ISLAMIC WORLD ACADEMY OF SCIENCES

Newsletter

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PRINCE EL HASSAN CALLS FOR POSITIONING JORDAN AS A REGIONAL HUB FOR HEALTH SERVICES*

HIS ROYAL HIGHNESS PRINCE EL HASSAN BIN TALAL
FOUNDING PATRON OF THE ISLAMIC WORLD ACADEMY OF SCIENCES (IAS)

HRH Prince El Hassan Bin Talal visits the World Health Organisation headquarters in Jordan.

HRH Prince El Hassan Bin Talal, Chairman of the Higher Council for Science and Technology and Founding Patron of the Islamic World Academy of Sciences (IAS), visited the World Health Organisation (WHO) headquarters in Jordan, where he called for positioning Jordan as a regional hub for health services.

During the meeting attended by WHO Representative in Jordan Jamela Raiby, Chairman of the Senate Health Committee Yassin Husban, former Minister of Education and Minister of Higher Education and Scientific Research Walid Maani, former Minister of Health Saad Jaber and WHO staff, Prince El Hassan stressed the importance of developing standardized models to monitor and evaluate health needs and achievements across the region, thereby enhancing Jordan's role in regional health cooperation.

Prince El Hassan also underlined the need for clear, targeted health goals and robust national partnerships to realize a comprehensive, humane health vision, the Jordan News Agency, Petra, reported.

He also emphasized the significance of including mental health as an integral part of broader healthcare efforts, advocating for regional, cross-border collaboration in health advancement.

On health emergency preparedness, he stressed the necessity of adopting scientific methods, including statistical tools, to identify risks, propose proactive solutions, and minimize impacts before crises emerge.

He also highlighted the vital role of international and humanitarian organizations in reducing the adverse effects of conflicts and wars on affected populations.

*News source: The Jordan Times, 06 April 2025. Photo source: Petra.
https://jordantimes.com/news/local/prince-el-hassan-calls-positioning-jordan-regional-hub-health-services

ARTIFICIAL INTELLIGENCE(AI) AND HIGHER EDUCATION

Adnan Badran[1] FIAS, FAAS
President, Islamic World Academy of Sciences
and President, Arab Academy of Sciences

There is a global shift in the demands of the digital economy and the needs of human societies, including the Arab world, for new educational outcomes. If we do not move quickly to modernize education and improve its quality to align with global trends, education in our Arab world will become a learning of the past, not of the present or the future. Today's philosophers of education and learning and educational experts will speak in the language of the past, addressing outdated economies, societies, and policies.

The themes of the past in the philosophy of education and teaching always revolved around curriculum circles. The teacher and teaching methods were in a closed classroom, the textbook was closed, and the school, with its windows and integrated databases, was closed to the outside world.

Likewise, the assessment and evaluation in an annual exam called the Tawjihi, in which the student's future fate is decided, meaning that the evaluation is based on what the student has memorized in the prescribed book and what the teacher has repeated in the class.

Therefore, we must move quickly to move the teaching and learning process to higher levels of databases and knowledge building from electronic information and using information technology to build artificial intelligence based on innovation, creativity, invention, exploration, research, investigation, information management, knowledge building and transformation. To a technology that contributes to the growth, development and prosperity of humanity, therefore education must be flexible, aiming to build the ability to question, critical thinking, analytical mind, fact-finding, discovery of the unknown, innovation and patents.

We now live in a rapidly changing world, and education cannot respond quickly enough to meet the challenges of change. Therefore, we must focus on the main concepts and trends in the learning process, leaving the details to be adapted to the evolving needs of society. So, we must re-read the continuous education throughout life as long as man thinks, "I think, therefore I am," "learning to be, learning to know," "learning to do, learning how to live with others." This leads us to flexibility and the practice of artificial intelligence, and the smart skills it carries in using databases and information to provide answers in various fields, enriching the human mind with new solutions, and automating new lifestyles that keep pace with the development of science and technology to build an Arab human future that relies on self-judgment. Against poverty and unemployment, and to walk with the strong in a rapidly changing world, and in new and wide spaces and orbits.

Artificial Intelligence in Education:

Artificial intelligence has been around for decades. One of its founders, John McCarthy, coined AI to automate learning. It has been described as a revolutionary technology with transformative potential.

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Higher education institutions are currently facing the need to adapt once again to a new reality, following a short period of integrating distance learning online, especially with the COVID-19 pandemic, and discussing what we should do in the face of a new wave: artificial intelligence. Should we embrace it or fight it?

Where are we heading in the context of higher education? What are the different roles of the participants in the learning process: the teacher, the learner, and the educational institution? What is the dynamic of the relationship between them to build a generation capable of meeting the challenges of the future?

In November 2022, the American technology startup Open AI launched its chatbot "ChatGPT" as a free service. It quickly gained widespread popularity, with the number of its users surpassing one million just one week after its launch. However, ChatGPT has caused chaos among university faculty members, forcing them to adapt once again to a new educational reality.

Today, the doors of artificial intelligence have been opened wide. Artificial intelligence is here, it is everywhere, and it is here to stay. In fact, we are already intertwined with artificial intelligence, from surveillance cameras, facial recognition, home systems, smartphones, robotic vacuums, and self-driving cars. For example, Netflix also uses AI to identify our preferences and provide viewing options.

In the context of higher education, artificial intelligence was unleashed without warning. Traditionally, higher education institutions were considered "stuck in the past," slow to adapt to change, particularly in responding to external influences. Specifically, artificial intelligence was described as a "disruptive force for higher education." In such a context, there are usually two sides. On the one hand, there are the "pessimists," who have a critical and pessimistic view of the integration of artificial intelligence into higher education, claiming that it will disrupt the teaching and learning process. On the other hand, there are the "proponents," who believe that AI will improve educational practices.

The educational situation now is similar to the entry of the Internet into the learning process, which was invented by the British physicist in the nuclear endeavors of CERN/Switzerland for the purposes of joint research for scientists in laboratories of multiple countries through a joint network of scientists in laboratories of multiple countries working together as if they were in a single laboratory and through collaborative work on the Internet, the human genome was then discovered. Thus, the Internet allowed communication between scientists through an intergalactic network, and through this experiment between physicists, the Internet became available for social and human communication.

The Internet has already reshaped education by: (1) enhancing access to information and knowledge, beyond the traditional textbook; (2) interacting daily with a torrent of information that feeds into knowledge-building databases with other shared data systems; (3) encouraging communication and collaborative learning; (4) Promoting knowledge exchange; (5) Improving research collaboration; (6) and increasing administrative efficiency, among other things. It also revolutionized distance education and online education. However, universities initially showed mixed reactions to the use of the Internet. This is due to several reasons, including: (1) security concerns related to academic and administrative data; (2) lack of familiarity among faculty members and administrative staff; (3) and the complexity and cost of the infrastructure. These reasons are again echoed in the direction of the use of artificial intelligence. Eventually, the Internet and information technology became widely accepted and integrated into university operations.

Certainly, the transition from skepticism to networking to mainstream integration highlights the challenges and opportunities that come with the introduction of innovative and transformative technologies into higher education.

