

Technology Roundup

A NEWS BULLETIN

TECHNOLOGY INFORMATION SERVICES (TIS)

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE



PASTIC

VOLUME 16 NO. 2

March - April 2024

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- 2nd International Conference on Computing Technologies, Tools and Applications (ICTAPP-24)
- One-Day Hands-on Workshop Intravenous (IV) and Intramuscular (IM) Administration
- 8th International Conference on Sustaining Livelihoods: Climate-Smart Agriculture for Food Security
- 14th National Media Workshop (14th NMW)
- 1st International Conference on Computational Sciences and Innovations (ICCSI)
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Tech & Trade Offers

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Pakistani IT Firms Excel at Saudi-Pak Tech Expo 2024

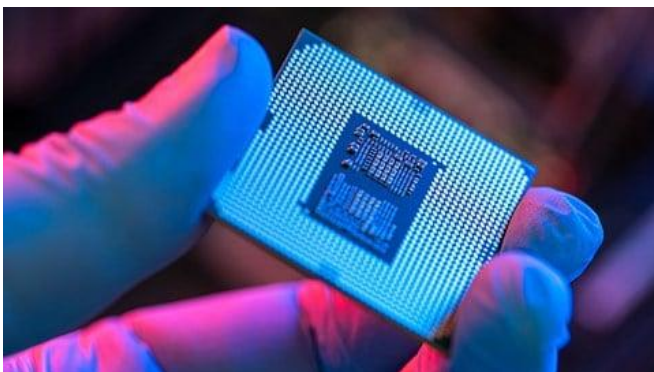
Pakistani IT businesses made significant strides at the Saudi-Pak Tech Expo 2024 in Riyadh, representing a pivotal moment in global tech cooperation. The event, organized by the Pakistan Software Houses Association in partnership with the Special Investment Facilitation Council (SIFC), Pakistan Software Export Board (PSEB), and the Pakistan Embassy in Riyadh, featured seventy-four local firms and eight hundred delegates from Pakistan. The expo drew a total of one hundred seventy-two thousand participants from one hundred eighty-three countries worldwide. During the Expo, Pakistani IT corporations reached a significant milestone by signing multiple agreements with top-tier firms, marking the beginning of a new era in global collaboration. These partnerships are poised to create fresh opportunities for the Pakistani IT industry, fostering advancements in both technology exchange and economic growth, thereby enhancing the nation's export potential within the sector.



(Meta AI imagined image).

SIFC to Develop Semiconductor and Chip Design Industry

The Special Investment Facilitation Council (SIFC) plans to initiate a strategy aimed at fostering Pakistan's semiconductor and chip design industry, targeting significant multibillion-dollar investments. The initiative necessitates the government to provide tax incentives and support to attract foreign investments, especially from China and the U.S., to establish chip design centers. The SIFC proposed a government-to-business chip design facility to spur investment, recommending an initial focus on testing and research before advancing the semiconductor sector. Establishing a



semiconductor manufacturing foundry would require an estimated investment of \$6-7 billion, highlighting a shortage of trained professionals in the country. The Pakistan National Semiconductor Plan, launched in 2022, assesses the potential and challenges of the semiconductor industry. It underscores the necessity for

enhancing business infrastructure, bridging the academic-industry divide through advanced training centers, and providing incentives to attract chip design firms. The plan also advocates for streamlining the customs process to bolster Pakistan's competitiveness in semiconductor design and manufacturing.

Pakistan Pursuing Transfer of Agriculture Technology from the Netherlands

Henny de Vries, Ambassador of the Kingdom of the Netherlands to Pakistan, met with Muhammad Aurangzeb, Minister for Finance and Revenue, to discuss mutual interests and bolster the existing ties between Pakistan and the Netherlands. The meeting underscored the significance of the bilateral relationship, grounded in shared values and a history of collaboration. Minister for Finance and Revenue emphasized Pakistan's keen interest in technology transfer and harnessing Dutch expertise in agriculture, dairy, and farm production. This collaboration aims to boost production and exports, thereby making a substantial contribution to Pakistan's economy. Meanwhile, Ambassador de Vries underscored the Netherlands' commitment to enhance cooperation with Pakistan across multiple sectors. She also expressed appreciation for the government's ongoing efforts in reforming key economic and financial sectors of the economy.



