BR, 03rd March 2023.
- Jul-Feb: FBR collection shows Rs240bn shortfall. BR, 05th March 2023.
- Galloping inflation. BR, 07th March 2023.
- Shape up or ship out!. BR, 12th March 2023.
- Finance Act challenged. BR, 19th March 2023.
- Economic impasse is a ticking bomb waiting to go off. BR, 20th March 2023.
- The IMF-govt trust deficit. BR, 27th March 2023.
- Interest rate soars to historic high. Daily Dawn, 03rd March 2023.
- Mr Dar and our 'Inshallah economy. Daily Dawn, 06th March 2023.
- Raising policy rate was not IMF's demand, discloses SBP chief. Daily Dawn, 09th March 2023.
- Dar expects to close IMF deal as talks set to resume. Daily Dawn, 12th March 2023.
- The messy economy. Daily Dawn, 20th March 2023.

- Dar hopes FBR will achieve revised target of Rs7,640 billion despite challenges. The Nation, 02nd March 2023.
- Looming economic default. The Nation, 09th March 2023.
- Prime Minister Office intervenes to resolve issues faced by Chinese IPPs. The Nation, 15th March 2023.
- Commerce minister agrees to redress garment sector's SMEs liquidity crisis. The Nation, 20th March 2023.
- Pakistan takes \$7.4 billion foreign loan in eight months to build forex reserves. The Nation, 21st March 2023.
- CWDP approves 6 development projects worth Rs21.28 billion. The Nation, 25th March 2023.
- Political instability, delay in IMF programme aggravating economic crisis. The Nation, 27th March 2023.
- FPCCI says raising interest rates won't help curb inflation. The News, 01st March 2023.
- Inflation hits nearly 50-year high in February. The News, 02nd March 2023.
- FPCCI says tight monetary policy to kill businesses. The News, 04th March 2023.
- Adding \$80 billion to the GDP. The News, 07th March 2023.
- SBP abolishes MDR on POS transactions. The News, 19th March 2023.
- Up 10pc in Feb, FDI falls by 40pc in eight months. The News, 21st March 2023.

Engineering and Technology:

- Pakistan National Shipping Corporation. BR, 02nd March 2023.
- Interview with Shahzad Saleem – Chairman, Nishat Chunian Group. BR, 24th March 2023.

Education Policies & Related:

- PM inaugurates mobile school project in Islamabad. Daily Dawn, 01st March 2023.
- HEC programme PhD students await funds to continue study abroad. Daily Dawn, 16th March 2023.
- Education minister hints at linking varsity grants with performance. Daily Dawn, 18th March 2023.
- Largest university of Punjab sans VC for a year PUASA. Daily Dawn, 18th March 2023.
- Unlocking education through STEAM. The Nation, 07th March 2023.
- Emergencies and education. The Nation, 09th March 2023.
- SC to take up plea seeking extra marks for Hafiz-e-Quran students. The Nation, 10th March 2023.
- Vice chancellors of Pakistani universities depart for study tour. The Nation, 16th March 2023.
- Upgraded health, education facilities top priority of govt. The Nation, 21st March 2023.
- PM launches 'teleschool Pakistan' free online education. The Nation, 22nd March 2023.
- Tech Valley Pakistan leads the way, as a system integrator, in improving digital education in Pakistan> The Nation, 25th March 2025.
- Schools on Wheels project launched by PM. The News, 01st March 2023.
- Schools on Wheels' project to be expanded to flood-hit areas. The News, 05th March 2023.

- Inordinate delay in appointment of three public varsities' VCs. The News, 06th March 2023.
- 1,000 faculty members trained under HEC, British Council project. The News, 07th March 2023.
- Sindh to devise school-building policy in view of climate change. The News, 15th March 2023.
- Digital skill development project for women starts. The News, 16th March 2023.
- Students being imparted quality education, minister told. The News, 16th March 2023.
- HEC directed to build performance management system for varsities. The News, 17th March 2023.
- Education quality. The News, 21st March 2023.
- Danish schools to be set up in remote Balochistan areas. The News, 22nd March.
- Pakistan, Maldives discuss education collaboration. The News, 22nd March 2023.
- Punjab govt approves 56 new varieties of seed. The News, 25th March 2023.
- HEC launches capacity-building training for faculty members. The News, 31st March 2023.

Energy:

- Energy sector reforms. BR, 08th March 2023.
- Energy security of Pakistan. BR, 09th March 2023.
- Energy sector reforms. BR, 15th March 2023.
- 2 power plants inaugurated by PM. BR, 23rd March 2023.
- Dhabeji SEZ to get 250MW of power by June next year, NA panel told. BR, 30th March 2023.
- MoU signed with Iran for 100MW for Gwadar. Daily Dawn, 14th March 2023.
- Five oil firms join hands for green energy. Daily Dawn, 30th March 2023.
- Neelum-Jhelum to resume power generation from July. Daily Dawn, 31st March 2023.
- Withdrawal of power sector subsidy to hit exports. The Nation, 05th March 2023.
- Discos, KE allowed to recover Rs52b deferred FCAs from power consumers. The Nation, 11th March 2023.
- Pakistan to import additional 100 megawatts electricity from Iran. The Nation, 14th March 2023.
- Pakistan, US vow to continue deepening partnership through 'Green Alliance' framework. The Nation, 16th March 2023.
- Karot Hydropower Project. The Nation, 17th March 2023.
- Govt all set to launch 600MW solar power project in Muzaffargarh. The Nation, 18th March 2023.
- Govt promoting renewable energy sources for sustainable economic development. The Nation, 21st March 2023.
- Govt slashes RLNG price by upto 3.16pc. The Nation, 22nd March 2023.
- PM inaugurates 1,650 MW coal-fired power plants in Thar. The Nation, 23rd March 2023.
- Five major E&P companies allocate substantial resources for green hydrogen fund. The Nation, 30th March 2023.
- Policy on solar panels indigenisation on the cards. The Nation, 30 March 2023.

- Power subsidy withdrawal to further hit exports. The News, 05th March 2023.
- The power and energy crisis. The News, 05th March 2023.
- Indus Waters Treaty under threat. The News, 13th March 2023.
- Indus Waters Treaty under threat. The News, 15th March 2023.

Environment:

- First national policy formulated to tackle air pollution. Daily Dawn, 11th March 2023.
- Role of Science Diplomacy stressed to address Climate Change. The Nation, 07th March 2023.
- Health and environment. The Nation, 15th March 2023.
- WWF working for awareness in nature conservation, capacity building. The Nation, 16th March 2023.
- The climate challenge. The News, 02nd March 2023.
- US to help Pakistani farmers reduce pollution, lower costs. The News, 17th March 2023.
- Fellowship programme launched on climate justice action. The News, 20th March 2023.
- Pollution in the air. The News, 20th March 2023.
- Clean and Green plantation drive inaugurated. The News, 26th March 2023.

Imports and Exports:

- Containment of imports. BR, 14th March 2023.
- Jul-Feb textile group exports dip 11.09pc YoY. BR, 18th March 2023.
- Falling exports and imports. BR, 21st March 2023.
- Merchandise exports shrink 19pc in February. Daily Dawn, 02nd March 2023.
- Exports to Asean countries grow by 2.3pc to \$768.67m in seven months. The Nation, 01st March 2023.
- Pakistan's garment exports to China register 33pc increase in 2022. The Nation, 12th March 2023.
- Country imports food items worth \$6.7 billion in eight months. The Nation, 19th March 2023.
- Soyabean, palm oil imports increased by 148.67pc, 9.87pc in eight months. The Nation, 22nd March 2023.

Information Technology:

- E-commerce and its potential in Pakistan. BR, 29th March 2023.
- Digital population census. The Nation, 04th March 2023.
- Pakistan earns \$1,523 million from IT services' export in 7 months. The Nation, 21st March 2023.

Industrial Policy and Plan:

- Rafhan Maize Products Company Limited. BR, 08th March 2023.
- SMEs: CCP recommends new law. BR, 10th March 2023.
- ZIL Limited. BR, 20th March 2023.
- Textile units not buying lint for liquidity crunch. Daily Dawn, 04th March 2023.

- Privatisation process of Pakistan Steel Mills at advance stage. The Nation, 07th March 2023.
- Exports could be increased by boosting industrial productivity. The Nation, 13th March 2023.
- Pakistan can earn billions of dollars through pink salt export. The Nation, 29th March 2023.
- SME competitiveness. The Nation, 30th March 2023.

LAW:

- Parliament passes 'justice reforms' bill. The Nation, 30th March 2023.
- Five-judge bench dissolved as Justice Amin recuses himself. The Nation, 31 March 2023.
- Two apex court judges dissenting order CJs 'one man show' power must be regulated. The News, 28th March 2023.
- What are the judicial reforms about. The News, 30th March 2023.

Sugar and Allied Industry:

- Quice Food Industries Limited. BR, 28th March 2023.

SMEs:

- Closure of SME Bank approved. Daily Dawn, 18th March 2023.
- Germany ready to start two projects for promotion of SMEs sector. The Nation, 21st March 2023.
- Split emerges in Supreme Court. The Nation, 28th March 2023.
- SME bank's closure to curb new loans to small borrowers. The News, 18th March 2023.

Textile Industry:

- Azgard Nine Limited. BR, 01st Mar 2023.
- Textile industry: water management. Br, 05th March 2023.
- Textile exports facing quadruple whammy. BR, 13th March 2023.
- Textile sector on verge of collapse. BR, 15th March 2023.
- PIAF for clear roadmap for economic revival as financial crisis hit trade, industry. The Nation, 06th March 2023.
- Textile exporters fear decline in exports after mini-budget. The Nation, 10th March 2023.
- Textile exports plunge 28pc to \$1.2bn APTMA. The News, 07th March 2023.
- Textiles sustainability challenge. The News, 08th March 2023.
- Textile exports dip to 21-month low in February. The News, 18th March 2023.

Trade:

- FBR's SRO notifies Tajikistan-Pakistan Transit Trade Rules, 2023. BR, 07th March 2023.
- Vietnam envoy for facilitating businesspeople to increase volume of trade. BR, 14th March 2023.
- Traders stress need for banking channels to promote trade with regional states. BR, 27th March 2023.

- Traders fear weak rupee, high interest rate will aggravate crises. Daily Dawn, 03rd March 2023.
- FM urges OIC to secure `equality` in global trade. Daily Dawn, 17th March 2023.
- Pakistan's exports to Afghanistan surge by 32pc to \$658m in eight months. The Nation, 13th March 2023.
- Barter trade model will inject new energy to Pak-China trade Qamar. The Nation, 17th March 2023.
- Trade volume between Pakistan, Turkey to be increased. The News, 21st March 2023.
- Pakistan faces \$6.2 billion trade deficit with UAE. The News, 30th March 2023.

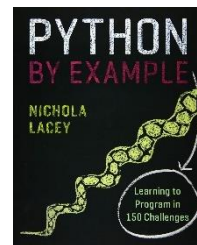
Women:

- WB sees restrictions on women's ability to register business in Pakistan. BR, 03rd March 2023.
- How to empower women. The News, 08th March 2023.

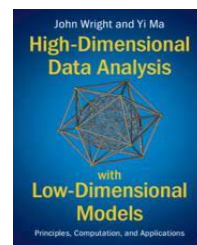
New Arrivals

Science and Engineering:

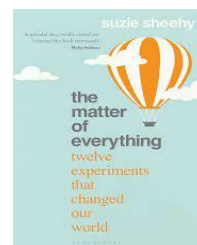
Title: Python by example : learning to program in 150 challenges / Nichola Lacey.
Publisher: New York : Cambridge University Press, 2022.
Call Number: 005.133 L131P 2022
Pages: vi, 183 pages : illustrations ; 27 cm.