MUHAMMAD IQBAL CHOUDHARY

Adnan Badran FIAS, FAAS
President, Islamic World Academy of Sciences
and President, Arab Academy of Sciences

"Professor Choudhary is a good friend of many scientists in Jordan. With Prof. Atta-ur-Rahman and Prof. Choudhary, the International Center for Chemical and Biological Sciences (ICCBS) has contributed an incubation space for junior scientists to do their advanced research utilizing the magnificent instrumentation in the research center in Karachi, Pakistan. This is why the IAS has recognized the ICCBS as a center of excellence of the South, to bridge the other centers of excellence in various regions of the South countries. I certainly believe that through science and those centers of excellence and networking between those centers, we could achieve solutions to great common problems, particularly in the field of Water, Energy, Food and Ecosphere and we could address major common problems handicapping the progress and achieving self-reliance and raising the GDP of the Islamic World."

Professor **Muhammad Iqbal Choudhary** is a globally renowned and distinguished Pakistani bioorganic and medicinal chemist, renowned for his extensive contributions to natural product chemistry and drug discovery. He currently serves as the Director of the International Center for Chemical and Biological Sciences (ICCBS) at the University of Karachi and as the Coordinator General of COMSTECH, the OIC's Ministerial Standing Committee on Scientific and Technological Cooperation.

Academic and Research Contributions

Prof. Choudhary has authored over 1,266 peer-reviewed research publications and holds 64 U.S. patents. His work has garnered more than 36,700 citations, reflecting an h-index of 80. He has supervised over 100 Ph.D. students and trained hundreds of researchers from various countries, significantly advancing scientific capacity in the developing world.

Scientific Discoveries

His notable scientific achievements include the discovery of isooxylitones A and B, potent antiepileptic compounds derived from *Delphinium denudatum*, which are currently in phase II clinical trials. He has also developed nutraceutical formulations for Parkinson's disease and identified promising anti-leishmanial and anticancer agents.

Prizes, Honours and Awards

Some of the awards and recognitions Prof. Choudhary has received include the following :

- Sheikh Zayed International TCAM Award, United Arab Emirates, 2024.
- The Outstanding Team Impact Prize, 2024.
- Mustafa Prize, for the discovery of fascinating molecules with therapeutic applications, Iran, 2021.
- Hilal-i-Imtiaz (Crescent of Excellence) Award by the President of Pakistan, 2007.
- Sitara-i-Imtiaz (Star of Excellence) Award by the President of Pakistan, 2001.
- Tamgha-i-Imtiaz (Medal of Excellence) Award by the Government of Pakistan, 1998.
- Distinguished National Professor of the Higher Education Commission of Pakistan, 2004.
- COMSTECH Award in Chemistry, 2010.
- TWAS Award, Young Scientist Award, Italy, 1994.
- Khwarizmi International Award by the President of Iran, 2006.

- Economic Cooperation Organization Award by the President of Azerbaijan, 2006.
- Senior Fulbright Award ,United States, 1997 - 1998.
- Senior Fulbright Research Fellow, University of California, 1998.
- Gold Medal of Pakistan Academy of Sciences, 1993.

Fellowships

- Fellow of the Islamic World Academy of Sciences (IAS), 2002.
- Fellow of Pakistan Academy of Sciences, 2003.
- Fellow of Third World Academy of Sciences, 2003.

Global Engagement

Prof. Choudhary has served as a visiting professor at numerous international institutions, such as Cornell University, Purdue University, and the University of Rhode Island, fostering global scientific collaboration.

Prof. Choudhary with Prof. Adnan Badran, IAS President at the 24th IAS Conference in Karachi, Pakistan (2023).

Prof. Choudhary receiving the Mustafa Prize Award (2021).

Prof. Choudhary awarded the Sheikh Zayed International Traditional Complemtary and Alternative Medicine (TCAM) in the discipline of Traditional Herbal Medicine under the Academic category (2024).

Prof. Choudhary (left) and Prof Dr Sammer Yousuf receive the "Outstanding Team Impact Prize" from the UK's Medical Research Council (2024).

Prof. Choudhary Awarded Honorary Professor Title by Eurasian National University by the Rector of L.N. Gumilyov Eurasian National University (ENU) in Astana, Kazakhstan (2024).

FLUORESCENCE METHODS IN MOLECULAR AND CELL BIOLOGY*

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Abstract

Science comes with price. And with the inherent increase in research cost and technologies, scientists are continuously seeking for alternate research methodologies that are inexpensive, simple, and fast. Henceforth, fluorescence spectroscopy and microscopy offer various techniques with widespread benefits. This chapter provides an overview of the three main fluorescence tools used in molecular and cellular biology research study techniques, the theories behind them, and examples of their applications in the biological field. These are Förster (Fluorescence) resonance energy transfer (FRET), fluorescence correlation spectroscopy (FCS), and fluorescence recovery after photobleaching (FRAP).

Keywords: Fluorescence · Förster resonance energy transfer (FRET) · Fluorescence correlation spectroscopy (FCS) · Fluorescence recovery after photobleaching (FRAP)

Introduction

Fluorescence has been used as an indispensable technique in biology and medical sciences due to its simplicity, low cost, and high sensitivity and specificity, as compared to other analytical methods. In 1852, the British scientist Sir George G. Stokes was the first to describe fluorescence, when he detected that mineral fluorite converted ultra-violet light into visible red light of longer wavelength. In other words, fluorescence occurs when a molecule receiving energy from a photon is emitted as a photon of lower energy. This emission continuously occurs at an extended wave-length than that of the excitation light. According to Jablonski diagram (Fig.1), an electron that is boosted to a higher energy singlet level, usually the first excited state, will dissipate its energy as a photon to reach a lower vibrational plane of the ground electronic state (Slesser et al., 2011).

* *Link to the whole publication: https://link.springer.com/chapter/10.1007/978-981-96-2088-3_8*

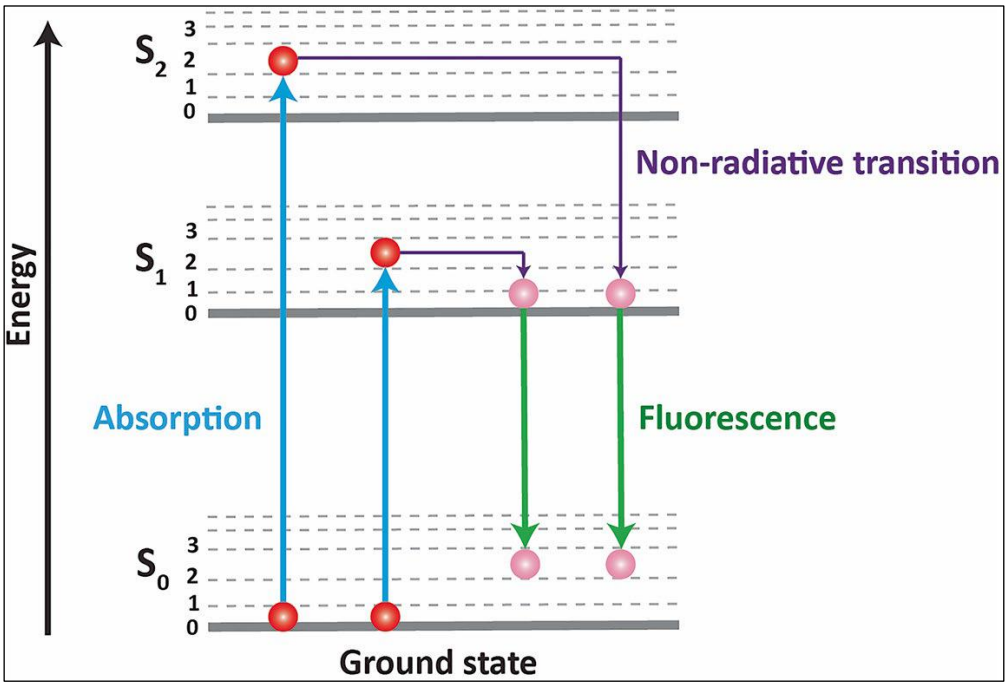

Fig. 1 Jablonski diagram showing the absorption and emission of light during fluorescence. When a complex absorbs energy, electrons move from the ground state to the excited state (brown arrow). These electrons then move to an excited state of lower energy (red arrows). The energy here might be lost by nonradiative routes, eventually in the form of heat. Light is emitted when the electrons drop to the ground state (green arrows). This effect, which is characterized by a radiative transition, is called fluorescence. The emitted light is of lower energy than the exciting light and therefore has longer wavelength.