First Women's Software Technology Park in Azad Kashmir

The Pakistan Software Export Board (PSEB), a division under the Ministry of Information Technology and Telecommunication, is poised to establish Pakistan's inaugural Woman Software Technology Park (WSTP) at Women University Bagh in Azad Kashmir. Spanning approximately 5,000 square feet, the park is dedicated exclusively to women in the technology industry, offering a modern and secure workspace. In collaboration with Women University Bagh Azad Kashmir, PSEB has finalized plans for the development of the WSTP, with both parties reaching an agreement. PSEB has allocated 31 million rupees for the establishment of this facility. Led by PSEB, this initiative



aligns with overarching goals to advance gender equality, empower women through technology, encourage innovation and entrepreneurship, create job opportunities, and bolster local economic development. Establishing Pakistan's inaugural women-only technology park aims to provide women equal access and opportunities within the technology sector. According to PSEB, the establishment of WSTP aligns with

the United Nations Sustainable Development Goals (SDGs), specifically addressing gender disparities, promoting innovation-driven economic growth, and facilitating sustainable development.

Saudi Investors Partner with SuperNova in Pakistan

A significant Saudi investment consortium in the IT and technology field has partnered with SuperNova Solutions, a prominent provider of enterprise resource planning and business solutions based in Pakistan, as announced by the Pakistani company. This investment marks a significant milestone in Pakistan's investment arena, propelling us onto the global stage and fostering strategic involvement in the regional IT market. It sets a precedent for further



partnerships, collaborations, and joint ventures, bolstering Pakistan's competitiveness, digital transformation, ERP implementation capabilities, services, and exports. In alignment with Saudi Arabia's Vision 2030 objectives, digital transformation emerges as a pivotal catalyst, reshaping industries, government services, and societal interactions. This acquisition perfectly aligns with the vision of driving digital transformation and fostering innovation. By amalgamating resources and expertise, the entities are strategically poised to assist businesses in leveraging ERP solutions to attain the strategic objectives.

UAE Developing 400Megawatt Battery Energy Storage System

Emirates Water and Electricity Company (EWEC), a prominent entity in coordinating water and electricity planning, purchasing, and supply throughout the UAE, has called upon developers and developer consortiums to submit an Expression of Interest (EOI) for the establishment of a 400-megawatt Battery Energy Storage System (BESS) power project. EWEC plans to deploy BESS to enhance system flexibility and offer ancillary services like frequency response and voltage regulation. BESS technology holds a pivotal position in EWEC's strategic agenda to broaden its array of energy

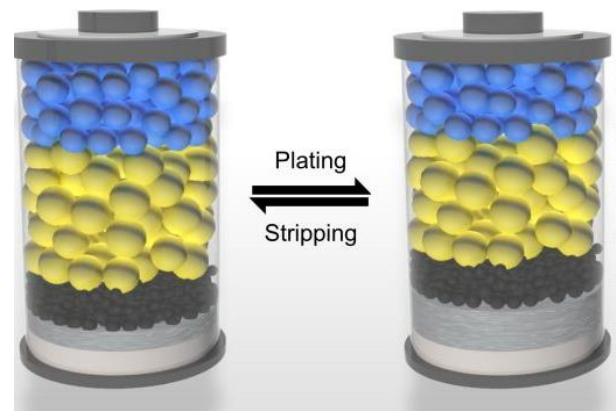


projects with a sustainability emphasis. This initiative aligns with EWEC's goal of boosting its total solar photovoltaic (PV) power generation capacity to 7.5 gigawatts by 2030. Through the implementation of these vital strategic renewable energy ventures, EWEC anticipates a significant reduction in its average carbon dioxide intensity from power generation. This reduction is projected to be approximately 42%, decreasing from 330 kilograms per megawatt hour

(kg/MWh) in 2019 to an estimated 190 kg/MWh by 2030.