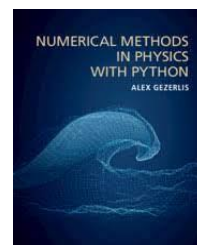
Title: High-dimensional data analysis with low-dimensional models : principles, computation, and applications / John Wright and Yi Ma.
Publisher: New York : Cambridge University Press, 2022.
Call Number: 006.31 W947H 2022
Pages: xxix, 685 pages : illustrations ; 2022.



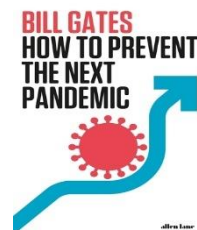
Title: The matter of everything : twelve experiments that changed our world / Suzie Sheehy.
Publisher: London, UK : Bloomsbury Publishing, 2022.
Call Number: 530.0724 S541M 2022
Pages: 313 pages ; 23 cm.



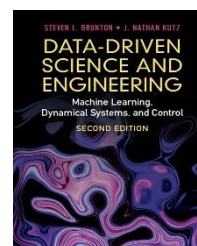
Title: Numerical methods in physics with Python / Alex Gezerlis.
Publisher: New York : Cambridge University Press, 2020.
Call Number: 530.15028553 G398N 2020
Pages: xviii, 586 pages : illustrations, 25 cm.



Title: How to prevent the next pandemic / Bill Gates.
Publisher: London : Allen Lane, an imprint of Penguin, 2022.
Call Number: 614.592414 G259H 2022
Pages: 292 pages : illustrations ; 24 cm.

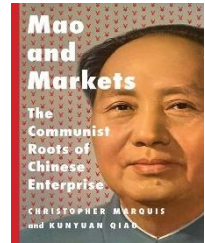


Title: Data-driven science and engineering : machine learning, dynamical systems, and control / Steven L. Brunton, University of Washington, J. Nathan Kutz, University of Washington.
Publisher: Cambridge, United Kingdom, New York, NY : Cambridge University Press, 2022.
Call Number: 620.00285 B911D 2022
Pages: xxiv, 590 pages : illustrations ; 23 cm.

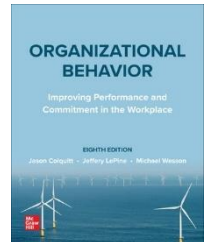


Business Administration:

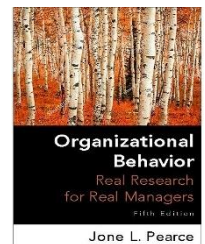
Title: Mao and Markets : the communist roots of Chinese enterprise / Christopher Marquis and Kunyuan Qiao.
Publisher: New Haven : Yale University press, 2022.
Call Number: 658.10951 M357M 2022
Pages: viii, 372 pages : illustrations ; 24 cm.



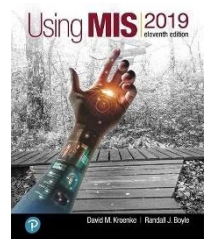
Title: Organizational behavior : improving performance and commitment in the workplace / Jason Colquitt ; Jeffery A. LePine and Michael J. Wesson.
Publisher: New York : McGraw Hill, 2023.
Call Number: 658.3 C722O 2023
Edition: Eighth edition.



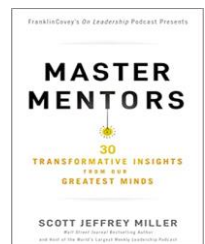
Title: Organizational behavior : real research for real managers / Jone L. Pearce.
Publisher: Irvine : Melvin & Leigh Publishers, 2021.
Call Number: 658.4 P359O 2021
Edition: Fifth edition.



Title: Using MIS / David M. Kroenke, Randall J. Boyle.
Publisher: Hoboken, NJ : Pearson Education, 2020.
Call Number: 658.4038 K932U 2020
Edition: Eleventh edition.

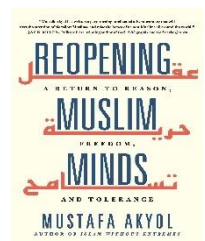


Title: Master mentors : 30 transformative insights from our greatest minds / Scott Jeffrey Miller.
Publisher: Nashville : HarperCollins Leadership, 2021-2022.
Call Number: 658.4092 M647M 2022
Pages: Two volums : illustrations ; 20 cm.

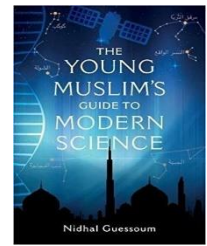


Religion:

Title: Reopening muslim minds / Mustafa Akyol.
Publisher: New York : ST Martin's Essentials, 2021.
Call Number: KIC 297.09 A315R 2021
Pages: xxvi, 308 pages : illustrations ; 20 cm.

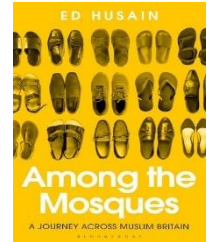


Title: The young Muslim's guide to modern science / Nidhal Guessoum.
Publisher: Manchester : Beacon Books, [date of publication is not available].
Call Number: KIC 297.265 G936Y [n d.]
Pages: xi, 164 pages : illustrations ; 23 cm.

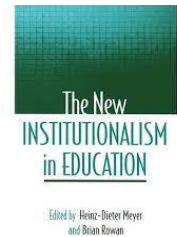


Social Sciences:

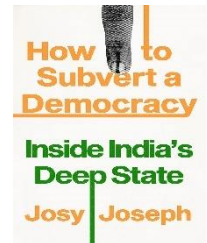
Title: Among the mosques : a journey across muslim britain / Ed Husain.
Publisher: London : Bloomsbury Publishing, 2022.
Call Number: KIC 305.6970941 H968A 2022
Pages: 332 pages ; 21 cm.



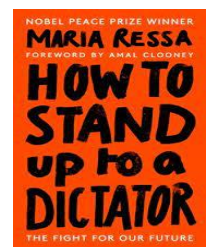
Title: The new institutionalism in education / edited by Heinz-Dieter Meyer & Brian Rowan and Brian Rowan.
Publisher: New York : State University of New York Press, 2006.
Call Number: KIC 306.43 N532 2006
Pages: ix, 234 pages : illustrations ; 24 cm.



Title: How to subvert a democracy : inside India's deep state / Josy Joseph.
Publisher: London : Hurst & Company, 2022.
Call Number: KIC 320.954 J832H 2022
Pages: 306 pages ; 23 cm.



Title: How to stand up to a dictator / Maria Ressa ; foreword by Amal Clooney.
Publisher: London : WH Allen, an imprint my Penguin, 2022.
Call Number: KIC 321.9 R435H 2022
Pages: xiii, 301 pages : illustrations ; 23 cm.



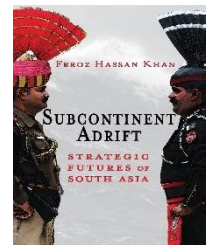
Title: How politics works : the concepts visually explained / Dorling Kindersley-DK.
Publisher: London : Dorling Kindersley-DK, an imprint of Penguin, 2022.
Call Number: KIC 324 H847 2022
Pages: 224 pages : illustrations, 25 cm.



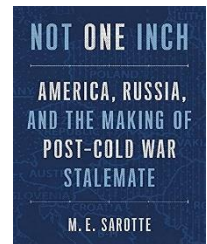
Title: Russian foreign policy towards the Middle East : new trends, old traditions / edited by N. A. Kozhanov.
Publisher: London : Hurst & Company, 2022.
Call Number: KIC 327.47056 R969 2022
Pages: xiii, 298 pages : illustrations ; 24 cm.



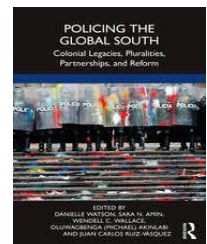
Title: Subcontinent adrift : strategic futures of South Asia / by Feroz Hassan Khan and edited by Geoffrey R.H. Burn.
Publisher: Amherst : Cambria Press, 2022.
Call Number: KIC 327.5405491 K452S 2022
Pages: xviii, 258 pages ; 22 cm.



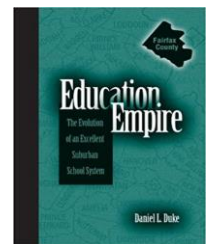
Title: Not one inch : America, Russia, and the making of post-cold war stalemate / M. E. Sarotte.
Publisher: London : Yale University press, 2021.
Call Number: KIC 327.73047 S246N 2021
Pages: xiii, 550 pages : illustrations, maps ; 25 cm.



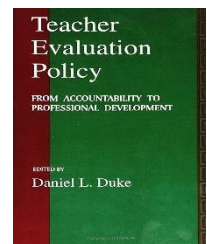
Title: Policing the global south : colonial legacies, pluralities, partnerships and reform / edited by Danielle Watson, Sara N. Amin, Wendell C. Wallace, Oluwabenga Michael Akinlabi and Juan Carlos Ruiz-Vasquez.
Publisher: Abingdon, Oxon ; New York, NY : Routledge, 2023.
Call Number: KIC 363.23 P766 2023
Pages: xxi, 393 pages ; 23 cm.



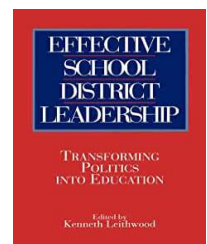
Title: Education empire : the evolution of an excellent suburban school system / Daniel L. Duke.
Publisher: Albany, NY : State University of New York Press, 2005.
Call Number: KIC 370.9755291 D877E 2005
Pages: xv, 199 pages : illustrations ; 24 cm.



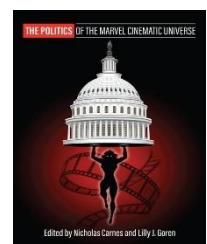
Title: Teacher evaluation policy : from accountability to professional development / edited by Daniel L. Duke.
Publisher: Albany : State University of New York Press, 1995.
Call Number: KIC 371.1440973 T253 1995
Pages: 203 pages : illustrations ; 24 cm.



Title: Effective school district leadership : transforming politics into education / edited by Kenneth Leithwood.
Publisher: Albany : State University of New York Press, 1995.
Call Number: KIC 371.201109713 E272 1995
Pages: x, 352 pages : illustrations ; 24 cm.

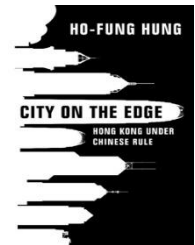


Title: The politics of the Marvel cinematic universe / edited by Nicholas Carnes and Lilly J. Goren.
Publisher: Lawrence : University Press of Kansas, 2023.
Call Number: KIC 791.43652 P769 2023
Pages: xiv, 419 pages : illustrations ; 23 cm.

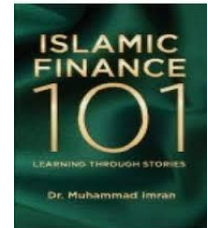


Economics:

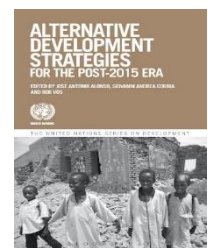
Title: City on the edge : Hong Kong under Chinese rule / Ho-fung Hung.
Publisher: Cambridge ; New York, NY : Cambridge University Press, 2022.
Call Number: KIC 330.95125 H936C 2022
Pages: xxi, 297 pages : illustrations ; 20 cm.