In fluorescence microscopy, a compound absorbs light at a particular wavelength and emits light (fluoresces) at a greater wavelength, with nothing else in the background, emitting light at this latter wavelength. Furthermore, fluorescence spectroscopy helps in getting information on how much a particular wavelength of light gets absorbed by a compound and is a direct measure of the concentration and nature of that compound in a sample in addition to giving insights into its molecular dynamics. Overall, it is the grouping of fluorescence microscopy and spectroscopy that is significant in biological research. As such, it allowed the study of the structures of proteins and nucleic acids as well as the qualitative and quantitative analyses of cellular components and molecular dynamics and processes.

Fluorescence techniques are minimally invasive, extremely sensitive, characterized by a high degree of specificity, and influenced by timescales and distances. They have been widely employed in the fields of chemistry, biology, and medicine. Examples for the applications of fluorescence are many. It has been described in the detection of marine petroleum pollutants (Steffens et al.,2011) and the diagnosis of cancer through noninvasive and fast imaging of precancerous and cancerous tissues (Woo et al., 2021). Fluorescence is also widely used in the food industry to detect microbial contaminants and assess the quality of the sample (Shaikh & O'Donnell, 2017).

This chapter describes various fluorescence models including, first, FRET, which is the Förster (fluorescence) resonance energy transfer, second, FRAP related to the fluorescence recovery after photobleaching, and finally FCS describing the fluorescence correlation spectroscopy. These are elaborated theoretically and experimentally, in addition to their uses and applications in various fields.

PHYTOCHEMICAL PROFILING, ANTIOXIDANT ACTIVITY, FOOD PRESERVATION, AND INSECTICIDAL PROPERTIES OF *ORIGANUM SYRIACUM* AND *CYMBOPOGON WINTERIANUS* EXTRACTS**

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Abstract: This study examines the phytochemical composition, antioxidant, antifungal, and insecticidal properties of *Origanum syriacum* (Syrian oregano plant) and *Cymbopogon winterianus* (Java citronella plant) extracts. Their potential applications in food preservation and pest control are explored based on their bioactive properties. The phytochemical screening indicated a rich presence of secondary metabolites in the extract. The hydrodistillation of plant leaves resulted in an extraction yield of 4.3% Syrian oregano essential oil. The major component of the essential oil was carvacrol (79.30%). The Syrian oregano ethanolic extract contained 110.674 ± 1.842 mg GAE/g total phenols and 52.57 ± 0.086 mg RE/g total flavonoids, and exhibited a high antioxidant activity with a half-maximal inhibitory concentration (IC50) equal to 168.28 µg/mL. Flatbread was prepared with additions of Syrian oregano and Java citronella powders, followed by analysis of moisture content, visual appearance, and sensory characteristics. The results showed that the powders of Syrian oregano and Java citronella have promising food preservative effects. These findings were supported by a significant decrease in fungal growth in several samples and a shelf life extension of one day. The inclusion of a 2% mixture of Syrian oregano and Java citronella powder in the flatbread resulted in the sample receiving the highest overall acceptability mark from consumers, while also extending its shelf life. To assess the insecticidal activity, weevils (Sitophilus granarius L.) were exposed to Syrian oregano and Java citronella essential oils. The insecticidal activity was at its peak when Syrian oregano and Java citronella essential oils were combined resulting in 7% lethal dose (LD50) towards grain weevils. Future research should focus on optimizing extraction methods, evaluating long-term storage effects, and assessing the broader applicability of these extracts in various food products and agricultural settings.

Keywords: Syrian oregano; Java citronella; antioxidant activity; food preservative; flatbread; insecticide

** *Link to the whole publication: https://www.mdpi.com/2304-8158/14/8/1347*

PHILANTHROPIC HUBS FOR THE ADVANCEMENT OF SCIENCE

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Establishing charitable institutions for the advancement of science requires a well-thought-out strategy that integrates philanthropy, educational initiatives, and scientific research. The creation of such centers or institutions, particularly in developing countries, plays a vital role in building scientific capacity for sustainable development.
Here is a proposed framework for establishing such institutions:

1. Vision and Mission Definition:

- **Purpose:** Clearly define the core mission of the institute, focusing on promoting scientific research, education, and innovation. For example, the mission could be to "advance scientific knowledge in fields such as medicine, technology, and environmental sciences," "support underfunded researchers and students," or "foster fundamental and basic science for groundbreaking discoveries".
- **Goals:** Establish measurable objectives, such as creating research centers, providing scholarships, organizing public lectures, and fostering international collaborations.

2. Securing Funding:

- **Endowment Fund:** Establish an endowment fund, where donations from wealthy individuals, corporations, or foundations are invested, and the returns are used to fund the institute's activities.
- **Crowdfunding:** For smaller-scale projects, consider crowdfunding platforms to gather contributions from a wide audience interested in science advancement.
- **Government Support:** Seek government grants or partnerships for research in specific scientific fields.
- **Corporate Partnerships:** Collaborate with businesses that may benefit from scientific advancements. This can include pharmaceutical companies, tech firms, and energy companies.

3. Infrastructure and Facilities:

- **Educational Facilities:** Build state-of-the-art lecture halls, classrooms, and laboratories for scientific studies and research development.
- **Research Centers:** Establish specialized research centers focused on key areas such as biotechnology, environmental sciences, artificial intelligence or national labs.
- **Libraries and Data Centers:** Create resource-rich libraries with access to scientific journals and research publications. Set up database centers for computational research and development of data science.

4. Collaboration with Academia and Industry:

- **Academic Partnerships:** Partner with established universities and research institutions to provide access to experienced faculty, resources, and funding.

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- **Internships and Fellowships:** Offer internships and fellowships for students and researchers to conduct cutting-edge research. These can be funded through private donations or corporate sponsorships.
- **Industry Collaboration:** Foster relationships with industries in relevant fields, allowing researchers to apply their work to practical solutions. This can lead to innovations and technological advancements with real-world applications.

5. Educational Programs and Public Engagement:

- **Scholarships and Grants:** Establish scholarship programs for students pursuing degrees in scientific fields and offer research grants for promising scientists.
- **Public Awareness Campaigns:** Run educational campaigns to raise awareness of the importance of science in solving global challenges (e.g., climate change, health, technology). This is very important to establish journals or newsletters based on scientific popularization.
- **Workshops & Seminars:** Organize public lectures, workshops, and seminars where experts can share their knowledge and inspire future generations of scientists.
- **Online Platforms:** Develop online platforms to offer virtual courses, webinars, and public resources to make scientific knowledge free accessible to all.