Advancing Battery Technology: Safer and Long lasting Energy Storage

Batteries used in devices from smart phones to electric vehicles have relied on liquid electrolytes for energy transfer. These electrolytes carry inherent flammability risks, although reduced in modern applications, remain a concern for safety. To resolve this challenge, the research team partnered with POSCO N.EX.T Hub to create an anode protection layer using a functional binder (PVA-g-PAA) for all-solid-state batteries. This layer demonstrates outstanding lithium transfer capabilities, preventing erratic electrode position and enabling a 'bottom electrode position' process. This guarantees uniform lithium deposition starting from the bottom of the anode surface. The research team utilized scanning electron microscopy (SEM) to analyze and confirm the stable electrode position and detachment of lithium ions. This method notably minimized unnecessary lithium consumption. Moreover, the all-solid-state batteries developed by the team exhibited consistent electrochemical performance over prolonged duration even with lithium metal thicknesses as low as 10 micrometers (μm) or less.



Food Security through a Common Plant

According to findings, the wild plant *Caroliniana Azolla*, native to the eastern United States, could help alleviate food insecurity in the near future. The researchers discovered that the Carolina strain of azolla is not only more digestible and nutritious for humans compared to wild varieties but also to those cultivated in Asia and Africa for livestock feed. Previously, *Azolla*'s potential for human consumption was hindered by its high total polyphenolic content, which affects digestibility. However, new research reveals that the Carolina strain has significantly lower phenolic content, which further diminishes with cooking. The plant was cultivated in a greenhouse at Penn State's University Park campus.



Researchers found that Carolina *Azolla* has a total phenolic content of approximately 4.26 grams of gallic acid equivalents per kilogram of dry weight. The researchers investigated three cooking methods, boiling, pressure cooking, and natural fermentation. The tests revealed that boiling reduced the total phenol content by 88%, pressure cooking by 92%, and natural fermentation by 62% compared to the raw plant.

ExLabs Plans Mission to Rendezvous with Asteroid Apophis

Exploration Labs, a startup based in Southern California specializing in space resources, is preparing for a 2028 mission to intercept asteroid Apophis before its approach to Earth. During the mission, ExLabs plans to deploy three cubesats into Apophos' orbit. The flight aims to validate systems and software for future campaigns focused on capturing and relocating near-Earth asteroids into stable orbits for resource acquisition. ExLabs is creating large modular spacecraft to accommodate partner payloads and developing robotics for capturing and transporting space objects to different locations. Their spacecraft, known as the Space Exploration and Resource Vehicle (SERV), can host payloads weighing up to 30 metric tons in its fully assembled configuration. Additionally, ExLabs' Arachne Platform is designed specifically for capturing and transporting noncooperative objects in space. NASA has shown interest in cost-effective missions to Apophis, an asteroid set to pass between Earth and satellites in geostationary orbit in April 2029. In February, NASA hosted an Apophis workshop inviting small companies and other nontraditional partners to participate.



Hydrogen Train Travels 3,000km without Refueling

The manufacturer of the hydrogen fuel cell train announced that it achieved a Guinness World Records entry by traveling nearly 3,000km without the need for refueling. The Flirt H2 model, manufactured by Swiss trainmaker Stadler, completed a 1,741-mile (2,803km) journey on a test track in Colorado, spanning 46 hours. The 2,803km distance exceeds the advertised range of 460km for the Flirt H2 by over six times. This achievement likely reflects the manufacturer's optimization of the



train's operation on a flat test track, without the interruptions of stops, starts, or inclines. Stadler did not disclose specific details about the size of the fuel cells used in the record-breaking train. However, the Flirt H2 model supplied to the San Bernardino County Transportation Authority (SBCTA) in California this year, which is poised to become the US's first hydrogen train, is equipped with 12 fuel cells, each rated at 100kW. This setup implies a total hydrogen power train of 1.2MW.