Title: Islamic finance 101 : learning through stories / Muhammad Imran.
Publisher: Karachi : Liberty Publishing, 2021.
Call Number: KIC 332.0917671 M952I 2021
Pages: 304 pages : illustrations ; 23 cm.

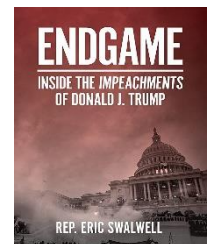


Title: Alternative development strategies for the post-2015 era / Jose|Antonio Alonso ; edited by Giovanni Andrea Cornia ; Rob Vos and United Nations.
Publisher: New York : Bloomsbury, 2014.
Call Number: KIC 338.9 A466 2014
Pages: xliii, 406 pages : illustrations ; 25 cm.

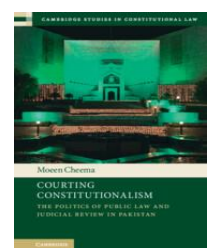


Law:

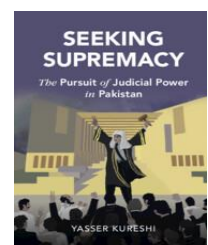
Title: Endgame : inside the impeachments of Donald J. Trump / Eric Swalwell.
Publisher: New York : Abrams Press, 2021.
Call Number: KIC 342.73068 S971E 2021
Pages: 358 pages ; 20 cm.



Title: Courting constitutionalism : the politics of public law and judicial review in Pakistan / Moeen Cheema, Australian National University, Canberra.
Publisher: New York : Cambridge University Press, 2021.
Call Number: KIC 347.5491 C515C 2021
Pages: xxvii, 259 pages ; 23 cm.

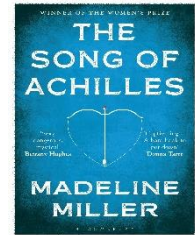


Title: Seeking supremacy : the pursuit of judicial power in Pakistan / Yasser Kureshi, University of Oxford.
Publisher: New York : Cambridge University Press, 2022.
Call Number: KIC 347.5491014 K968S 2022
Pages: xii, 295 pages ; 23 cm.

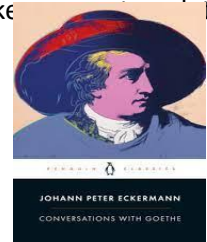


Language and Literature:

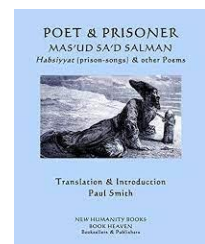
Title: The song of Achilles / Madeline Miller.
Publisher: London : Bloomsbury, 2017.
Call Number: KIC 813.6 M647S 2017
Pages: 352 pages ; 20 cm.



Title: Conversations with Goethe : in the last years of his life / Johann Peter Eckermann, edited by Allan W. Phillips.
Publisher: Milton Keynes, UK : Penguin Books, 2022.
Call Number: KIC 831.6 E191C 2022
Pages: lvi, 694 pages ; 20 cm

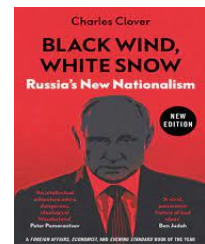


Title: Poet & prisoner... Mas'ud Sa'd Salman : habsiyyat, (prison-songs) & other poems / Mas'ud Sa'd Salman and translated by Paul Smith.
Publisher: Australia : New Humanity Books, Book Heaven, 2020.
Call Number: KIC 891.551 M424P 2020
Pages: 202 pages : illustrations ; 26 cm.

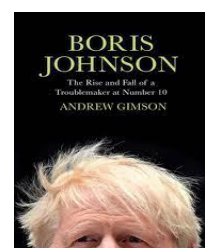


History and Geography:

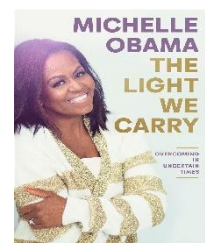
Title: Black wind, white snow : Russia's new nationalism / Charles Clover.
Publisher: New Haven : Yale University press, 2022.
Call Number: KIC 923.1047 C647B 2022
Edition: New edition.



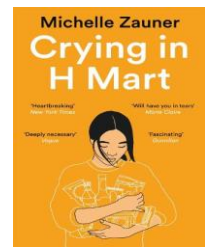
Title: Boris Johnson : the rise and fall of a troublemaker at number ten / Andrew Gimson.
Publisher: London : Simon & Schuster, 2022.
Call Number: KIC 923.2041 G491B 2022
Pages: ix, 436 pages ; 24 cm.



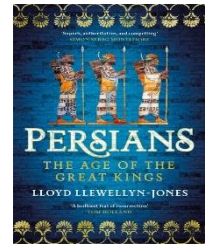
Title: The light we carry : overcoming in uncertain times / Michelle Obama.
Publisher: Great Britain : Viking, an imprint of Penguin, 2022.
Call Number: KIC 923.4073 O121L 2022
Pages: xii, 318 pages : illustrations ; 24 cm.



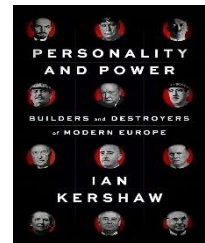
Title: Crying in H mart / Michelle Zauner.
Publisher: London : Picador, an imprint of Pan Macmillan, 2022.
Call Number: KIC 927.0782 Z391C 2022
Pages: 239 pages ; 20 cm.



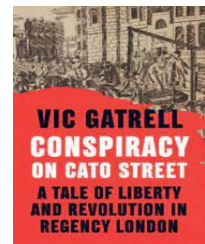
Title: Persians : the age of the great kings / Lloyd Llewellyn-Jones.
Publisher: London : Wildfire, 2022.
Call Number: KIC 935.05 L791P 2022
Pages: xiv, 432 pages : illustrations (some colour) ; 24 cm.



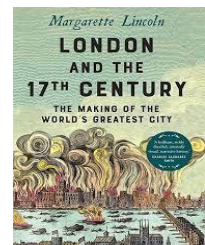
Title: Personality and power : builders and destroyers of modern Europe / Ian Kershaw.
Publisher: New York : Penguin press, 2022.
Call Number: KIC 940.531 K416P 2022
Pages: xv, 492 pages : illustrations ; 25 cm.



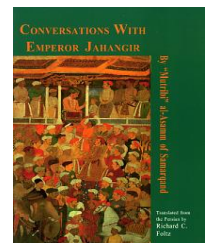
Title: Conspiracy on Cato Street : a tale of liberty and revolution in Regency London / Vic Gatrell, University of Cambridge.
Publisher: Cambridge ; New York, NY : Cambridge University Press, 2022.
Call Number: KIC 941.074 G261C 2022
Pages: xxiii, 451 pages : illustrations ; 2022.



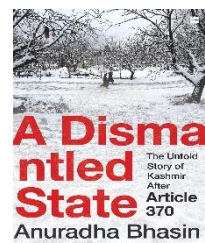
Title: London and the 17th Century : the making of the world's greatest city / Margarete Lincoln.
Publisher: London : Yale University press, 2022.
Call Number: KIC 942.106 L736L 2022
Pages: xiii, 372 pages, 8 unnumbered pages of plates : illustrations (some color), maps ; 20 cm.



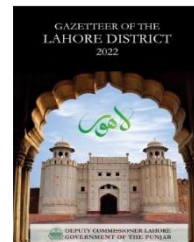
Title: Conversations with Emperor Jahangir / by "Mutribi" al-Asamm Samarqandi ; translated from the Persian with an introduction by Richard C. Foltz.
Publisher: Cost Mesa, California : Mazda Publishers, 1998.
Call Number: KIC 954.0256 M993C 1998
Pages: viii, 98 pages ; 22 cm.



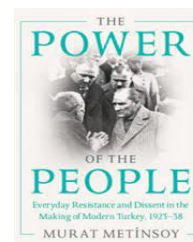
Title: A dismantled state : the untold story of Kashmir after article 370 / Anuradha Bhasin.
Publisher: Haryana : HarperCollins, 2023.
Call Number: KIC 954.6 B575D 2023
Pages: xiv, 383 pages ; 22 cm.



Title: Gazetteer of the Lahore District 2022 / Deputy Commissioner Lahore Government of the Punjab.
Publisher: Lahore : Sang-e-Meel Publications, 2022.
Call Number: KIC 954.9143 G289 2022
Pages: x, 312 pages : illustrations, maps, photographs ; 28 cm.



Title: The power of the people : everyday resistance and dissent in the making of modern Turkey, 1923-38 / Murat Metinsoy.
Publisher: Cambridge ; New York, NY : Cambridge University Press, 2021.
Call Number: KIC 956.1024 M592P 2021
Pages: xi, 405 pages : illustrations ; 2021.



Journal Table of Content

Academy of Management LEARNING & EDUCATION



CONTENTS

Volume 21, Number 4, December 2022

From the Editors—Constructing Ontological Foundations for Management Learning and Education Research

Oliver Laasch, Dirk Lindebaum, and Arran Caza 525

RESEARCH & REVIEWS

Unpacking Entrepreneurial Education: Learning Activities, Students' Gender, and Attitude Toward Entrepreneurship

Laura Padilla-Angulo, Antonia M. García-Cabrera, and Ana M. Lucia-Casademunt 532

Linking Social Networks to Student Learning and Performance in Project Teams: The Promise of Collaborative Norms

Yuan Jiang, Liyan Yang, Wenjing Guo, and Wei Zhang 561

Student Cheating Gone International: The Role of Social Networks and Cultural Intelligence in Affecting the Fate of the Deviant

Joel M. Evans, James Oldroyd, and John B. Bingham 580

Language and the Evolution of Academic Fields: The Case of Organization Studies

Thomas G. Cummings and Chailin Cummings 598

Learning to Live the Paradox in a Democratic Organization: A Deliberative Approach to Paradox Mindsets

Martyn Griffin, Daniel King, and Patrick Reedy 624

Embodiment and Management Learning: Understanding the Role of Bodily Analogy in a Yoga-Based Learning Model

Vinca Bigo and Gazi Islam 648

ESSAYS

The Professor's Predicament: How Can I Have My Expertise Without It Having Me?

Thomas E. Will 669

The Language of Executive Coaching: A Developmental Framework

Jean-Etienne Joullié, Anthony M. Gould, and Robert Spillane 690

BOOK & RESOURCE REVIEWS

How to Manage Student Consulting Projects: A Practical Guide for Project Advisors

Reviewed by Christina Kyprianou 705

The Rise of Business Ethics

Reviewed by John Hulpke 707

Dark Academia: How Universities Die

Reviewed by Dennis Tourish 710

The Power of And: Responsible Business Without Trade-Offs

Reviewed by Julie Beckel Nelsen 713

Discover papers in this journal online ahead of the print issue through **In-Press** Articles on the journal's website (aom.org/amle)



p. 22

26 Beyond Ecotourism

A conservation-minded look at treading lightly — and responsibly — in some of the world's most mesmerizing, vulnerable places.

TREE MEINCH

34 Mapping the Multiverse

The most controversial idea in physics has leapt from niche academic circles to Hollywood blockbusters — but physicists are still fighting about it.