6. Governance and Accountability:

- **Transparent Governance:** Establish a clear governance structure with independent boards of trustees, advisory councils, and scientific committees to oversee the institute's activities.
- **Monitoring and Evaluation:** Regularly assess the impact of the institute's work through independent reviews, ensuring that funds are being used effectively for scientific advancement.

7. Sustainability and Long-Term Impact:

- **Sustainable Practices:** Ensure that the institute operates with environmentally sustainable practices and seeks long-term viability through continuous endowment growth and innovative funding models.
- **Global Outreach:** Consider setting up satellite institutes or partnerships with international organizations to expand the institute's reach globally.
- **Impact on Society:** Continuously evaluate the social and scientific impact of the institute's work, ensuring that it addresses pressing global issues and contributes to the broader good.

8. Proposed Steps to Begin:

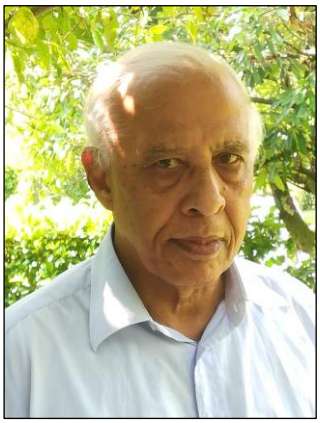
- **Form a Core Team:** Gather a team of scientists, educators, philanthropists, and community leaders to develop the vision, structure, and funding strategies for the institution.
- **Initial Fundraising:** Launch initial fundraising campaigns, focusing on wealthy philanthropists, corporations, and international foundations.
- **Select Location and Infrastructure Development:** Choose a strategic location for the institute (possibly near universities or in regions with scientific potential), and start building the necessary infrastructure.
- **Pilot Programs:** Start with pilot programs in education or research and scale them up as resources and funds grow.

Conclusion:

Academies of science in Islamic countries need to develop such a proposal and present it to non-governmental organizations for implementation and training. In this program, the role of distinguished scientists is crucial. For the successful execution of this program, it is essential for scientists to engage in dialogue with policymakers to establish the foundational frameworks for creating philanthropic hubs that advance science at the national, regional, and international levels. It is proposed that a gathering of academies of sciences from Islamic countries, supported by the Islamic World Academy of Sciences, be organized under the theme "Permanent Secretariat for the Establishment of Philanthropic Centers for the Advancement of Science," and decisions be made regarding this important strategic issue.

PHENOMENON OF COMPLEXITY IN NATURE

Mohammed Asghar[^] *FIAS*



Abstract

This text defines the phenomenon of complexity in Nature and presents some physical cases, where this complexity is transformed momentarily into a collective ordered state.

1. Introduction

A complex system is a system composed of many components which may interact with each other. Examples of complex systems are Earth's global climate, organisms, the human brain, infrastructure such as power grid, transportation or communication systems, complex software and electronic systems, social and economic organizations like cities, an ecosystem, a living cell, and, ultimately, for some authors, the entire universe (1).
There are four known forces of Nature: gravity, electromagnetism (EM), strong nuclear and weak nuclear.

2. Cases where complexity is transformed into a collective ordered state

a. Dynamics of migratory flocks of birds

Although these forces are relatively simple, here, the EM force seems to control and coherently direct the dynamics of migratory flocks of birds moving annually from north to south and from south to north. It seems the beaks of the migratory birds contain magnetic elements that line up with the Earth's magnetic field and guide the complex flock in an orderly manner along the Earth's magnetic field lines.

b. Blinking in sync of a complex flock of fireflies

Thousands of fireflies in a complex flock start simultaneously blinking (Figure 1) without any apparent conductor to control and to lead them to a collective behavior implying that a complex system of high disorder or high entropy is instantaneously transformed into a simple collective orderly one of low entropy. There must be some internal mechanism in the complex flock to trigger its simultaneous blinking of its individual fireflies.

Figure 1. Simultaneous blinking of individual fireflies in a complex flock of fireflies (1).

c. Different instantaneous shapes of murmuration of complex flocks of starlings

Complex flocks of hundred, sometimes thousands of flying starlings execute different compact collective shapes in the space called the murmuration presented in Figures 2, 3 and 4. Here again there must be some internal mechanism in the flock to trigger these compact collective shapes. This triggering may be due to the EM force and here, one possibility may be that the "leader" of the flock emits a signal that initiates the execution of murmuration through individual starlings of the flock. The same argument may be relevant for the firefly collective blinking treated above.

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Figure 2.

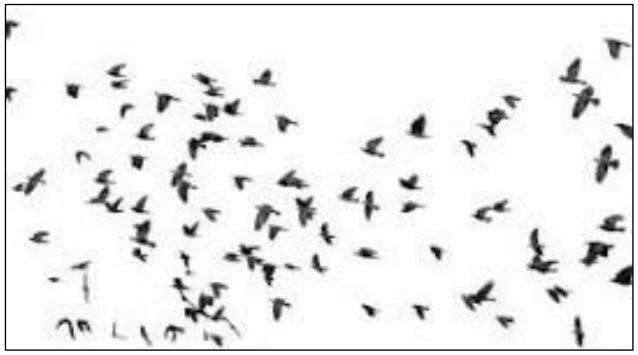

Figure 3.

Figure 4.

Figures 2, 3, and 4 depict different shapes of murmurations, where hundreds, sometimes thousands, of starlings fly in swooping, intricately coordinated patterns through space (1).

d. Shoals of fish in sea and murmuration in water

Shoals of fish in sea are observed executing murmuration in water, Figure 5.

Figure 5. Shoal of fish in sea executing murmuration (1).

3. Conclusions

This text defines the phenomenon of complexity in Nature along with some physical cases, where the complexity is transformed momentarily into collective ordered states.

References

1. Courtesy Google and Wikipedia.

6TH MEETING OF THE STEERING COMMITTEE FOR OIC STI AGENDA

22 – 24 April 2025
Islamabad - Pakistan

Zabta Khan Shinwari FIAS
Vice President, Islamic World Academy of Sciences (IAS)

The 6th Meeting of the Steering Committee for the Organisation of Islamic Cooperation (OIC) Science, Technology, and Innovation (STI) Agenda 2026 convened from April 22-24, 2025. The event brought together esteemed representatives from OIC member states, scientific institutions, and policy experts to assess progress and strategize the next phase of implementation for the STI Agenda 2026.

Representing the **Islamic World Academy of Sciences (IAS)** on behalf of the President, Prof. Adnan Badran, and as its Vice President, Prof. Zabta Khan Shinwari delivered a compelling presentation titled **"Empowering the Islamic World Through Science, Technology, and Innovation."** His address underscored the critical role of STI in fostering economic resilience, sustainable development, and technological sovereignty among OIC nations.

