

**2025**

# **INP Annual International Conference Innovation and Sustainable Development**



**Cairo: June 24 – 25, 2025**

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## Introduction

The Institute of National Planning (INP) stands as one of Egypt's most prominent national think tanks, playing a pivotal role in supporting decision-makers and policy architects. This is achieved through the preparation of research, scientific reports, and policy papers that offer evidence-based solutions and innovative developmental alternatives, all contributing to the realization of Egypt's developmental objectives and the implementation of the Sustainable Development Strategy: Egypt Vision 2030. The INP fulfills this mission by adopting an approach grounded in the consolidation of scientific principles for providing solutions and alternatives based on evidence, enhancing expertise and insights, and leveraging national, regional, and international partnerships. Given that sustainable development issues are at the heart of the concerns of policymakers in Egypt and worldwide, the INP annually selects a vital theme for its annual conference, based on rigorous studies and serious discussions. This conference thus becomes an effective tool for policymakers not only in Egypt but across the Arab world as a whole. The significance of the INP's annual conference is underscored by its engagement with complex and intertwined issues that require the preparation of multiple studies and research papers to present scientific perspectives and innovative solutions to matters of public interest.

In light of rapid developments and successive crises, it has become imperative to reconsider the role of innovation as a fundamental requirement and principal driver of sustainable development, encompassing its economic, social, and environmental dimensions. Achieving sustainable development is no longer limited to the implementation of traditional policies but now fundamentally depends on the adoption and integration of innovation within planning and decision-making systems. Accordingly, this international conference explores how innovation can support good governance efforts, enhance institutional performance, and activate partnerships across various sectors. Based on this perspective, the INP has decided that this year's international annual conference will address the theme of "Innovation and Sustainable Development," serving as a genuine platform for exchanging expertise and strengthening cooperation with local, regional, and international partners. The conference will feature distinguished scientific contributions from Egyptian and international researchers, addressing issues related to assessing the status of the national innovation system in Egypt and its role in supporting sustainable development; leveraging innovation to support sustainable development; national innovative applications supporting sustainable development; and international experiences and best practices in the governance, sustainability, and efficiency of national innovation systems and their lessons for sustainable development. Today, through the Institute of National Planning (INP)'s international annual conference, we collectively review innovative visions and solutions aimed at advancing sustainable development. I am confident that the outcomes of this conference will provide a solid foundation for decision-makers not only in Egypt but throughout the entire Arab region.

**Prof. Dr. Ashraf El-Araby**

**President of INP**

## Conference Committees

| Conference High and Supervised Committee |                       |
|------------------------------------------|-----------------------|
| Prof. Dr. Ashraf El-Araby                | President of INP      |
| Prof. Dr. Khalid Attia                   | Vice President of INP |
| Prof. Dr. Khalid Zakeria Amin            | Conference Chair      |

| Conference Academic and Organizing Committee |                                                                          |
|----------------------------------------------|--------------------------------------------------------------------------|
| Prof. Dr. Alaa Zahran                        | Former President of INP and Professor, Center for Macroeconomic Policies |
| Prof. Dr. Khalid Attia                       | Vice President of INP for Research and Postgraduate Studies              |
| Prof. Dr. Khalid Zakeria Amin                | Director of Center Macroeconomic Policies                                |
| Prof. Dr. Magid Khashaba                     | Emeritus Professor, Center for Industrial Planning and Development       |
| Prof. Dr. Esraa El-Husseiny                  | Professor, Faculty of Economics and Political Science                    |
| Dr. Heba El-Baz                              | Assistant Professor, Center of Macroeconomic Policies                    |
| Dr. Yehia Hussein                            | Director, Contractual Scientific Activities Unit                         |
| Dr. Sherine Beshry                           | Assistant Professor, Center of Macroeconomic Policies                    |
| Dr. Nevin Abdel Aziz                         | Assistant Professor, Center of Macroeconomic Policies                    |
| Dr. Ali El-Baghlaty                          | Secretary General, Institute                                             |
| Dr. Dalia Ibrahim                            | Director, Technical Office of INP President                              |
| Dr. Mohamed El-Maghrabi                      | Lecturer, Center of Cultural and Social Planning                         |
| Dr. Shaimaa Azab                             | Lecturer, Center of Environmental Planning and Development               |
| Dr. Tarek Abdel Moneim                       | Lecturer, Center of International Economic Relations                     |
| Dr. Mohamed Hassanein                        | Lecturer, Center of Macroeconomic Policies                               |
| Dr. Naeem Saad Zaghloul                      | Head of Central Administration of Agreements and Conferences             |
| Ms. Amal Serour                              | Director, General Administration of Agreements and Conferences           |
| Ms. Dina Rifaat                              | INP President Office                                                     |