DAN FALK

42 A Taste for Waste

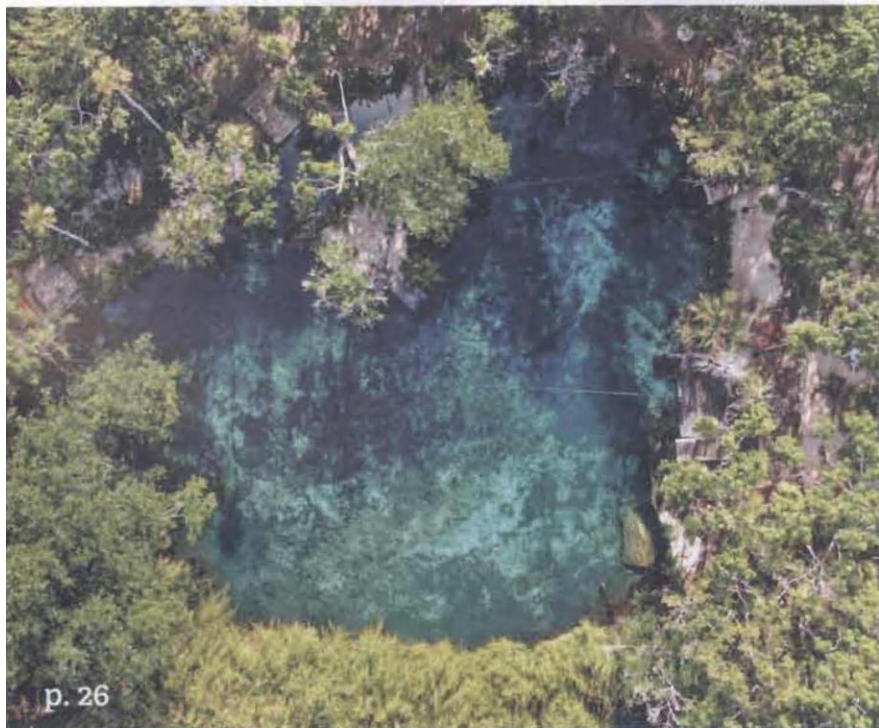
With challenges to the global food supply chain mounting, the black soldier fly's insatiable appetite and nutritious potential has scientists buzzing.

JOHN RIHA

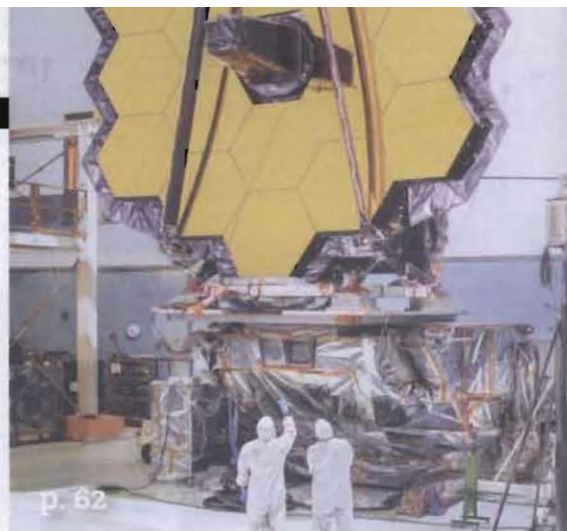
50 Space Aging

Microgravity deteriorates the body in surprisingly familiar ways. Space travel is now informing health research for earthbound seniors and astronauts alike.

DAVE WILLIAMS AND ELIZABETH HOWELL



p. 26



p. 62



p. 56



HOT SCIENCE

p. 9

How to find a new frog species by ear, how to check books for pretty poisons, and how to know if you've got what it takes to be an astronaut.

COLUMNS & DEPARTMENTS

6

EDITOR'S NOTE

Well 'Versed

Examining the multiple dimensions enmeshed in physics and pop culture.

8

INBOX

Readers share experiences with unique foods across the globe.

18

VITAL SIGNS

Not-So-Mellow Yellow

His sickly skin color, poor appetite and significant weight loss all screamed pancreatic cancer. What else could it be?

DOUGLAS G. ADLER

22

PLANET EARTH

The Invisible Biome

In the shadow of the Amazon rainforest lies an unexpected reservoir of biodiversity.

SARAH SAX

56

HISTORY LESSONS

A Cure-All's Comeback

With ingredients ranging from accepted herbal treatments to burnt viper's flesh, L'Orvietan was the 17th-century remedy of choice for commoners and kings.

ELIZABETH HEATH

62

OUT THERE

New Life From an Old Rock

How a humble meteorite redefined the future of astrobiology.

ELISE CUTTS

66

#SCIENCEIRL

Quaking Clone

Utah's "one-tree forest" is shrinking.

ELISA R. NECKAR



FOREIGN AFFAIRS

Volume 102, Number 2

Essays

 LIBRARY

-
- The Reckoning That Wasn't 6
Why America Remains Trapped by False Dreams of Hegemony
ANDREW J. BACEVICH
- How Democracy Can Win 22
The Right Way to Counter Autocracy
SAMANTHA POWER
- Innovation Power 38
Why Technology Will Define the Future of Geopolitics
ERIC SCHMIDT
- People Over Robots 53
The Global Economy Needs Immigration Before Automation
LANT PRITCHETT
- China's Hidden Tech Revolution 65
How Beijing Threatens U.S. Dominance
DAN WANG

Cover illustration by Edward Tuckwell

What Russia Got Wrong <i>Can Moscow Learn From Its Failures in Ukraine?</i> DARA MASSICOT	78
The Limits of the No-Limits Partnership <i>China and Russia Can't Be Split, but They Can Be Thwarted</i> PATRICIA M. KIM	94
Disunited Kingdom <i>Will Nationalism Break Britain?</i> FINTAN O'TOOLE	106
How Commerce Can Save the Climate <i>The Case for a Green Free Trade Agreement</i> GORDON H. HANSON AND MATTHEW J. SLAUGHTER	119
Asia's Third Way <i>How ASEAN Survives—and Thrives— Amid Great-Power Competition</i> KISHORE MAHBUBANI	130
After the Iran Deal <i>A Plan B to Contain the Islamic Republic</i> SUZANNE MALONEY	142

The Divided Diplomat	156
<i>Ralph Bunche and the Contradictions of Liberal Order</i>	
ZACHARIAH MAMPILLY	
Behind Enemy Lines	162
<i>The CIA's Cold War in China</i>	
JANE PERLEZ	
The Cult of Secrecy	168
<i>America's Classification Crisis</i>	
PATRICK RADDEN KEEFE	
Blundering Into Baghdad	176
<i>The Right—and Wrong—Lessons of the Iraq War</i>	
HAL BRANDS	
Recent Books	185
The Archive	212

“Foreign Affairs... will tolerate wide differences of opinion. Its articles will not represent any consensus of beliefs. What is demanded of them is that they shall be competent and well informed, representing honest opinions seriously held and convincingly expressed....It does not accept responsibility for the views expressed in any article, signed or unsigned, which appear in its pages. What it does accept is the responsibility for giving them a chance to appear there.”

Archibald Cary Coolidge, Founding Editor
Volume 1, Number 1 • September 1922

"Once 'hired,' [digital employees] never tire, never complain,
never seek a raise, and always follow company policy."

"AI WITH A HUMAN FACE," PAGE 49

Contents



March–April 2023

35 Spotlight

The New
Human-Machine
Relationship

36 A Smarter Strategy for Using Robots

Automation should
focus more on flexibility
than on productivity.
*Ben Armstrong and
Julie Shah*

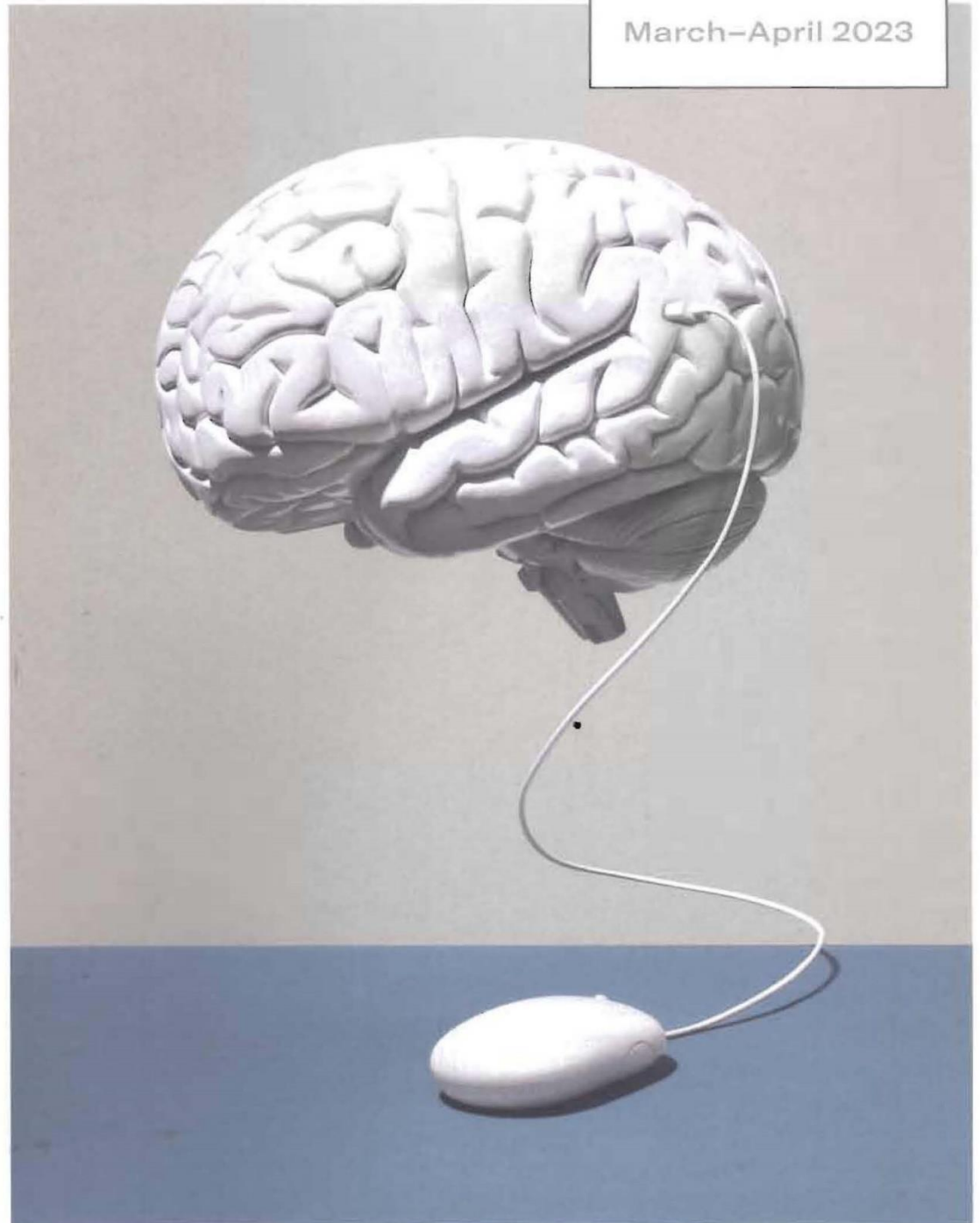
43 Neurotech at Work

Welcome to the world
of brain monitoring
for employees.
Nita A. Farahany

49 AI with a Human Face

The case for—and against—
digital employees
Mike Seymour et al.

COVER ILLUSTRATION
Richard Borge



57 Features

58 TIME MANAGEMENT

Beware a Culture of Busyness

Organizations must stop conflating activity with achievement.