Key Highlights of the Presentation:

- **Strengthening Scientific Collaboration:** Adnan Badran and Zabta Shinwari emphasized the need for enhanced cooperation among OIC member states through joint research initiatives, exchange programs, and shared technological resources.
- **Investing in Research and Development:** They highlighted the significance of increasing investments in scientific research, particularly in areas such as biotechnology, artificial intelligence, and renewable energy.
- **Capacity Building and Human Capital Development:** The presentation called for greater focus on nurturing young scientists, fostering STEM education, and equipping researchers with advanced skills.
- **Bridging the Innovation Gap:** They proposed strategic policies to bridge the divide between research output and industry applications, ensuring scientific advancements translate into socio-economic benefits.
- **Biosecurity and Ethical Science:** Addressing contemporary challenges, he stressed the importance of biosecurity frameworks and ethical scientific practices to safeguard research integrity across OIC nations.

The presentation was well-received, sparking meaningful discussions on the future of STI policy in the Islamic world. Delegates acknowledged the pivotal role of platforms like the IAS in advocating for science-driven progress and fostering sustainable innovation ecosystems.

Outcomes of the Meeting:

- Commitment to **expanding funding mechanisms** for STI projects across OIC member states.
- Agreement on **enhancing collaboration with international organizations** to facilitate technology transfer and capacity-building initiatives.
- Formation of a **task force** to accelerate the implementation of key STI priorities leading up to 2026.
- Renewed emphasis on **leveraging digital transformation and AI** to address global and regional challenges.

The meeting concluded on a high note, reinforcing the collective commitment of OIC nations to harnessing science, technology, and innovation as pillars of progress and self-reliance.

IAS remains dedicated to its mission of advancing scientific excellence and will continue to actively contribute to shaping the future of STI policies within the OIC framework.

JACKIE YING FIAS NAMED IN THE FORBES 50 OVER 50 GLOBAL 2025 LIST

This prestigious recognition celebrates influential women who have demonstrated exceptional leadership, innovation, and global impact in their fields.

Taiwan-born Jackie Ying is one of the scientists who helped define Nanoscience and Nanotechnology, having contributed more than 400 research papers and 200 patents to the field. After completing a Ph.D. at Princeton, she joined the Massachusetts Institute of Technology in 1992 as a professor of Chemical Engineering. In 2003, she returned to Singapore, where she was raised, to establish and lead the Institute of Bioengineering and Nanotechnology, lifting it from obscurity to producing more than 650 patents and over 1,330 research papers. She is now the Executive Director of Research and Innovation at King Faisal Specialist Hospital & Research Centre in Riyadh.

The Forbes 50 Over 50 Global 2025 list celebrates individuals whose impact transcends borders. Dr. Ying's pioneering efforts place her among the world's most influential scientific leaders, reinforcing KFSHRC's dedication to fostering global research talent and driving healthcare innovation.

Sources:
https://www.forbes.com/sites/maggiemcgrath/2025/01/23/50-over-50-global-2025/
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ADDRESSING ETHICAL CHALLENGES IN THE DIGITAL TRANSFORMATION OF MEDIA: A UNIFIED OIC RESPONSE

Zabta Shinwari, Vice President, IAS &
Adnan Badran, President, IAS

As digital transformation reshapes the global media landscape, ethical challenges have emerged at an unprecedented scale. From misinformation to deepfakes, and data privacy to algorithmic bias, the speed and scale of digital content distribution raise serious questions about integrity, accountability, and inclusiveness. Recognizing the importance of a collective response, the Islamic World Academy of Sciences (IAS), in collaboration with key OIC organizations including COMSTECH and the Islamic Development Bank (IsDB), is prepared to lead a unified initiative to tackle these pressing issues.

Key Ethical Issues in Focus:

1. **Misinformation and Fake News:** The unchecked spread of false or misleading information is not only a threat to public health and security, but also undermines trust in legitimate journalism and institutions.
2. **Data Privacy and Surveillance:** The commodification of user data without proper transparency or consent raises serious ethical concerns, particularly in media platforms that rely heavily on behavioral tracking.
3. **Algorithmic Bias and Filter Bubbles:** Algorithm-driven content curation often reinforces existing biases ,limiting exposure to diverse perspectives and deepening societal polarization.
4. **Manipulation and Deepfakes:** The emergence of AI-generated media, such as deepfakes, presents risks of political and personal manipulation, requiring both ethical and technological safeguards.
5. **Freedom of Speech vs. Censorship:** Platforms are under pressure to regulate harmful content while preserving the right to free expression - a delicate ethical balance that must be managed wisely.
6. **Digital Divide**: Unequal access to digital infrastructure continues to widen gaps in education, civic engagement, and access to accurate information.
7. **Commercialization and Clickbait**: The pursuit of ad revenue often incentivizes sensationalism, compromising journalistic standards and eroding public trust.

IAS and OIC Collaboration:

Understanding the complex interplay of these issues, IAS - with support from COMSTECH, IsDB, and other partner institutions across the OIC region - is formulating a multidisciplinary approach. This includes:

- Capacity building for ethical digital journalism and content verification.
- Promoting research on AI ethics, data governance, and digital inclusiveness.
- Establishing an observatory on digital ethics and media trends in the Muslim world.
- Hosting expert dialogues and training programs on media responsibility in the age of AI.

We firmly believe that ethical governance in digital media is not just a technological or regulatory issue - it is a moral imperative. With our collective strength and shared values, we are ready to take the lead in shaping a responsible, inclusive, and truthful digital future for the OIC and beyond.

ANWAR IBRAHIM'S AI VISION: LEADING MALAYSIA AND THE ISLAMIC WORLD INTO A JUST, DIGITAL FUTURE

Shah Nor bin Basri FIAS
Professor, Universiti Muhammadiyah Malaysia

Malaysia is undergoing a profound transformation—technological, economic, and philosophical - under the leadership of Prime Minister Datuk Seri Anwar Ibrahim. At the heart of this evolution lies artificial intelligence (AI), not merely as a tool of efficiency, but as a spiritual and ethical catalyst for a greater vision of national and even civilizational progress. Through the Malaysia Madani framework, Anwar is not only redefining Malaysia's future-he is also offering a blueprint for the broader Islamic world.

More than a policy slogan, *Malaysia Madani* embodies a civilizational philosophy deeply rooted in Islamic thought. Grounded in values such as sustainability (*kelestarian*), well-being (*kesejahteraan*), creativity (*kreativiti*), respect (*hormat*), trust (*amanah*), and compassion (*ihsan*), it is both a governance framework and a moral compass. Anwar Ibrahim, a longtime Islamic intellectual and reformist, is leveraging these values to transform Malaysia into a high-income, AI-driven nation-while positioning it as a model for the wider Muslim world.

Anwar's leadership is uniquely suited to this moment. With a legacy that bridges Islamic political thought and global democratic ideals, he envisions a digital future that does not abandon faith, ethics, or community. His approach harmonizes *maqasid al-shariah*-the higher objectives of Islamic law, such as justice, welfare, and dignity - with cutting-edge technology and inclusive economic development.

In Malaysia, this vision is already materializing. AI is being deployed across sectors not only to increase productivity and attract investment, but also to ensure dignity, reduce inequality, and promote sustainable progress. Green technology and smart farming are empowering rural communities, especially smallholder Muslim farmers, while preserving the earth in accordance with Islamic teachings on *khalifah* (stewardship) and *mizan* (balance).

In healthcare and education, AI-powered systems are transforming rural access, enhancing dignity and opportunity for all. Telemedicine, intelligent diagnostics, and AI-enabled learning platforms are closing the urban-rural divide-upholding the prophetic ethic of compassion and upliftment for the marginalized.