Repurposing Avocado Tree Waste for Sustainable Food Packaging

An avocado pruning waste-derived bio-polyethylene material offers a blend of robust strength and biodegradability. While plastic has enabled convenient and hygienic food packaging, its environmental impact persists as a significant concern.

Researchers from the University of Córdoba and the University of Girona in Spain have explored avocado pruning residue, as a potential solution for eco-friendly food packaging. Cellulose, a biopolymer naturally occurring in plants, can be transformed into fibers to reinforce synthetic materials such as polyethylene.

Polyethylene, an affordable and non-toxic plastic, plays a crucial role in preserving food freshness and preventing contamination. Avocado pruning residue, a biomass from non-food plant materials abundant in Spain's Andalucía region, contains high cellulose levels similar to other agricultural tree species. Cellulose, a plant-derived biopolymer, can reinforce synthetic materials like polyethylene, a vital, non-toxic plastic for food preservation. However, traditional polyethylene, derived from fossil fuels, lacks biodegradability. Bioethanol-derived polyethylene from plant sources offers a sustainable alternative.



World's First 360° Wireless Power Transmission from Space

In a pioneering achievement, Space Solar, a startup from the UK headquartered in Oxford, has unveiled a major milestone in its effort to transmit solar energy from space to Earth. The company successfully lit an LED sign in a Belfast laboratory using wireless energy beamed from every direction, achieving the world's inaugural 360-degree wireless power transmission.

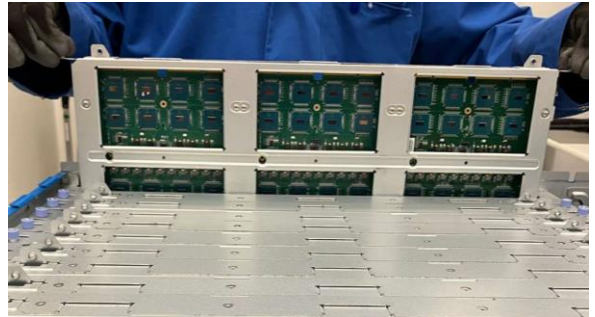


The technology revolves around capturing solar energy in space using satellites equipped with solar panels. These satellites then transmit the collected energy wirelessly to receiver stations on Earth in the form of microwaves. The proposed solar farm, planned for geostationary orbit about 35,000 km above the equator, will consist of mirrors and solar panels. These satellites will remain oriented towards the Sun at all times, optimizing energy capture. The capability to transmit energy from all

directions is essential for space-based solar satellites to efficiently deliver energy to a specific location on Earth as they orbit.

Intel Builds World's Largest Neuromorphic System

Hala Point introduces the industry's pioneering 1.15 billion neuron neuromorphic system, paving the way for enhanced efficiency and scalability in AI. Intel has unveiled the world's largest neuromorphic system under the codename Hala Point. Deployed at Sandia National Laboratories, this advanced system utilizes Intel's Loihi 2 processor and is designed to foster research in brain-inspired artificial intelligence (AI). It addresses current AI challenges related to efficiency and sustainability. Hala Point represents a significant advancement from Intel's previous large-scale research system, Pohoiki Springs,



boasting architectural enhancements that enable over 10 times more neuron capacity and up to 12 times higher performance. Hala Point marks a breakthrough as the first large-scale neuromorphic system demonstrating state-of-the-art computational efficiencies on mainstream AI workloads. It has been characterized to support up to 20 quadrillion operations per second (20 petaops) and achieves an efficiency surpassing 15 trillion 8-bit operations per second per watt (TOPS/W) when running conventional deep neural networks. These capabilities rival and even surpass those achieved by architectures based on graphics processing units (GPUs) and central processing units (CPUs).