| Conference Agenda      |                                                                                                                                                                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Day 1                  |                                                                                                                                                                                                                                                                 |
| Tuesday: June 24, 2025 |                                                                                                                                                                                                                                                                 |
| 9:30 – 10:00 AM        | Registration                                                                                                                                                                                                                                                    |
| 10:00 – 10:45 AM       | Opening Session<br>Welcoming Remarks                                                                                                                                                                                                                            |
| Dr. Ashraf Al – Arabi  | <i>President, Institute of National Planning (INP)</i>                                                                                                                                                                                                          |
| Dr. William Emmeke     | <i>Professor, International and the Public Affairs (SIPA), Columbia University</i>                                                                                                                                                                              |
| Dr. Rania Al – Mashat  | <i>Minister, Planning, Economic Development and International Cooperation and Chairman of INP Board</i>                                                                                                                                                         |
| 11:00 – 12:30 AM       | Session 1<br>Innovation and Scientific Research: Development Dimensions and International Experiences                                                                                                                                                           |
| Chairman               | <b>Dr. Sharif Hammad</b><br><i>Former Minister of Scientific Research</i>                                                                                                                                                                                       |
| Speakers               | <ul style="list-style-type: none"> <li>Developmental and Cognitive Dimensions of Scientific Research and Innovation: Indicators and Implications<br/><i>Dr. Moataz Khorshid</i> – <i>Former Minister of Higher Education and Scientific Research</i></li> </ul> |
|                        | <ul style="list-style-type: none"> <li>International Experiences in Employing and Governing Emerging Technologies to Support Sustainable Innovation Ecosystems – <i>Dr. Maggid Khashba</i> – <i>Professor, Institute of National Planning (INP)</i></li> </ul>  |
|                        | <ul style="list-style-type: none"> <li>Business Environment Challenges to Innovation Driven Startups in Egypt (<b>Presentation</b>) – <i>Dr. Hesham Hadaka</i> – <i>Advisor to Minister of Higher Education and Scientific Research</i></li> </ul>              |
| Discussant             | <b>Dr. Walid El-Zawawy</b>                                                                                                                                                                                                                                      |

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|                 | <i>Secretary-General of the Council of Research Centers, Institutes, and Authorities, and Acting Head of the Sector for Scientific Research and Innovation Affairs at (MoHSR)</i> |
| 12:30 – 1:00 PM | Break                                                                                                                                                                             |

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| 1:00 – 3:00 PM | <b>Session 2</b><br>Green Innovation to Support Sustainable Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Chairman       | <b>Dr. Khaled Fahmy</b><br><i>Professor, Institute of National Planning and Former Minister of Environment – Executive Director of CEDARE</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Speakers       | <ul style="list-style-type: none"> <li>• The Role of Green Innovation in Achieving Sustainable Development in Egypt: An Exploratory Study – <b>Dr. Khalid Attia</b> – Vice President, Institute of National Planning for Research and Graduate Studies</li> <li>• Food Innovation in Facing Climate Change Challenges – <b>Dr. Khaled Addour</b> – Senior Researcher, National Center for Research and Development in Fisheries and Aquaculture, Algeria</li> <li>• Green Innovation in Egypt: Funding and Implementation Prospects for Sustainable Development – <b>Mr. Mohamed El – Husayni Abdel Hamid</b> – Researcher, Secretariat General of the House of Representatives</li> <li>• AI Legislation as a Tool to Stimulate Innovation in the Green Economy: A Legal Framework for Achieving Sustainable Development – <b>Counselor Ahmed Mokhtar El-Mansi</b> – Technical Office of Specialized Courts Sector – Ministry of Justice</li> </ul> |
| Discussants    | <p>- <b>Dr. Mohamed Hegazy</b> Innovation and Digital Transformation Legislation Consultant</p> <p>- <b>Dr. Nezar Samy</b>-Project Officer, Inclusive Growth and Innovation UNDP</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3:00 – 4:30 PM | <b>Session 3</b><br>Financial Technology Innovations and Sustainable Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Moderator      | <b>Dr. Ashraf Al-Arabi</b><br><i>President, Institute of National Planning</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| Speakers       | <ul style="list-style-type: none"> <li>• <b>Dr. Hala Elsaid</b><br/><i>Economic Advisor to the Egypt's President and Former Minister of Planning and Economic Development</i></li> </ul> |
|                | <ul style="list-style-type: none"> <li>• <b>Dr. Islam Azam</b><br/><i>Vice Chairman, Financial Regulatory Authority (FRA)</i></li> </ul>                                                 |
|                | <ul style="list-style-type: none"> <li>• <b>Mr. Ibrahim Sarhan</b><br/><i>Chairman and Executive Director of E – Finance for Financial and Digital Investments</i></li> </ul>            |
| 4:30 – 5:00 PM | Lunch                                                                                                                                                                                    |