Malaysia's AI strategy is not a blind embrace of technology, but a conscious moral undertaking. The creation of the National Artificial Intelligence Office (NAIO) ensures that AI development aligns with Islamic values of *amanah* (trust) and transparency. It is a governance model of ethical digital leadership - distinct from both authoritarian technocracy and unregulated capitalism.

But Anwar Ibrahim's vision does not stop at Malaysia's borders. As one of the most respected Muslim leaders in the world, Anwar has the potential to guide the Islamic world into a digital renaissance-anchored in ethics, justice, and technological excellence. While many Muslim-majority nations wrestle with the dilemma of modernization versus tradition, Anwar offers a third path: a digital transformation that is not only economically competitive but spiritually conscious.

Malaysia is already investing in technologies aligned with Islamic values - halal AI verification systems, Islamic fintech, blockchain-based zakat distribution, and multilingual AI platforms that preserve Islamic cultural diversity. These innovations, born in Malaysia, can serve as models for the broader *ummah*, offering the Muslim world a chance to lead in the global digital economy - not from the margins, but from the center.

By 2040, Malaysia aims to become a regional-and perhaps global-hub for AI development rooted in Islamic ethics. Anwar's leadership may yet inspire a new generation of Muslim nations to embrace technology without sacrificing identity. In this vision, the Islamic world does not remain a passive consumer of Western technologies - it becomes a creator, a leader, and a moral compass in shaping the future of AI.

Anwar Ibrahim's Madani vision is thus more than national policy - it is a civilizational call. It demonstrates that faith and technology, tradition and innovation, can walk hand in hand toward a future that is both smart and just.

With Malaysia as the prototype and AI as the transformative tool, the dream of a digitally empowered, ethically guided Islamic world is no longer distant. Under Anwar Ibrahim's leadership, that future is not only possible - it is already beginning.

COMMENT FROM PROF. ADNAN BADRAN, PRESIDENT, IAS, ON THE ARTICLE ON ANWAR IBRAHIM

I have known Prime Minister Anwar Ibrahim since I was the Minister of Education representing Jordan at the General Conference of UNESCO in Paris in 1989. Mr. Ibrahim was elected as President of the conference, and I was elected as Vice President of the conference. Therefore, we were meeting frequently to discuss matters related to the speakers of the conference and to enact issues submitted by the executive board at UNESCO.

He was a devoted person to international affairs and faithful to his duty. I admire him as a humble person devoted to the great ideas of equality, liberty, peace and building a friendship among countries of the Islamic World and other countries abroad.

PRESENTATION SPOTLIGHT: DR. ZABTA KHAN SHINWARI ON "MICROBIAL BIOSECURITY: HARNESSING BENEFICIAL MICROBES WHILE MITIGATING RISKS"

In a thought-provoking and deeply insightful presentation, **Dr. Zabta Khan Shinwari**, Vice President, IAS and Vice Chancellor of FUUAST and UNESCO Laureate, addressed an audience of scholars, researchers, and students on the topic: **"Microbial Biosecurity: Harnessing Beneficial Microbes While Mitigating Risks."**

This talk took place during the 15th biennial International Conference of the Pakistan Society for Microbiology, under the theme **"Microbes for all: Insights, Impacts and Innovations",** which was held during 15-18 April 2025 in Karachi, Pakistan. The conference was in collaboration with the Department of Microbiology, Quaid-i-Azam University, Islamabad, Pakistan.

The talk highlighted the dual nature of microbes—both as vital allies in sustainable development and potential agents of bio-threats—and emphasized the need for a proactive and ethical approach to microbial management.

Dr. Shinwari opened by shedding light on the **immense role beneficial microbes play in agriculture, health, and environmental sustainability**, from nitrogen-fixing bacteria and biopesticides to probiotics and bio-remediation agents. He underscored how **strategically managing microbial resources** can enhance food security, reduce chemical dependency, and promote climate-resilient systems—key priorities in both national and global policy frameworks.
However, alongside this promise lies the **growing challenge of microbial misuse**. With advances in biotechnology, **dual-use concerns**—where the same technology can be used for beneficial or harmful purposes—pose **biosecurity and biosafety risks**. Dr. Shinwari stressed the urgent need to raise awareness, especially in developing countries, about responsible research practices and regulatory gaps that could be exploited for bioterrorism or accidental outbreaks.

Key points from his presentation included:

- **Promoting Bio-innovation:** Leveraging indigenous microbial resources for agriculture and industry.
- **Strengthening Biosecurity Frameworks:** Developing guidelines and oversight for laboratories handling pathogenic strains.
- **Capacity Building:** Training scientists, students, and policy-makers in bioethics, dual-use education, and responsible research.
- **International Cooperation:** Aligning with global treaties like the **Biological Weapons Convention (BWC)** to safeguard peaceful science.

The session concluded with a lively Q&A where Dr. Shinwari encouraged students to **engage in interdisciplinary research** and emphasized the importance of **local and international partnerships** to tackle biosecurity challenges holistically.

This presentation forms part of FUUAST's ongoing efforts to **mainstream biosafety and biosecurity education**, and further reflects Dr. Shinwari's long-standing commitment to **building a resilient, knowledge-based society rooted in ethical science**.

THE LATE
PROF. AHMAD SHAMSUL ISLAM
(BANGLADESH)

(1924 - 2025)

It is with a sense of sadness and sorrow that the Secretariat of the Islamic World Academy of Sciences (IAS), announces the passing away of the eminent scientist **Prof Ahmad Shamsul Islam (Bangladesh).**

Prof. Ahmad Shamsul Islam was born in 1924. He studied Botany, Plant Breeding and Genetics and got his BSc (1945) and MSc (1947) at Presidency College, Calcutta, PhD (1954) from Manchester University which awarded him a prize for outstanding work on "breeding of seedless strawberries."

His post-doctoral activity covered research on "Embryo Culture of Jute" (1961-1962) at Cornell University, USA; on "Uptake of Radioactive Amino-Acids" (1962-1963) at California University (USA); on "Tissue Culture of Jute"; and "Tissue Culture of Orchid" at Nottingham University, UK.

He conducted research work in Third World countries on genetics and breeding of food and cash crop; chromosome breakage in mistletoe, plant breeding and tissue culture, and established several courses and laboratories.

He was the Founding Editor of Sind University Research Journal; Pakistan Journal of Botany; Science Series of Dhaka University, Dar-es-Salam University Scientific Research Journal; and Bangladesh Journal of Botany.

He published over 100 papers and two textbooks. He also wrote a book entitled, "Character building through the teaching of the Qur'an."Professor Islam taught botany for over 40 years at the University of Dhaka and other institutions around the world. He also served as a supernumerary professor at Dhaka University.

In his research career, he achieved a major milestone by successfully hybridizing two commercial varieties of jute for the first time. He also pioneered tissue culture and micropropagation techniques for jute.

To produce virus-free plants from local orchids and potatoes, he developed and applied various tissue culture methods, including somaclonal variation, meristem culture, and micropropagation.

Among his notable awards are the President's Gold Medal in Agriculture (1984), Ekushey Padak in Education (1986), BAS Gold Medal in Biology (1987), Bangladesh Botanical Association Gold Medal (1997), and the GNOBB Lifetime Achievement Award (2017) and an Honorary DSc from India.