Adam Wajtz

68 HYBRID WORK

Redesigning How We Work

We now know the post-pandemic transition will take years. Leaders should acknowledge that—and start making plans for how to cope.

Lynda Gratton

76 LEADERSHIP

You Need Two Leadership Gears

Know when to take charge and when to get out of the way.

Lindy Greer, Francesca Gino, and Robert I. Sutton

86 ENTREPRENEURSHIP

The Hybrid Start-Up

A new-venture model that combines corporate and entrepreneurial capabilities

Nathan Furr and Kate O’Keeffe



96 HIRING & RECRUITMENT

The New-Collar Workforce

Companies aren't paying enough attention to workers without college degrees. It's time for a skills-first approach to hiring and people management.

Colleen Ammerman, Boris Groysberg, and Ginni Rometty

104 MANAGEMENT

How Chinese Companies Are Reinventing Management

They prioritize autonomy at scale, internal digital platforms, and a clear project focus.

Mark J. Greeven, Katherine Xin, and George S. Yip

114 LEADING TEAMS

Fixing a Self-Sabotaging Team

How to spot and counter dysfunctional group behavior

N. Anand and Jean-Louis Barsoux

124 MARKETING

What Psychological Targeting Can Do

And how to use it ethically

Sandra Metz



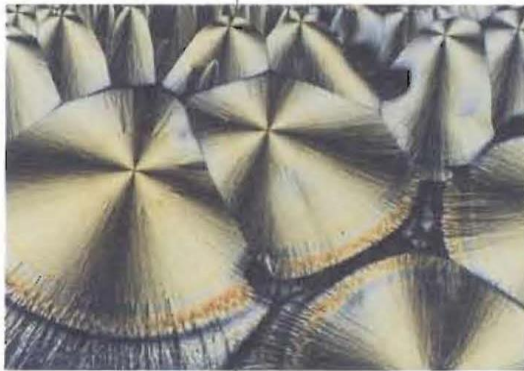
CONTENTS

On the Cover

Bronze heads in Berlin are among thousands of objects worldwide looted by British soldiers during an 1897 sacking of Benin City, in modern-day Nigeria. Museums in Germany and elsewhere have signed over or pledged to return many of the artifacts.

JUERGEN LIEPE (TOP), JENS ZIEHE, BPK BILDAGENTUR/ETHNOLOGISCHES MUSEUM, STAATLICHE MUSEEN, BERLIN/ART RESOURCE, NY (BOTH)

PROOF



6

A Crystalline Domain

They're useful, yes, but beautiful? With a photomicrography technique, common compounds such as vitamin C, (above) form dazzling images.

PHOTOGRAPHS BY PETER WOITSCHIKOWSKI

EXPLORE

15

THE BIG IDEA

Saturn: What Put the Rings on It?

Space scientists are still debating one of our solar system's great unsolved mysteries.

BY NADIA DRAKE

INNOVATOR

David Moinina Sengeh

He harnessed high tech to help fix the problem of painful prosthetics.

BY HICKS WOGAN



ALSO

The Rainbow Connection
Shell-Slinging Octopuses



24

DECODER

Night Partners

Bats are key pollinators of agave plants, but tequila and mescal production risks breaking up the relationship.

BY DIANA MARQUES

THROUGH THE LENS

Rediscovering the Joy

Grief drove a photojournalist to India, where light and color returned to her work.

BY SARA HYLTON

ALSO

Timing for Transplants
How to Reuse Your Water



 **LIBRARY**

FEATURES

Troubled Treasures

Museums work to return cultural objects to their original homes.

BY ANDREW CURRY
PHOTOGRAPHS BY
RICHARD BARNES.....P. 34

Out of Step

Perfectly suited for winter, mountain hares may fare less well as temperatures warm.

BY CAL FLYN
PHOTOGRAPHS BY
ANDY PARKINSON
.....P. 72

Life Goes On

Lebanon struggles to emerge from a severe economic collapse.

BY RANIA ABOUZEID
PHOTOGRAPHS BY
RENA EFFENDI.....P. 86

Return to Wild Waters

On Wisconsin's Apostle Islands, lake-sculpted landscapes draw intrepid adventurers.

BY STEPHANIE PEARSON
PHOTOGRAPHS BY
DAVID GUTTENFELDER
.....P. 110

Spider Sense

Though they often get a bad rap, arachnids are surprisingly diverse and beautiful.

BY JASON BITTEL
PHOTOGRAPHS BY
JAVIER AZNAR.....P. 126

ABOVE: A Syrian refugee sells roses on a Beirut beach. Two million refugees from neighboring Syria currently reside in Lebanon, which has suffered economic crises since 2019.

NEXT EDITION

POVERTY ALLEVIATION & CSR

SPECIAL REPORT: CHARITY IN PAKISTAN

APRIL 10, 2023

 LIBRARY

Stock Market Index	02	Research Corner	38
Pakistan In Focus	04	Announcement	40
Cover Story: PAKISTAN DAY	05	Technology News	41
Fact Sheet	22	Asia News	43
KSE-100 Indicators	24	Gulf News	45
Global Financial Market	26	World Commodities	46
Global Stock Exchange	28	Ports & Shipping	47
Page Reports	35	Leadership & Management	48

PHYSICS TODAY

January 2023 | volume 76 number 1

FEATURES

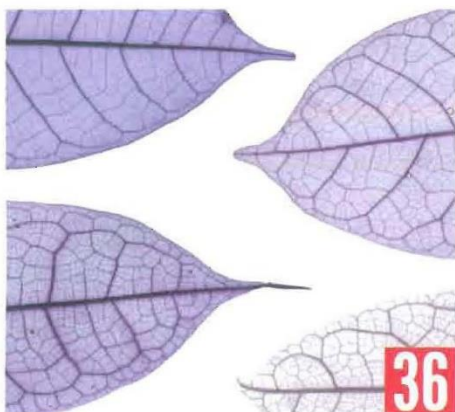


28

28 Ethics in physics: The need for culture change

Frances A. Houle, Kate P. Kirby, and Michael P. Marder

A new American Physical Society survey shows that although ethics education is more prevalent than it was nearly two decades ago, unethical research practices and harassment are still significant problems in the physics community.



36

36 The topology of data

Mason A. Porter, Michelle Feng, and Eleni Katifori

Topological data analysis, which allows systematic investigations of the "shape" of data, has yielded fascinating insights into many physical systems.



44

44 Nazis, émigrés, and abstract mathematics

Ryan Dahn

Today, Jordan algebras are a sprawling mathematical subfield, but the strange story of their discovery amid Adolf Hitler's seizure of power is not widely known.



ON THE COVER: Although usually permanently frozen, carbon-rich peatlands across this 3-km-wide stretch of Arctic tundra burned on 18 June 2020. The true-color image is overlaid by an IR filter that shows the fire hot spots. Arctic fires were exceptionally widespread during the 2019, 2020, and 2021 fire seasons compared with those of the past 20–40 years. See **page 17** to learn more about the complex set of interactions that affect high-latitude wildfires. (Satellite photo created by Adrià Descals; imagery acquired by the European Space Agency.)

Recently on
**PHYSICS
TODAY
ONLINE**

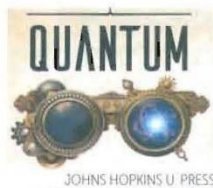


D. PADIJAN/F. PAGANI/C. CUMMINGS

Best of 2022

Explore *PHYSICS TODAY*'s most viewed pieces from last year, including several available only online. Topics include helium shortages, the quantum measurement problem, the 10th anniversary of the discovery of the Higgs boson, and strategies to advance equity, diversity, and inclusion.

physicstoday.org/Jan2023a



JOHNS HOPKINS U. PRESS

The year in books

PHYSICS TODAY's books editor, Ryan Dahn, looks back at 2022 and compiles a list of recommended books for fans of physics and its history. Selections include an entertaining introduction to quantum thermodynamics and a biography of the late materials scientist Mildred Dresselhaus.

physicstoday.org/Jan2023b



LLNL

Ignition attained

A fusion reaction at the National Ignition Facility yielded more energy than the laser energy required to spark it. Department of Energy officials announced last month. *PHYSICS TODAY*'s David Kramer details the long-awaited result and considers the implications for weapons research and energy applications.

physicstoday.org/Jan2023c

PHYSICS TODAY (ISSN 0031-9228, coden PHTOAD) volume 76, number 1. Published monthly by the American Institute of Physics, 1305 Walt Whitman Rd, Suite 110, Melville, NY 11747-4300. Periodicals postage paid at Huntington Station, NY, and at additional mailing offices. POSTMASTER: Send address changes to *PHYSICS TODAY*, American Institute of Physics, 1305 Walt Whitman Rd, Suite 110, Melville, NY 11747-4300. Views expressed in *PHYSICS TODAY* and on its website are those of the authors and not necessarily those of AIP or any of its member societies.



Copyright © 2023, American Institute of Physics. Single copies of individual articles may be made for private use or research. Authorization is given to copy articles beyond the free use permitted under US Copyright Law, provided that the copying fee of \$30.00 per copy per article is paid to the Copyright Clearance Center, 222 Rosewood Dr, Danvers, MA 01923. For articles published before 1978, the copying fee is \$0.25 per article. Authorization does not extend to systematic or multiple reproduction or to republication in any form. In all such cases, specific written permission from AIP must be obtained. Send requests for permission to AIP Office of Rights and Permissions, 1305 Walt Whitman Rd, Suite 110, Melville, NY 11747-4300; phone +1 516 576-2268; email rights@aip.org.

www.physicstoday.org

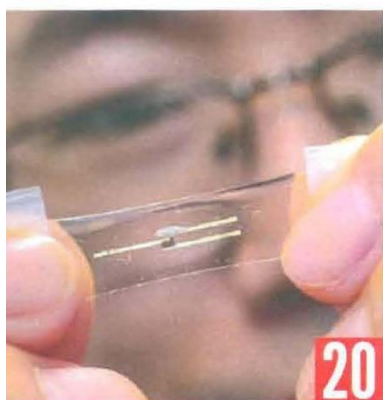


PHYSICS TODAY

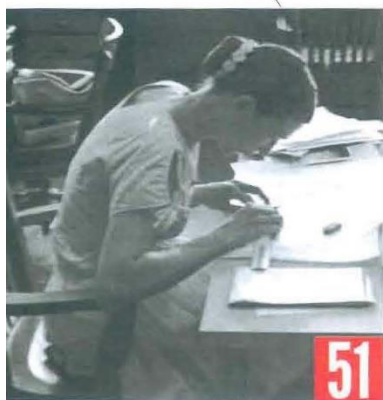
www.physicstoday.org



10



20



51

DEPARTMENTS

10 Readers' forum

Commentary: How to talk about climate change with politicians — *Paul Higgins* • Letters

14 Search & discovery

The early universe in a quantum gas • Climate change is redefining Arctic wildfires

20 Issues & events

Scientists take steps in the lab toward climate sustainability
• A computing hardware approach aspires to emulate the brain

51 Books

A stormy life in atmospheric science — *Roger Turner*
• A survey of women in astronomy — *Joanna Behrman*
• New books & media

56 New products

Focus on lasers, imaging, microscopy, and nanoscience

59 Obituaries

Maarten Schmidt • Karl von Meyenn

62 Quick study

Enceladus erupts — *Michael Manga and Maxwell Rudolph*

64 Back scatter

Zinc snowflakes

Editor-in-chief

Richard J. Fitzgerald rjf@aip.org

Art and production

Donna Padian, art director
Freddie A. Pagani, graphic designer
Cynthia B. Cummings, photographer
Nathan Cromer