| Day 2<br>Wednesday: 25 June 2025 |                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:30 – 10:00 AM                  | Registration                                                                                                                                                                                                                                                                                                    |
| 10:00 – 11:30S                   | <b>Session 4</b><br>Social Innovation and Sustainable Development                                                                                                                                                                                                                                               |
| Chairman                         | <b>Dr. Majid Othman</b><br><i>Director of the Egyptian Center for Public Opinion Research (Baseera) and Former Minister of Communications and Information Technology</i>                                                                                                                                        |
| Speakers                         | <ul style="list-style-type: none"> <li>• International Social Innovation Policies in Light of New Public Governance Indicators: A Critical Analytical Perspective – <b>Dr. Nevine Zakaria</b> – Professor of Sociology, Ain Shams University</li> </ul>                                                         |
|                                  | <ul style="list-style-type: none"> <li>• Human and Knowledge Capital Development to Support Innovation in Egypt (<b>Presentation</b>) – <b>Dr. Hani Ayad</b> – Former Executive Director, Innovators Support Fund (ISF)</li> </ul>                                                                              |
|                                  | <ul style="list-style-type: none"> <li>• Social Innovation and Solving the Economic Empowerment Dilemma of Women Working in Agriculture in Egypt: Opportunities and Limits – <b>Dr. Howida Roman</b> – Professor, National Center for Social and Criminological Research and Visiting Professor, INP</li> </ul> |
| Discussant                       | <b>Dr. Ahmed Zayed</b><br><i>Professor of Sociology, Cairo University – Director of Alexandria Library</i>                                                                                                                                                                                                      |
| 11:30 – 1:00 PM                  | <b>Session 5</b>                                                                                                                                                                                                                                                                                                |

| Innovation Financing and FinTech |                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman                         | <b>Dr. Khaled Zakaria</b><br><i>Director, Macroeconomic Policy Center, Institute of National Planning</i>                                                                                                                                                                                                                                        |
| Speakers                         | <ul style="list-style-type: none"> <li>Competitive Financing to Support Research and Innovation: The Role of Science and Technology Development Fund (STDF) in Egypt (<b>Presentation</b>) – <b>Dr. Walaa Shata</b> – <i>Executive Director of Science and Technology Development Fund (STDF)</i></li> </ul>                                     |
|                                  | <ul style="list-style-type: none"> <li>Innovative Climate Finance in Egypt: Harnessing Technology and Partnerships for Sustainable Development – <b>Mohamed Alaa Eldin</b> – <i>Senior Financial Expert, Export Development Bank</i></li> </ul>                                                                                                  |
|                                  | <ul style="list-style-type: none"> <li>The Role of Financial Innovation and FinTech in Achieving Sustainable Economic Growth in Egypt – <b>Dr. Heba Elsayed Mohamed</b> – <i>Assistant Professor of Economics, Future University, KSA</i> and <b>Dr. Lamia Gadou</b> – <i>Lecturer of Economics, Zagazig University</i></li> </ul>               |
| Discussant                       | <b>Mr. Sherif Sami</b><br><i>Financial Expert and Former Chairman, Financial Regulatory Authority</i>                                                                                                                                                                                                                                            |
| 1:00 – 1:30 PM                   | Break                                                                                                                                                                                                                                                                                                                                            |
| 1:30 – 3:00 PM                   | <b>Session 6</b><br>Productive Technology Transfer as a Catalyst for Sustainable Development                                                                                                                                                                                                                                                     |
| Chairman                         | <b>Dr. Samiha Fawzy</b><br><i>Professor of Economics, Faculty of Economics and Political Science – Former Minister of Trade and Industry</i>                                                                                                                                                                                                     |
| Speakers                         | <ul style="list-style-type: none"> <li>Technology Transfer &amp; Commercialization in Higher Educational Institutions “ Opportunities &amp; Challenges (<b>Presentation</b>) – <b>Dr. Mohamed Galal</b> – <i>Dean of Engineering, Al – Azhar University and Innovation &amp; Entrepreneurship Advisor to the University President</i></li> </ul> |
|                                  | <ul style="list-style-type: none"> <li>Industry Localization and Tech Transfer Aligned with National Sustainable Development Priorities – <b>Dr. Omnia El – Hussein</b> – <i>Administrative Sciences Center, Zagazig University</i></li> </ul>                                                                                                   |