He was a Fellow of the Bangladesh Academy of Sciences, past Honorary Member of the American Institute of Biological Science, National Correspondent for the International Association for Plant Tissue Culture, Member of the Indian and the Japanese Societies of Genetic and Plant Breeding, and past Secretary General of Bangladesh Association for Advancement of Science.

Prof. Islam was a Founding Fellow of the Islamic World Academy of Sciences (1986). He had been lecturing at the University of Texas (Austin) for the past few years.

Areas of Research

Genetics, Plant Breeding and Tissue Culture in Jute, Cotton, Rice, Millet, Peanut, Orchid and Potato.

انّا للّٰه وانّا اليه رٰجعون

Innalillahi wa Inna ilaihi Rojiun

Indeed we belong to Allah and indeed to him we will return

PICKS OF THE CHIEF EDITOR

THE 10 TOP TECHNICAL AND BUSINESS TRENDS OF 2024

WHAT'S AHEAD FOR AI, BIOTECH, AND MORE *

It's informative to consider what the top technical and business trends are likely to be. This helps startup founders, corporate executives, and investors know which trends might impact their business decisions. let's look at 10 emerging trends for 2024.

Trend 1: Generative A.I.

It is expected that generative artificial intelligence (A.I.) will be one of the most interesting technological innovations in 2024.

Recent developments in this sector include OpenAI's releasing ChatGPT in late 2022. Strong earnings by Nvidia triggered a major surge in investor interest in generative A.I., and the company's stock price rose dramatically. In 2023, tech corporations focused on generative A.I. have outperformed the broad market substantially.

It is recommend that we keep a close eye on generative A.I. Technology breakthroughs have the potential to bring sweeping changes to the economy.

Trend 2: Sustainable Technology

Another key trend in 2024 was the next evolution of sustainable technology. This includes clean technology, green technology, and climate technology.

Looking at sustainable development goals in 2024, sectors expected to be at the forefront include garbage recycling and upcycling, electric vehicles, sustainable home and business construction, green and clean energy, green agricultural technology, and carbon capture.

Trend 3: Cybersecurity

Research suggests that one in two businesses has been the victim of a successful cyberattack in the past three years. Cybersecurity Ventures expects the cost of cybercrime to reach $10.5 trillion by 2025, indicating the extent of this problem for businesses.

In the face of this fast-growing threat, technology solutions designed to bolster defenses and provide us with a fighting chance are high on every organization's must-have list. Cyberthreats are becoming more sophisticated, so competition to bring new solutions leveraging breakthrough technologies like A.I. to market is intensifying.

It is expected that cyberattacks will likely become more intricate, employing A.I. to sidestep customary defensive strategies. The proliferation of connected devices is expected to exacerbate security concerns, given their inherent vulnerabilities. Experts anticipate that generative A.I. will play a key role in this changing landscape.

We will likely see the emergence of stringent cybersecurity regulations across the globe. As governments and major entities intervene more than ever, companies will need to navigate a complex maze of rules in their efforts to bolster their defense mechanisms. 2024 will be a year in which technological advancements in cybersecurity will intertwine deeply with regulatory, human, and A.I.-driven perspectives.

* *Source: https://www.inc.com/anis-uzzaman/the-10-top-technical-business-trends-of-2024.html*

Automated threat management, cloud security, zero-trust architecture, identity management, behavioral analytics, cyber governance, endpoint protection, cybersecurity- as -a- service, blockchain security, and cybersecurity mesh will remain top cybersecurity innovations in 2024.

Trend 4: Quantum Computing

Quantum computing dominated large-scale computing in 2024. It will find applications in compute-heavy fields such as artificial intelligence, cloud computing, cryptography, drug discovery, genome sequencing, meteorology, material science, optimization of complex systems, and financial modeling.

Quantum computing has long been the stuff of science fiction, and in 2024 it is set to become a reality. This emerging technology has the potential to transform computing power as we know it, enabling us to solve complex problems at a previously unimaginable speed and scale. According to Fortune Business Insights, the quantum computing market is projected to grow from $928.8 million in 2023 to $6.5 billion by 2030, with a CAGR of 32.1 percent during the forecast period.

Trend 5: Automation

Looking at 2024, industrial automation will continue to grow and innovate, driven by the convergence of the internet of things (IoT), edge computing, A.I., machine learning, and 5G/6G. We can expect more predictive maintenance, real-time monitoring, interconnected shop floors, automated inventory control, real-time data analysis for logistics optimization, and demand forecasting with A.I. algorithms. Artificial intelligence, robotics, optimized logistics, streamlined transportation, and workflow automation will reduce timelines as well as costs. Innovations in supply chain management technologies, such as paperless transportation documents, will accelerate the flow of goods and reduce costs.

These technologies will enable industrial companies to achieve higher levels of performance, efficiency, and competitiveness in the global market.

Trend 6: Web 3.0 and the Metaverse

In 2024, Web 3.0 will gain further traction, opening avenues for new technologies, specifically the metaverse and other virtual worlds built for gaming, social interactions, and business. Web 3.0 will push for the rapid adoption of the metaverse across businesses as users seek a more personalized and rewarding online experience.

In 2024, the digital frontiers of the metaverse, virtual reality (VR), and augmented reality (AR) are poised for transformative advances. Propelled by affordable, advanced headsets, the VR and AR sectors are set to expand; meanwhile, the metaverse, a collective virtual shared space, is anticipated to redefine digital interactions.

From education to entertainment, immersive experiences will revolutionize learning and gameplay. Meanwhile, AR will innovate sectors like health care with precision diagnostics and retail with virtual showrooms. Generative A.I. is likely to enable tailor-made content creation within these realms. The convergence of VR, AR, the metaverse, and generative A.I. is set to blur the lines between the digital and physical, creating a future dictated only by our imagination.

Trend 7: Autonomous Vehicles

Autonomous vehicles, one of the most exciting emerging technologies, are set to transform transportation in 2024 further. By eliminating the need for human drivers, autonomous vehicles have the potential to improve safety, reduce traffic congestion, and increase mobility for millions of people.

In 2024, it was expected that autonomous vehicles advance further in sensor technology, machine learning, and connectivity. This will enable the vehicles to navigate complex environments and interact with other vehicles and infrastructure in real-time, paving the way for a future where driving is no longer the norm.

One of the most promising applications of autonomous vehicles is in the field of mobility services. By providing on-demand transportation that is safe, efficient, and cost-effective, autonomous vehicles could help improve accessibility and mobility for people who are currently underserved by traditional transportation systems.

Companies leading global autonomous driving technology include Tesla, Rivian, Zoox, May Mobility, Momenta, Pony.ai, General Motors, Nvidia, and Waymo (acquired by Google). According to Global Data's recent prediction,

the autonomous vehicle (AV) industry will not develop a fully self-driving car until 2035. However, we already see that GM-backed Cruise and Google-run Waymo have released fully automated robo-taxi fleets in San Francisco and in other U.S. states. I expect that 2024 will be a good year to watch the progress in this area.

Trend 8: 5G and 6G Network Technology Development

It is expected that 5G and 6G network technology will evolve and change the business landscape. A key factor is that the IEEE's amended standard is expected in May 2024. It will provide device manufacturers with design specifications to govern interoperability and performance. It is important to note that 6G is not yet a functioning technology. While some vendors are investing in the next-generation wireless standard, industry specifications for 6G-enabled products remain years away.