Editors

Ryan Dahn rdahn@aip.org
Toni Feder tf@aip.org
Heather M. Hill hhill@aip.org
Abby Hunt ahunt@aip.org
David Kramer dk@aip.org
Alex Lopatka alopatka@aip.org
Johanna L. Miller jlm@aip.org
Gayle G. Parraway ggp@aip.org
R. Mark Wilson rmw@aip.org

Online

Paul K. Guinnessy, director pkg@aip.org
Andrew Grant, editor agrant@aip.org
Angela Dombroski atd@aip.org
Greg Stasiewicz gls@aip.org

Assistant editor

Cynthia B. Cummings

Editorial assistant

Tonya Gary

Contributing editor

Andreas Mandelis

Sales and marketing

Christina Unger Ramos, director cunger@aip.org
Unique Carter
Krystal Amaya
Skye Haynes

Address

American Center for Physics
One Physics Ellipse
College Park, MD 20740-3842
+1 301 209-3100
pteditors@aip.org

PhysicsToday @physicstoday



Member societies

ACA: The Structural Science Society
Acoustical Society of America
American Association of Physicists in Medicine
American Association of Physics Teachers
American Astronomical Society
American Meteorological Society
American Physical Society
AVS: Science & Technology of Materials, Interfaces,
and Processing
Optica (formerly The Optical Society)
The Society of Rheology

Other member organizations

Sigma Pi Sigma Physics and Astronomy
Honor Society
Society of Physics Students

The American Institute of Physics is a federation of scientific societies in the physical sciences, representing scientists, engineers, educators, and students. AIP offers authoritative information, services, and expertise in physics education and student programs, science communication, government relations, career services, statistical research in physics employment and education, industrial outreach, and history of the physical sciences. AIP publishes *PHYSICS TODAY* and is also home to the Society of Physics Students and to the Niels Bohr Library and Archives. AIP owns AIP Publishing, a scholarly publisher in the physical and related sciences.

Board of Directors: David J. Helfand (Chair), Michael H. Moloney (CEO), Judy R. Dubno (Corporate Secretary), Susan K. Avery (Treasurer), Jonathan Bagger, Susan Burkett, Bruce H. Curran, Eric M. Furst, Jack G. Hehn, Mary James, Stella Kafka, Tyrone M. Porter, Efrain E. Rodriguez, Elizabeth Rogan, Nathan Sanders, Charles E. Woodward.

Officers: Michael H. Moloney (CEO), Gigi Swartz (CFAO).

SUBSCRIPTION QUESTIONS? +1 800 344-6902 | +1 516 576-2270 | ptsubs@aip.org

CONTENTS

MARCH 2023



Features

22

PERSPECTIVE

Beware Of Button Batteries

Powering many devices, these tiny cells can be harmful in the wrong hands.

LISA FIELDS

28

HEALTH

Boost Your Immune System

Fight illness and infection with seven practical approaches.

LISA BENDALL

42

CULTURE

A Tweed Revival

The Scottish handwoven Harris Tweed cloth is enjoying a steady resurgence.

ALEXANDER MÜHLAUER FROM SÜDDEUTSCHE ZEITUNG

52

CULTURE

The Beauty Queens Of Al Dhafra

Long lashes make for comely contestants at this pageant for camels.

KESTER SCHLENZ FROM STERN

58

HUMOUR

The Secret Of Grandparenting

Who is best placed to indulge a child?

RICHARD GLOVER

62

PHOTO FEATURE

Back To The Futuro

The '60s-style flying saucer houses now viewed as architectural icons.

HELEN FOSTER

68

ANIMAL KINGDOM

Swimming With Orcas

Despite their 'killer whale' nickname, orcas are not aggressive towards humans.

PETE MCBRIDE FROM SMITHSONIAN MAGAZINE

74

ART OF LIVING

Find Awe In Everyday Life

Awesome things don't always have to be beautiful.

ELIZABETH BERNSTEIN FROM THE WALL STREET JOURNAL



PHOTOS: (COVER) SHUTTERSTOCK; (CAMEL) CASPAR WÜNDRICH; (FUTURO HOME) COURTESY MARSTONPARK.CO.UK

ON THE COVER: BEWARE OF BUTTON BATTERIES - PAGE 22

80

TRAVEL

Pilgrim's Progress

Following age-old pilgrimage routes is becoming increasingly popular among hikers.

THE EDITORS

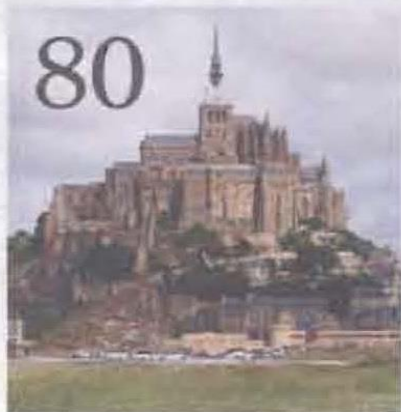
86

BONUS READ

How I Got Run Over By A Semi-Trailer – And Survived

After a horrendous road accident, a young woman sets out to reclaim her life against all the odds.

KATIE MCKENNA
FROM THE BOOK
HOW TO GET RUN OVER
BY A TRUCK



Departments

THE DIGEST

- 14 Pets Corner
- 16 Health
- 20 News From The World Of Medicine

REGULARS

- 4 Letters
- 5 Editor's Note
- 8 My Story
- 12 Smart Animals
- 38 Look Twice
- 61 Quotable Quotes

HUMOUR

- 36 Life's Like That
- 50 Laughter
- 78 All In A Day's Work

THE GENIUS SECTION

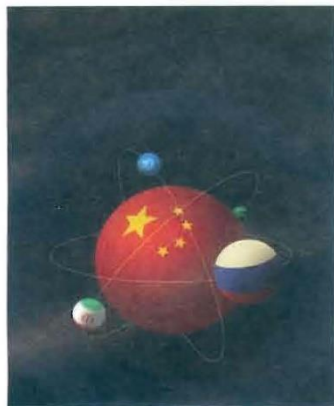
- 102 When A Secret Is Bad For Your Health
- 106 Puzzles
- 109 Trivia
- 110 Puzzle Answers
- 111 Word Power



HAVE YOU VISITED THE READER'S DIGEST FACEBOOK PAGE LATELY?

Constantly updated, our Facebook feed offers stories, videos, advice, humour, quotable quotes, cartoons, quirky photographs and more.

FOLLOW US
@ReadersDigestAsia



On the cover

Even if China's transactional diplomacy brings some gains, it contains real perils: leader, page 7. Xi Jinping went to Moscow not as a peacemaker, but as an opportunist, page 53. Iran wants a detente with its neighbours: briefing, page 16. After decades of expansion, Shia Islam is on the wane, page 37

Central banks' balancing act

They face an excruciating trade-off between instability and inflation: leader, page 8, and analysis, page 63. America's regional banks are just about holding up, page 65. UBS saves Credit Suisse, page 66. What happened to America's deposits? Free exchange, page 69. Markets can never be truly safe: Buttonwood, page 67

How TikTok broke the ad business

Whether or not it is banned, the app has forced its rivals to adopt a less lucrative model, page 57

North Koreans go hungry again

Kim Jong Un prefers weapons to well-nourished people, page 21

A special report on video games

As gaming grows, it is eating the media: leader, page 12, and analysis, after page 42

→ The digital element of your subscription means that you can search our archive, read all of our daily journalism and listen to audio versions of our stories. Visit economist.com

The world this week

- 5 A summary of political and business news

Leaders

- 7 **China and the world**
What Xi wants
- 8 **Turmoil in the banks**
The great balancing act
- 9 **French reform**
A half-victory
- 9 **Europe and America**
Play to your strengths
- 10 **Reforming Britain's state**
Not like that, minister
- 12 **Video games**
Storm forming

Letters

- 14 On Poland's war claims, South Africa, the Republicans, "The Simpsons", the four-day week, work training, the OECD

Briefing

- 16 **Iran**
Intransigence mixed with emollience

Special report: Video games

Insert coin
After page 42



Bagehot The nervousness of British publishers is rotsome for free speech. But change may be afoot, page 52



Asia

- 19 India and Japan
- 21 Hunger in North Korea
- 21 Australia's stricken rivers
- 22 **Banyan** Arming South-East Asia



China

- 23 The cover-up in Xinjiang
- 24 Losing face at the UN
- 25 The origins of covid-19
- 25 Standing up for pandas
- 26 **Chaguan** China's cheapest city



United States

- 27 Trump and the law
- 28 Repelling spring breakers
- 29 Spirituality and copper
- 32 South Africans in Mississippi
- 33 Quantifying anti-Semitism
- 33 The China divide
- 34 **Lexington** How Iraq changed America



The Americas

- 35 **NAFTA 3.0**



Middle East & Africa

- 37 Whither the Shia crescent?
- 39 Iraq 20 years on
- 39 Uganda's family rule
- 40 Breaking HIV's cycle



Europe

- 43 Macron's costly victory
- 44 Ukrainian drones
- 45 Finland and NATO
- 45 Prussia capitulates
- 46 Charlemagne Dutch farms

**Britain**

- 49 The civil service
- 51 Johnson on Partygate
- 52 Bagehot Free speech

**International**

- 53 Why Xi Jinping went to Moscow

**Business**

- 57 TikTokifying social media
- 59 Big law in India
- 59 Can Adidas catch Nike?
- 60 What propels Ryanair
- 60 The other business AI
- 61 Bartleby On flexibility
- 62 Schumpeter The Barbie paradox

**Finance & economics**

- 63 Inflation v chaos
- 65 America's regional banks
- 66 United Banks of Switzerland
- 67 Buttonwood Making markets safe
- 68 Europe's soul
- 69 Free exchange The half-trillion hole

**Science & technology**

- 70 Private fusion's rise

**Culture**

- 73 Revising African history
- 74 Wrestling and America
- 75 Ancient Mexican booze
- 76 Teenage transformations
- 76 East Germany
- 77 Back Story The moral of "Guys & Dolls"

**Economic & financial indicators**

- 80 Statistics on 42 economies

Graphic detail

- 81 Online daters are less open-minded than their filters suggest

Obituary

- 82 Jacqueline Gold, queen of sex



The Economist

Volume 446 Number 9339

Published since September 1843 to take part in 'a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress.'

Editorial offices in London and also: Amsterdam, Beijing, Berlin, Brussels, Chicago, Dakar, Dallas, Dubai, Johannesburg, Madrid, Mexico City, Moscow, Mumbai, New Delhi, New York, Paris, San Francisco, São Paulo, Seoul, Shanghai, Singapore, Tokyo, Washington DC

Subscription service

For our full range of subscription offers, including digital only or print and digital bundled, visit: [Economist.com/offers](https://www.economist.com/offers)

If you are experiencing problems when trying to subscribe, please visit our Help pages at: www.economist.com/help for troubleshooting advice.

To manage your account online, please visit my.economist.com where you can also access our live chat service which is available 24/7. To call us, contact our dedicated service centre on:

Asia: 001800 7711 2711
Singapore: +61 2915 75069



PEFC certified
This copy of *The Economist* is printed on paper sourced from sustainably managed forests, recycled and controlled sources certified by PEFC
www.pefc.org



THE NEW YORKER

FEBRUARY 27, 2023



4 GOINGS ON ABOUT TOWN

II THE TALK OF THE TOWN

David Remnick on a year of war in Ukraine; the Pit on Fifth; Whitmer Thomas and Clay Tatum; Oliver Sacks, the opera; psychedelics for Ukraine.