NASA Chooses Aircraft for New Earth and Climate Change Studies

NASA has chosen six new airborne missions to study fire-induced clouds, Arctic coastal change, air quality, landslide hazards, shrinking glaciers, and emissions from agricultural lands, both domestically and internationally. These missions complement satellite observations, ground measurements, and computer simulations conducted by scientists. Supported by NASA's Earth Venture program, these



missions focus on deploying instruments aboard aircraft to achieve finer spatial resolution and shorter time scales than many satellites allow. Selected through competitive processes, these missions offer opportunities to enhance satellite observations and conduct innovative measurements. Under the NTERFAACE (Nitrogen and Carbon Terrestrial Fluxes: Agriculture, Atmospheric Composition, and Ecosystems) mission, led by Glenn Wolfe at

NASA's Goddard Space Flight Center in Greenbelt, Maryland, researchers will quantify emissions of greenhouse gases, nitrogen, and other pollutants from agricultural lands throughout the United States.

ITCN Asia 2024 - Pakistan's Largest Tech Event

ITCN Asia, Pakistan's premier information and communication technology (ICT) event, held its 24th edition in Lahore from April 18–20, 2024. This three-day extravaganza showcased cutting-edge technological advancements, fostered industry networking opportunities, and ignited discussions on the future of technology in Pakistan. ITCN Asia, organized by E-



commerce Gateway Pakistan (Pvt.) Ltd., serves as a comprehensive platform where companies, entrepreneurs, government organizations, and tech enthusiasts converge to explore the dynamic landscape of technology. ITCN Asia 2024 highlighted the significant growth and potential of Pakistan's IT industry. The event served multiple purposes, providing a platform for both established Pakistani enterprises and ambitious startups to showcase their innovations on an international stage. It facilitated international expansion and collaboration opportunities for Pakistani IT firms, attracting foreign investors and tourists.

Robotic System Aids Severely Mobility-impaired Individuals with Feeding

Cornell researchers have created a robotic feeding system employing computer vision, machine learning, and multimodal sensing to safely assist individuals with severe mobility limitations, such as those with spinal cord injuries, cerebral palsy, and multiple sclerosis, in eating. Feeding individuals



with severe mobility limitations using a robot is challenging because many cannot lean forward and need food to be placed directly into their mouths," explained Tapomayukh "Tapo" Bhattacharjee, assistant professor of computer science in the Cornell Ann S. Bowers College of Computing and Information Science and lead developer of the system. The difficulty increases when dealing with individuals who have additional complex medical conditions. This research has the potential to significantly improve the daily lives and well-being

of individuals with severe mobility limitations by offering a reliable and effective solution for feeding assistance.

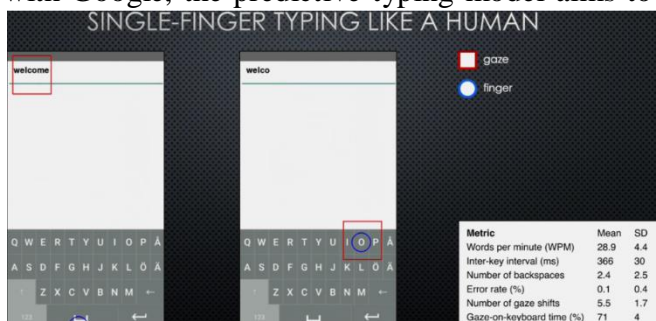
New Metal-Free Porous Frameworks

Scientists from the University of Liverpool and the University of Southampton have utilized computational design techniques to create organic porous framework materials devoid of metals. These materials hold promise for applications in catalysis, water capture, and hydrogen storage. The research team employed inexpensive and readily available non-metallic elements, including chloride ions, to design non-metal organic porous frameworks (N-MOFs). These new materials provide an alternative to metal-organic frameworks (MOFs), which are crystalline materials composed of metals linked by organic compounds. While over 95,000 MOFs have been identified with diverse applications in catalysis, gas separation, and energy storage, the potential of the newly developed metal-free porous framework materials remains largely unexplored. Initial findings indicate their effectiveness in capturing iodine, a crucial element in the nuclear industry.