But 5G networks are enabling faster and more reliable connectivity. These are the latest generation of wireless technology, offering faster speeds, lower latency, and more reliable connectivity than in the past. With the ability to handle massive amounts of data at lightning-fast speeds, 5G networks have the potential to revolutionize the way we use technology.

We can expect to see 5G networks become even more prevalent in 2024, with advancements in areas such as edge computing, the internet of things (IoT), and virtual and augmented reality. This enables 5G networks to become more intelligent and capable, providing faster and more responsive services to users.

One of the most promising applications of 5G networks is in the field of virtual and augmented reality. With the high-speed connectivity provided by 5G networks, users can experience immersive and interactive virtual and augmented reality environments with ease.

Trend 9: Biotechnology

Biotechnology is an emerging field that combines biology and technology to create new products and processes that improve our lives. From health care to agriculture, biotechnology has the potential to revolutionize industries and solve some of the world's biggest challenges. Biotechnology will become even more advanced, in areas such as gene editing, synthetic biology, and personalized medicine.

Several areas of biotechnology grew in 2024, including personalized medicine, gene editing and Crispr diagnostics, machine learning and A.I., stem cell technology, tissue engineering and bioprinting, big data, and drug research.

Thriving startup Strand Therapeutics is developing the first platform for creating programmable, long-acting mRNA therapeutics capable of delivering potentially curative treatments. 23andMe offers DNA analysis with easy-to-understand results, while Color is a health care delivery platform that offers cancer prevention, screening programs, and health care services.

In addition to health care, biotechnology can transform industries such as agriculture and energy by developing new crops and fuels that are more efficient and sustainable. It's clear that biotechnology is set to become an increasingly important technology trend, providing new solutions to some of the world's biggest challenges.

Trend 10: Human-Machine Interface

Many experts believe that human-machine interaction (HMI) is redefining people's relationship with technology. It's an emerging field that aims to create more intuitive and natural ways for humans to interact with technology.

By combining advances in A.I., machine learning, and robotics, HMI has the potential to transform the way we use technology and improve our daily lives. In 2024, HMI became even more advanced, in areas such as natural language processing, gesture recognition, and brain-computer interfaces. This will enable HMI to become more natural and seamless, providing more intuitive and responsive experiences for users.

JALAL AL-DIN AL-RUMI*
(1207 - 1273 AD)

Jalal al-Din Mohammad Ibn Mohammad Ibn Mohammad Ibn Hussain al-Rumi was born in 604 AH (1207/8 AD) at Balkh (now Afghanistan). His father Baha al-Din was a renowned religious scholar. Under his patronage, Rumi received his early education from Syed Burhan-al-Din. When his age was about 18 years, the family (after several migrations) finally settled at Konya (Turkey). At the age of 25, Rumi was sent to Aleppo for advanced education and later to Damascus. Rumi continued with his education till he was 40 years old, although on his father's death Rumi succeeded him as a professor in the famous Madrasa at Konya at the age of about 24 years. He received his mystical training first at the hands of Syed Burhan al-Din and later he was trained by Shams al-Din Tabrizi. He became famous for his mystical insight, his religious knowledge and as a Persian poet. He used to teach a large number of pupils at his Madrasa and also founded the famous Mawlawi Order in Tasawwuf. He died in 672 AH (1273 AD) at Konya, which subsequently became a sacred place for dancing dervishes of the Mawlawi Order.

His major contribution lies in Islamic philosophy and Tasawwuf. This was embodied largely in poetry, especially through his famous Mathnawi. This book, the largest mystical exposition in verse, discusses and offers solutions to many complicated problems in metaphysics, religion, ethics, mysticism, etc. Fundamentally, the Mathnawi highlights the various hidden aspects of Sufism and their relationship with the worldly life. For this, Rumi draws on a variety of subjects and derives numerous examples from everyday life. His main subject is the relationship between man and God on the one hand, and between man and man, on the other. He apparently believed in Pantheism and portrayed the various stages of man's evolution in his journey towards the ultimate.

Apart from the Mathnawi, he also wrote his Diwan (collection of poems) and Fih-Ma-Fih (a collection of mystical sayings). However, it is the Mathnawi itself that has largely transmitted Rumi's message. Soon after its completion, other scholars started writing detailed commentaries on it, in order to interpret its rich propositions on Tasawwuf, metaphysics and ethics. Several commentaries in different languages have been written since then.

His impact on philosophy, literature, mysticism and culture, has been so deep throughout Central Asia and most Islamic countries that almost all religious scholars, mystics, philosophers, sociologists and others have referred to his verses during all these centuries since his death. Most difficult problems in these areas seemed to have inspired most of the intellectuals in Central Asia and adjoining areas since his 95 time. Scholars like Iqbal have further developed Rumi's concepts. The Mathnawi became known as the interpretation of the Qur'an in the Pahlawi language. He is one of the few intellectuals and mystics whose views have so profoundly affected the world-view in its higher perspective in large parts of the Islamic World.

* *Source: Personalities Noble, 2nd Edition, 2000, Edited by Hakim Mohammed Said, published by IAS with permission of Hamdard Foundation Pakistan.*

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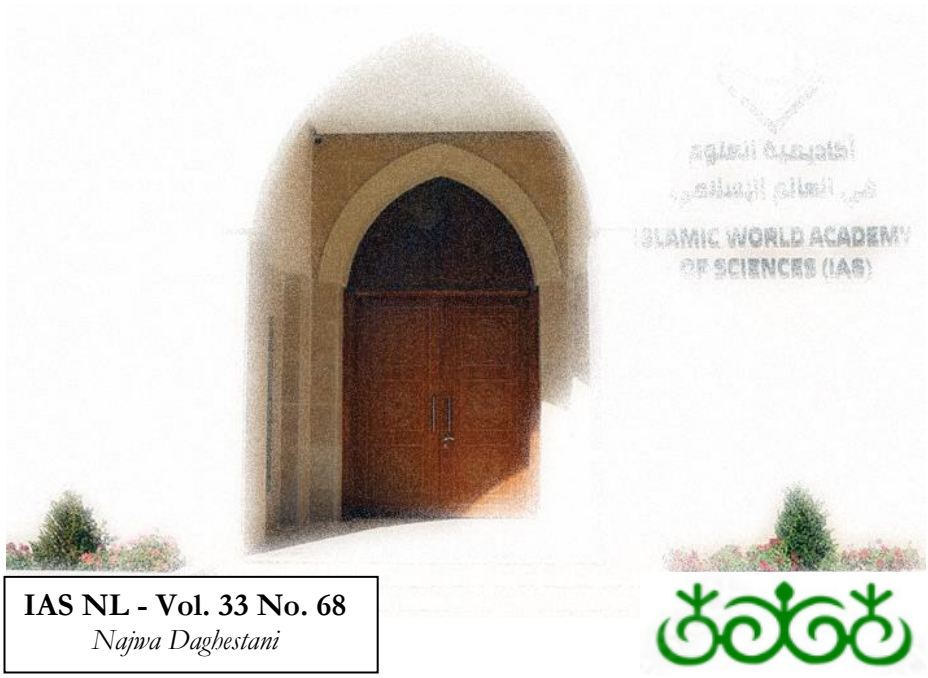

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