PROFILES

Hua Hsu 16 Late Shift
Randall Park's "Shortcomings" dares to offend.

ANNALS OF INQUIRY

Manvir Singh 22 You First
Who gets to be "Indigenous"?

SHOUTS & MURMURS

Jesse Eisenberg 27 A G.P.S. Route for My Anxiety

LETTER FROM ISRAEL

Ruth Margalit 28 Minister of Chaos
The alarming rise of Itamar Ben-Gvir.

A REPORTER AT LARGE

Kimon de Greef 40 After the Gold Rush
South Africa's illegal mining boom.

FICTION

Allegra Goodman 50 "The Last Grownup"

THE CRITICS

THE ART WORLD

Rebecca Mead 55 *The Rijksmuseum's blockbuster Vermeer show.*

BOOKS

57 Briefly Noted

Adam Gopnik 59 *A manifesto against light pollution.*

Katy Waldman 63 *Rebecca Makkai's "I Have Some Questions for You."*

DANCING

Jennifer Homans 66 *Justin Peck's "Copland Dance Episodes."*

THE THEATRE

Helen Shaw 68 *"Pictures from Home," "Cornelia Street."*

POEMS

Daniel Poppick 32 "Duet"

Aria Aber 47 "Zelda Fitzgerald"

COVER

Edward Steed "Curiosities"

DRAWINGS Frank Cotham, Amy Hwang, Sam Gross, Harry Bliss and Steve Martin, Roz Chast, Ed Himelblau and Shannon Odell, Anjali Chandrashekar, Drew Panckeri, Hartley Lin, Chelsea Carr, Jake Thompson, Gabrielle Drolet, Rich Sparks **SPOTS** Antonio Giovanni Pinna

WORLD TIMES

11



Sania Alam

GENERAL

- 4 | From the Editor's Desk
- 8 | Letters to the Editor
- 10 | World Agenda March 2023
- 64 | Sabz Kitab
- 69 | Regenesiis
- 72 | The Feynman Technique
- 74 | Children's Education
- 111 | Zia Mohyeddin

15

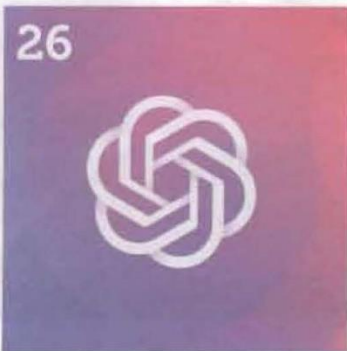


US-China Relations

INTERNATIONAL

- 12 | Just War Theory
- 18 | The Green Deal Industrial Plan
- 21 | Swapping Debt for Nature
- 24 | The Northern Ireland Protocol
- 29 | The Syria-Turkiye Earthquake

26



ChatGPT

NATIONAL

- 32 | Police Reforms in Pakistan
- 36 | Self-Assessment Scheme
- 46 | Pakistan in the 21st Century
- 50 | Human Rights in Pakistan
- 54 | Renewable Energy

LIBRARY

38



Indus Waters Treaty

42



Resurgence of Terrorism

48



The Mini-Budget



www.jworldtimes.com
[worldtimesinsta](https://www.instagram.com/worldtimesinsta)
[worldtimesinst1](https://twitter.com/worldtimesinst1)
[worldtimesinstitute](https://www.facebook.com/worldtimesinstitute)
 World Times CSS Videos
www.facebook.com/jworldtimes
www.facebook.com/UrduWorldTimes



52



Pervez Musharraf

EXAM PACK

- 83 | Solar is the Future
- 86 | Main Argument Paragraphs
- 88 | Peace is An Elusive Dream
- 92 | Islam at the Crossroads
- 96 | Fasting in Islam
- 100 | Predicament of the Muslim World

GK CORNER

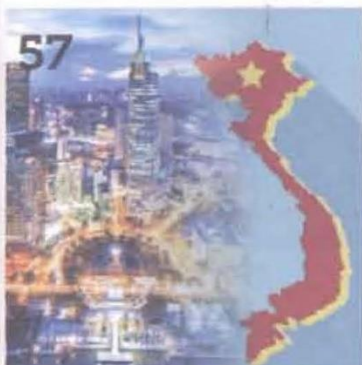
- 116 | World in Focus

79



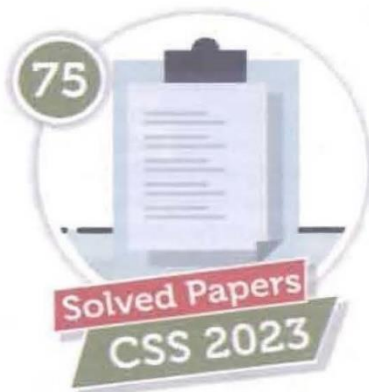
CSS Optional Subjects

57

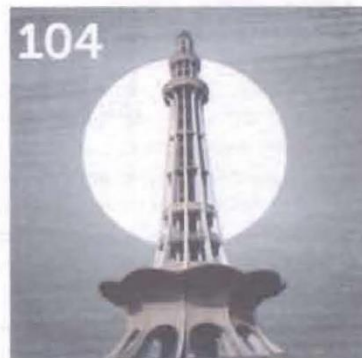


Vietnam's Development

75

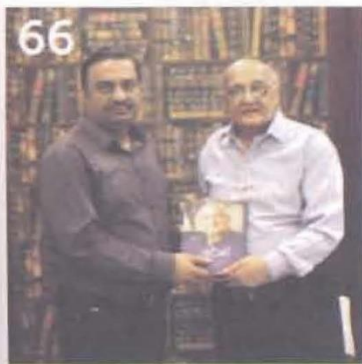


104



The Lahore Resolution

66



Amjad Islam Amjad

INTERVIEWS

- 62 | Muhammad Aashir (PSP)
30th in Pakistan, CSS 2021-22
- 70 | Abdul Fatir Khan
18th in Punjab, PMS 2020-21
- 73 | Syed Zain ul Abidin
Assistant Director (Investigation)
Federal Investigation Agency (FIA)

108



Social Media and Radio

Twenty-fifth Year of Publication


Part-3

VOL. XXV

REGD. No.CPL-06

YEARLY

LAW

 LIBRARY

REPORTER

[YLR]

*Consisting Judgments of High Courts of Pakistan;
Superior Courts of Azad Jammu and Kashmir
and Gilgit-Baltistan
on Civil, Criminal & Revenue Laws*

MARCH, 2023

Editors

MR. MUHAMMAD WAHAJ AZHAR, LL.B. (HONS.) (LOND.);
LL.M. (LOND.); BAR-AT-LAW
MR. KASHIF MIR ZUBAIR, LL.B. (HONS.) (WARWICK); LL.M. (LOND.)

Case-law	497 -- 744
Headnotes of Cases	49 -- 72

Mode of Citation: { 2023 YLR 564 etc.
2023 YLR Note 58 etc.

THE
YEARLY LAW REPORTER

35-NABHA ROAD, LAHORE.

Phones: 37356228/37356287/WhatsApp: 03020001524

Email: info@pldpublishers.com

Printed and Published by PLD Publishers at the
Pakistan Educational Press, Lahore

For regular subscribers: Rs.335/-*
[Postage/carriage extra]

*Extra charges may apply 60 days after publication

1. Hayashi, K., Kato, N., Bashir, K., Nomoto, H., Nakayama, M., Chini, A., ... & Ueda, M. (2023). Subtype-selective agonists of plant hormone co-receptor COI1-JAZs identified from the stereoisomers of coronatine. *Communications Biology*, 6(1), 320.
2. Tahir, N., Zahid, M., Jillani, A., Tahir, S., Yaseen, M., Abbas, Q., ... & Shahid, I. (2023). Impact of alternate Mn doping in ternary nanocomposites on their structural, optical and antimicrobial properties: Comparative analysis of photocatalytic degradation and antibacterial activity. *Journal of Environmental Management*, 337, 117706.
3. Khattak, M. A., Ali, M., Azmi, W., & Rizvi, S. A. R. (2023). Digital transformation, diversification and stability: What do we know about banks?. *Economic Analysis and Policy*.
4. Younus, H. A., Saeed, M., Mahmood, A., Jadoon, M. S. K., Hameed, A., Asari, A., ... & Al-Rashida, M. (2023). Exploring Chromone Sulfonamides and Sulfonylhydrazones as Highly Selective Ectonucleotidase Inhibitors: Synthesis, Biological Evaluation and In Silico Study. *Bioorganic Chemistry*, 106450.
5. Shahid, M. N., Azmi, W., Ali, M., Islam, M. U., & Rizvi, S. A. R. (2023). Uncovering risk transmission between socially responsible investments, alternative energy investments and the implied volatility of major commodities. *Energy Economics*, 106634.
6. Ali, A., Haseeb, M. T., Hussain, M. A., Tulain, U. R., Muhammad, G., Azhar, I., ... & Ahmad, N. (2023). A pH responsive and superporous biocomposite hydrogel of *Salvia spinosa* polysaccharide-co-methacrylic acid for intelligent drug delivery. *RSC advances*, 13(8), 4932-4948.
7. Abdulameer, N. J., Acharya, U., Adare, A., Aidala, C., Ajitanand, N. N., Akiba, Y., ... & Javani, M. (2023). Low-p T direct-photon production in Au+ Au collisions at s N N= 39 and 62.4 GeV. *Physical Review C*, 107(2), 024914.
8. Tahir, R., Albargi, H. B., Ahmad, A., Qadir, M. B., Khaliq, Z., Nazir, A., ... & Harraz, F. A. (2023). Development of Sustainable Hydrophilic *Azadirachta indica* Loaded PVA Nanomembranes for Cosmetic Facemask Applications. *Membranes*, 13(2), 156.
9. Shami, A. A., Akhtar, M. T., Mumtaz, M. W., Mukhtar, H., Tahir, A., Shahzad-ul-Hussan, S., ... & Neophytou, M. (2023). NMR-Based Metabolomics: A New Paradigm to Unravel Defense-Related Metabolites in Insect-Resistant Cotton Variety through Different Multivariate Data Analysis Approaches. *Molecules*, 28(4), 1763.
10. Iqbal, S. A., Uzelac, M., Nawaz, I., Wang, Z., Jones, H., Nichol, G. S., ... & Ingleson, M. J. (2023). Amides as modifiable directing groups in electrophilic borylation. *Chemical Science*.
11. Marasco, A., Khalid, A. M., & Tariq, F. (2023). Does technology shape the relationship between FDI and growth? A panel data analysis. *Applied Economics*, 1-24.
12. Safdar, M., Siddique, N., & Khan, M. A. (2023). A systematic review of literature on human libraries: Objectives, benefits, and challenges. *Journal of Librarianship and Information Science*, 0961000623115886.