Teaching a Computer to Type like a Human

A novel typing model replicates the typing process rather than solely predicting words. Developed by researchers at Aalto University, a groundbreaking predictive typing model can simulate various user behaviors, offering insights into optimizing smartphone usage. The model distinguishes between typing styles such as one-handed or two-handed typing, as well as differences between younger and older users. The researchers developed a machine-learning model equipped with virtual 'eyes and fingers' and working memory to mimic the human typing process. This enables the model to type out sentences, replicating human-like errors and corrections in the process. Developed in collaboration with Google, the predictive typing model aims to streamline the evaluation and optimization of new



phone keyboard designs. Traditionally, testing new designs with real users is costly and time-intensive. This project seeks to complement these tests by providing a faster and more efficient evaluation method for keyboards.

By training computer models, we can make predictions without requiring extensive observations of numerous individuals. Given the ubiquitous presence of user interfaces in modern life, this research ultimately strives to enhance societal functionality and streamline everyday activities.

SOURCES AND IMAGE CREDITS

<https://xperttimes.com/pakistani-it-corporations-shine-at-saudi-pak-tech-expo-2024-signal-key-world-agreements/>

<https://profit.pakistantoday.com.pk/2024/03/28/sifc-to-implement-plan-to-develop-semiconductor-chip-design-industry/>

<https://www.brecorder.com/news/40297045>

<https://propakistani.pk/2024/04/24/pseb-to-pioneer-womens-software-technology-park-in-azad-kashmir/>

<https://www.arabnews.com/node/2470871/business-economy>

<https://www.ewec.ae/en/media/press-release/ewec-invites-expression-interest-submissions-development-battery-energy-storage>

<https://scitechdaily.com/revolutionary-all-solid-state-battery-design-paves-the-way-for-safer-longer-lasting-energy/>

<https://www.psu.edu/news/research/story/common-plant-could-help-reduce-food-insecurity-researchers-find/>

[https://spacenews.com/exlabs-plans-mission-to-rendezvous-with-asteroid-apophis/#:~:text="](https://spacenews.com/exlabs-plans-mission-to-rendezvous-with-asteroid-apophis/#:~:text=)

<https://www.hydrogeninsight.com/transport/world-record-hydrogen-train-travels-nearly-3-000km-without-refuelling/2-1-1617599>

<https://www.advancedsciencenews.com/avocado-tree-waste-used-to-make-sustainable-food-packaging/>

<https://technologytimes.pk/2024/04/09/space-solar-powers-future-of-energy-with-wireless-beam/>

<https://www.intel.com/content/www/us/en/newsroom/news/intel-builds-worlds-largest-neuromorphic-system.html#gs.ariied3>

<https://science.nasa.gov/earth/nasa-selects-new-aircraft-driven-studies-of-earth-and-climate-change/>

<https://www.techbridgeconsultancy.com/itcn-asia-2024-the-biggest-tech-event-in-pakistan/>

[https://www.cs.cornell.edu/information/news/newsitem13208/robotic-system-feeds-people-severe-mobility-limitations#:~:text="](https://www.cs.cornell.edu/information/news/newsitem13208/robotic-system-feeds-people-severe-mobility-limitations#:~:text=)

<https://news.liverpool.ac.uk/2024/05/22/liverpool-and-southampton-researchers-design-new-metal-free-porous-framework-materials/>