13. Mazhar, U. (2023). Managing common resources in Gilgit-Baltistan: a case of Markhor trophy hunt. *Emerald Emerging Markets Case Studies*, 13(1), 1-19.
14. Khan, M., Rasheed, A., & Anwar, M. S. (2023). Numerical analysis of nonlinear time-fractional fluid models for simulating heat transport processes in porous medium. *ZAMM-Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik*, e202200544.
15. Ganji, S. F. G., Rahimnia, F., Ahanchian, M. R., & Syed, J. (2023). A qualitative study of diversity management practices in Iran's private sector organizations. *Equality, Diversity and Inclusion: An International Journal*.
16. Bafekry, A., Fadlallah, M. M., Faraji, M., Shafique, A., Jappor, H. R., Sarsari, I. A., ... & Ghergherehchi, M. (2023). Reply to the 'Comment on "Two-dimensional penta-like PdPSe with a puckered pentagonal structure: a first-principles study"' by S. Chowdhury, F. Shojaei and B. Mortazavi, *Phys. Chem. Chem. Phys.*, 2023, 25. *Physical Chemistry Chemical Physics*.
17. Qureshi, M. T., Ullah, F., Hameed, R. S. A., Al-Elimi, M., Humadi, J., Nassar, A. M., ... & Saleem, M. (2023). Enhanced thermoelectric and optical response of Ag substituted Cu₂O compositions for advanced applications. *Ceramics International*.
18. Firdous, F., Raza, H. G., Chotana, G. A., Choudhary, M. I., Faisal, A., & Saleem, R. S. Z. (2022). Centrosome Clustering & Chemotherapy. *Mini Reviews in Medicinal Chemistry*.
19. Farhan, A., Hassan, G., Ali, S. H. L., Yousaf, Z., Shafique, K., Faisal, A., ... & Mirza, S. (2023). Spontaneous NETosis in diabetes: A role of hyperglycemia mediated ROS and autophagy. *Frontiers in Medicine*, 10.
20. Saeed, M., Firdous, A., Zaman, M. S., Izhar, F., Riaz, M., Haider, S., ... & Tariq, S. MOFs for desulfurization of fuel oil: Recent advances and future insights. *Journal of the Chinese Chemical Society*.
21. Wahid, N., Amin, U., Khan, M. A., Siddique, N., & Warraich, N. F. (2023). Mapping the desktop research in Pakistan: a bibliometric analysis. *Global Knowledge, Memory and Communication*.
22. Tarar, M. O., Hassan, N. U., Naqvi, I. H., & Pecht, M. (2023). Techno-Economic Framework for Electric Vehicle Battery Swapping Stations. *IEEE Transactions on Transportation Electrification*.
23. Shabbir, W., KH, S. Y., Dogar, A. M., Isaev, D., & Oz, M. (2022). Probing the ubiquitination-mediated function of Epithelial Sodium Channel in A549 cells. *Current Molecular Pharmacology*.
24. Pastore, F., & Choudhry, M. T. (2022). Determinants of school to work transition and COVID-19. *International Journal of Manpower*, 43(7), 1487-1501.
25. Tahir, M. N., Khalid, Z., & Aslam, A. (2022, November). Online, Real-time and Robust Detection and Localization of Foreign Objects on Paper Surface using Machine Vision and Clustering. In 2022 28th International Conference on Mechatronics and Machine Vision in Practice (M2VIP) (pp. 1-6). IEEE.
26. Abbasi, M. Z. (2020). Al-Fatawa al-'Alamgiriyyah: Hanafi Legal Code of the Mughal Empire. *Islamic Studies*, 59(4), 451.

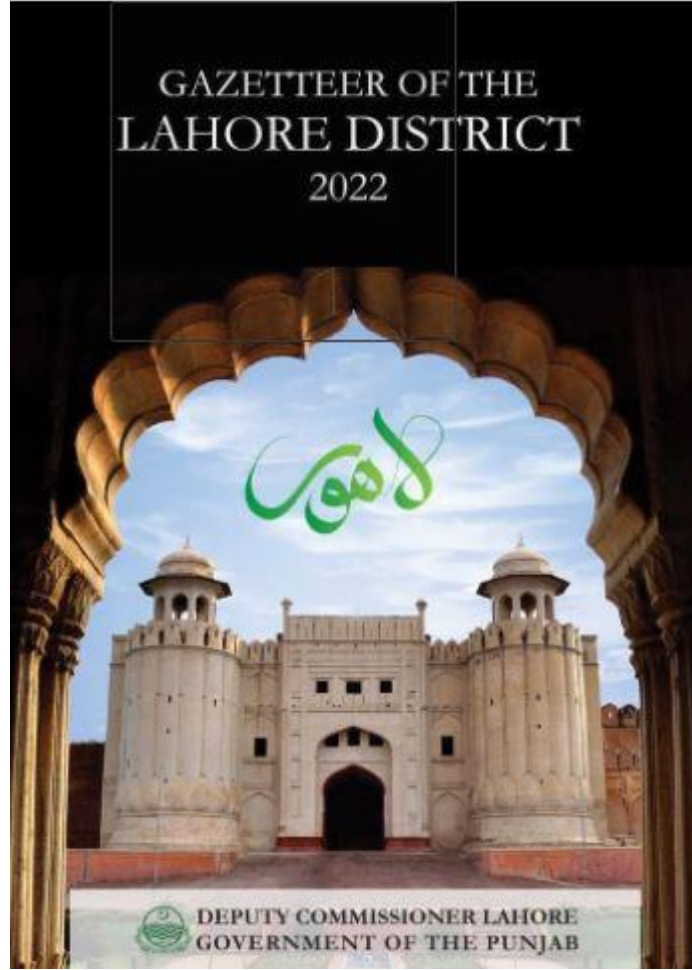
27. Abbasi, M. Z., & Cheema, S. A. (2020). Polygamy and Second Marriage under Muslim Family Law in Pakistan. *Islamic Studies*, 59(1), 29-50.
28. Baig, A., Blau, B., & Hao, J. (2020). Accounting Information Quality and the Clustering of Stock Prices.

Book of the Month

You can reach @

KIC 954.9143 G289

2022



Overview

MESSAGE FROM THE COMMISSIONER, LAHORE DIVISION Much has been written about the great city of Lahore, its rich cultural heritage, its architectural monuments, its history and demography in recent decades. Official literature of the district, written from the perspective of administrators, was a tradition but has been discontinued for various reasons for a long time. The 2022 Gazetteer of Lahore District is therefore a laudable achievement of the Deputy Commissioner Office Lahore, in attempting to not only revive this tradition but also provide official, authentic information about the district. The effort was led by Dr Atiyab Sultan, Additional Deputy Commissioner (Headquarters), Lahore who undertook it with a seriousness of purpose and academic rigour, steering it through to publication. Here I must also mention the support that the Board of Revenue has provided in reviving the tradition of publishing district gazetteers. I am also pleased to note that while conscientious emphasis has been placed on making the gazetteer citizen-centric, it also provides the reader with useful information on public services and their access. I congratulate the team on finishing this important piece of work, and hope that the reader will find both joy and utility in perusing the contents.

Product Details

ISBN-13:

969353445X

Publication date:

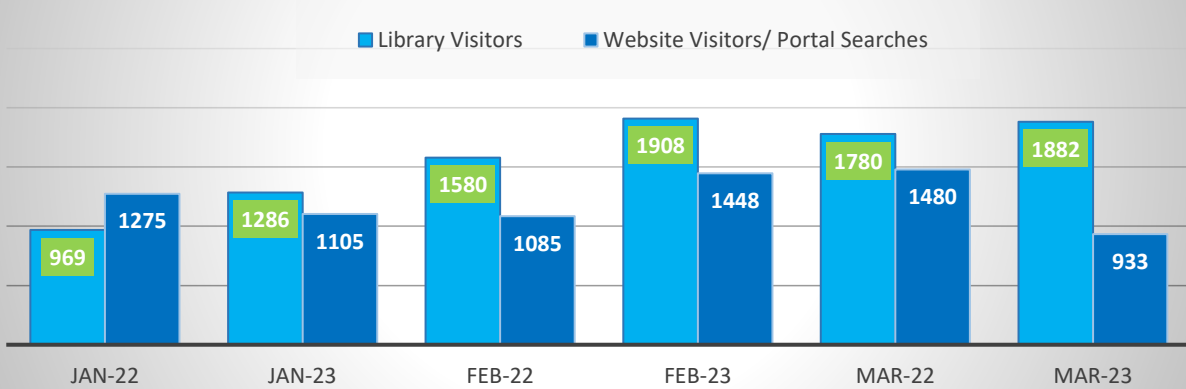
2022

Pages:

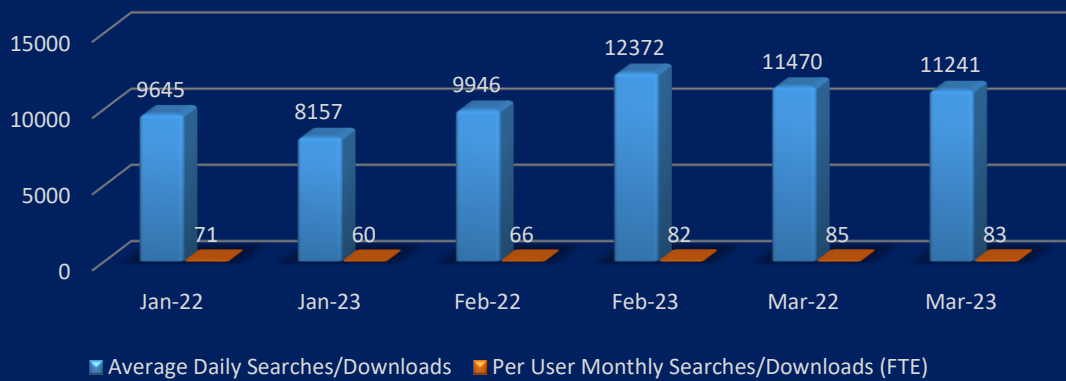
324 pages

Monthly Statistics

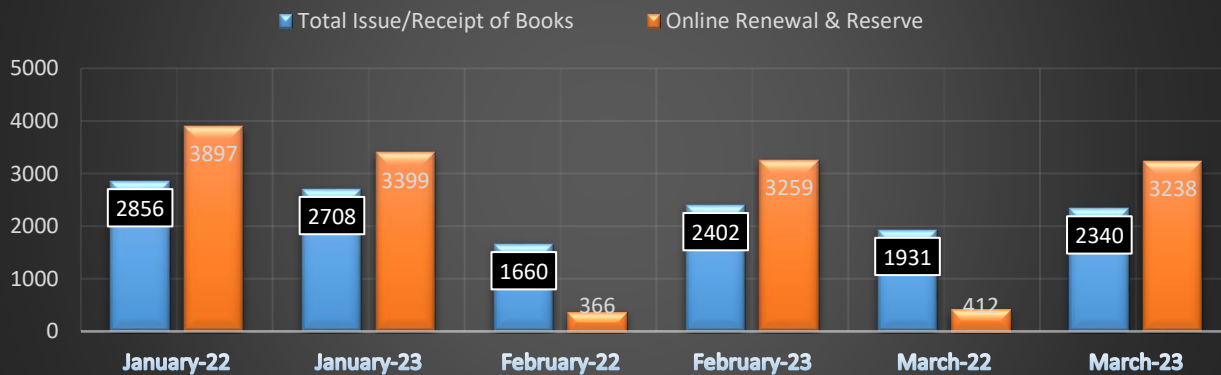
Daily Average Library Usage (January-February-23)



Daily Databases Usage Statistics (January-February23)



Monthly Library Circulation Statistics (January-February-23)





LUMS



📍 D.H.A, Lahore Cantt. 54792 Lahore, Pakistan

☎ Phone: +92 42 3560 8000

📠 Fax: +92 42 3572 5048

🌐 URL: library.lums.edu.pk



www.lums.edu.pk