<https://www.aalto.fi/en/news/teaching-a-computer-to-type-like-a-human>

FORTHCOMING TECH EVENTS**PAKISTAN**

- Seminar on Drug Adulterants, Impurities, and Impact on Human Health
May 28th, University of Veterinary & Animal Sciences, Lahore
<https://uvas.edu.pk/news-events/2024/June/seminar.php>
- 2nd International Conference on Computing Technologies, Tools and Applications (ICTAPP-24)
June 4 – 6, The University of Agriculture, Peshawar
<https://ictapp.org.pk/>
- One-Day Hands-on Workshop Intravenous (IV) and Intramuscular (IM) Administration
June 12 – 13 and 26 – 27, National Defense University, Karachi
<https://www.duhs.edu.pk/events/one-day-hands-on-workshop-intravenous-iv-and-intramuscular-im-administration/>
- 8th International Conference on Sustaining Livelihoods: Climate-Smart Agriculture for Food Security
July 3 – 4, University of Poonch, Rawalakot
<https://upr.edu.pk/storage/uploads/blogs/664c6cd2d708e-Call%20for%20Abstracts.pdf>
- 14th National Media Workshop (14th NMW)
July 22 – 26, National Defense University, Islamabad
<https://ndu.edu.pk/issra/download/14th-NMW.jpg>
- 1st International Conference on Computational Sciences and Innovations (ICCSI)
July 22 – 23, The University of Haripur, Haripur
<http://121.52.149.157/>
- International Conference on Breakthrough in Pakistan's Economic Development through Technological Innovation in Agriculture - A Policy Approach
July 29 – 31, Bacha Khan University, Charsadda
https://docs.google.com/forms/d/e/1FAIpQLSf39yuGy8z-TgriokNHNH9Ni3GWKdczImKRTL_mImH6h-m7JA/viewform?pli=1
- 1st International Conference on advances in Mechanical, Materials, Mechatronics and Energy Engineering (ICAME-24)
October 17 – 18, University of Engineering and Technology, Taxila
<https://web.uettaxila.edu.pk/icame2024>
- Role of Artificial Intelligence in Access to Justice in Pakistan: Shaping the Future of Law, Peace, and Equality
December 3 – 4, International Islamic University, Islamabad
<https://www.iiu.edu.pk/wp-content/uploads/2024/05/iri-international-conference-02052024.pdf>
- 18th International Conference on Emerging Technologies (ICET 2023)
November 6 – 7, National University of Computer and Emerging Sciences, Peshawar
<https://www.icet.org.pk/2023/index.php>

INTERNATIONAL

- AI and Big Data Expo
June 5 – 6, California, USA
<https://www.ai-expo.net/northamerica/>
- 6th International Symposium on Engineering and Applied Science
July 4 – 6, Osaka, Japan
<https://iseas.org/>
- TECHSPO Auckland 2024 Technology Expo
August 8 – 9, Auckland, New Zealand
<https://techspoauckland.co.nz/>

- Asia Pacific Drilling Technology Conference and Exhibition – Advancing Drilling and Well Technologies for Resilient Future
August 19 – 20, Bangkok, Thailand
https://www.spe-events.org/asia-pacific-drilling?_ga=2.42068965.1905833411.1
- 63rd Annual Conference of Metallurgists
August 19 – 22, Nova Scotia, Canada
<https://com.metsoc.org/>
- EV Charging Infrastructure Middle East 2024
August 19 – 20, Dubai, UAE
<https://www.middleeast.evcharging-infrastructure.com/>
- 11th International Conference on Civil and Urban Engineering
August 19 – 20, Rome, Italy
<https://iccue.org/>
- Global Summit on Polymer Science and Composite Materials (GSPSCM2024)
September 16 – 18, Prague, Czech Republic
<https://polymersciencesummit2024.com/>
- WATER AI 2024
September 18 – 19, California, USA
<https://www.water-ai-summit.com/>
- Intelligent Automation Conference 2024
October 1 – 2, Amsterdam, Netherlands
<https://intelligentautomation-conference.com/europe/>
- 5th International Seminar on Fundamental and Application of Chemical Engineering (ISFACHE) 2024
October 1 – 2, Surabaya, Indonesia
<https://elib.its.ac.id/conf/isfache/>
- 5th International Conference on Building Science, Technology and Sustainability (ICBSTS 2024)
October 15 – 18, Lisbon, Portugal
<https://www.icbsts.org/>
- 10th IUPAC International Conference on Green Chemistry (10th ICGC)
October 18 – 22, Beijing, China
<https://www.greeniupac2024.org/>
- Greenhouse Gas Control Technologies (GHGT) conference
October 20 – 24, Alberta, Canada
<https://ghgt.info/>
- Optical Latin America Optics and Photonics Conference
November 10 – 14, Puerto Vallarta, Mexico
https://www.optica.org/events/topical_meetings/latin_america_optics_and_photonics_conference/
- International Congress on Engineering and Information
November 21 – 23, Taipei, Taiwan
<https://iceai.org/>
- 9th International Neonatology Association Conference
December 5 – 8, Berlin, Germany
<https://worldneonatology.com/2024/>

TECH AND TRADE OFFERS

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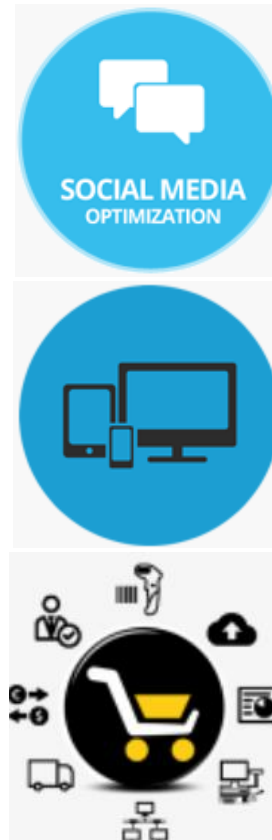
About Pak IT Services

Pak IT Services is a young, dynamic and growing firm, based in Pakistan, which was formed as the result of one man's dream. The driving force behind the company is the passion, dedication, and commitment of the firm to satisfy and fulfill the design needs of its customers with assured quality and on time delivery.

Pak IT Services is backed by a team of experienced and qualified professionals in the field of designing in various media, such as website development, Digital Marketing, Networking, CCTV, Mobile apps development, S.E.O, S.M.O etc.

Our services

- Software development
- Digital marketing
- Website development
- Search engine optimization
- Mobile apps developments
- Networking
- CCTV
- Domain and hosting
- Social media optimization



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Mushroo

About Mushroo

MUSHROO is working to support more sustainable food production by marketing fresh food products from selected farms across Pakistan.

By getting the freshest, grown in an environmentally conscious way and delivering to consumers & restaurants, MUSHROO is helping local food businesses to thrive and also helping reduce dependence on imports.

Our flagship products are the juiciest and freshest white button mushrooms grown in a state-of-the-art

farming facility in Pakistan. Unlike canned mushrooms, they are fresher and tastier and add oomph to your foods. Our premium yet affordable mushrooms are perfect for every recipe, from pizzas and pasta to mushroom tikkas and pakoras for evenings and much more.



Contact us

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About PASTIC

PASTIC serves as a gateway for Scientific & Technological Information for R&D by catering to the information needs of researchers, entrepreneurs, industrialists, educationists, policy makers and planners through anticipatory and responsive information services.

Technology Information Section works exclusively for support and promotion of technological information on trade and industry in the country.

“Technology Roundup” is a news bulletin that provides latest and innovative technology news, and forthcoming events. It also promotes products, technologies and services globally in sectors such as Agro Industry, Bio-Technology, Building Material, Business, Chemicals, Electronics, Energy, Fisheries, Food Processing, Machinery, Packaging, Mining, Pharmaceuticals and Textiles.

Please give us your feedback and address queries to tis.pastic@gmail.com