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|                | <ul style="list-style-type: none"> <li>Unveiling the Impact of Innovation on Sustainable Industrial Development in Egypt – <b>Dr. Hanan Abdel Khalek</b> – Assistant Professor of Economics, Damanhour University</li> </ul>                                                                                                                                                                                                                                                                                                                                                       |
| Discussants    | <p><b>Eng. Mohamed Abdel Karim</b> – Former Chairman, Industrial Development Authority (IDA)</p> <p><b>Dr. Steve Colen</b> – Professor of Practice, School of Public and International Affairs, Columbia University</p> <p><b>Dr. Anyi Wang</b> – Associate Research Scholar at the Research Program on Sustainability Policy and Management, Columbia Climate School</p>                                                                                                                                                                                                          |
| 3:00 – 4:00 PM | <p><b>Session 7</b></p> <p>Innovation and emerging technologies</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chairman       | <p><b>Dr. Alaa Zahran</b></p> <p>Professor at the Institute of National Planning and Former President of INP.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Speakers       | <ul style="list-style-type: none"> <li><b>Main Speaker Dr. Hossam Osman</b> - Deputy Minister of Higher Education and Scientific Research for Innovation and Scientific Research Affairs (TBC)</li> <li>Enhancing Responsible Innovation through "Regulatory AI Labs" – Regional and International Experiences – <b>Counselor Asmaa Abdel-Mawla Hassan</b> Administrative Prosecution Authority</li> <li>Employing Emerging Technologies to Develop Responsible Innovation Business Models in Egypt – <b>Dr. Mai Mostafa</b> – Lecturer, Institute of National Planning</li> </ul> |
| Discussant     | <p><b>Dr. Mahmoud Sakr</b></p> <p>Professor at the National Research Center (NRC) and Former President of the Academy of Scientific Research.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4.00-5.00 PM   | <p>Conference Closing and Lunch</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| 10:00 – 10:45 AM | Opening Session<br>Welcoming Remarks |
|------------------|--------------------------------------|

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|-----------------------|---------------------------------------------------------------------------------------------------------|
| Dr. Ashraf Al – Arabi | <i>President, Institute of National Planning (INP)</i>                                                  |
| Dr. William Emmeke    | <i>Professor, International and the Public Affairs (SIPA), Columbia University</i>                      |
| Dr. Rania Al – Mashat | <i>Minister, Planning, Economic Development and International Cooperation and Chairman of INP Board</i> |



### **Dr. Rania Al-Mashat**

#### **Minister, Planning, Economic Development and International Cooperation and Chairman of INP Board**

Dr. Rania Al-Mashat currently serves as Minister of Planning, Economic Development and International Cooperation and Chairman of the Board of Directors of the National Planning Institute since 2024, and has held the position of Minister of International Cooperation since December 2019. She earned her Ph.D. in International Economics from the University of Maryland (1998-2001), a Master's degree in Economics from the same university (1995-1997), and a Bachelor's degree in Economics from the American University in Cairo (1991-1995). She also completed executive education in Leadership and Public Policy at Harvard Kennedy School and Transformational Leadership at Oxford University. She served as Minister of Tourism in Egypt from January 2018 to December 2019. She worked as Sub-Governor of the Central Bank of Egypt for Monetary Policy from August 2005 to May 2016. She worked at the International Monetary Fund in two separate periods as Senior Economist (June 2001 - July 2005) and Advisor to the Chief Economist (June 2016 - January 2018), where she specialized in central banking issues including designing monetary policy frameworks and defining financial stability and macro-prudential tools, led country mission teams and contributed several chapters to the IMF's book "Advancing the Frontiers of Monetary Policy" published in 2018. She held positions on the boards of directors of important financial institutions such as the Egyptian Stock Exchange (August 2009 - May 2010) and the Arab Investment Bank (October 2007 - March 2008), and worked as an Adjunct Professor of Economics at the American University in Cairo (January 2005 - January 2006). She is known for her advocacy of the climate agenda and her work in mobilizing climate finance through innovative financing modalities including blended finance, carbon credits, and debt-for-climate swaps. She designed Egypt's Country Platform for the Nexus of Water, Food & Energy to mobilize climate finance to accelerate the country's green transition. She authored a book titled "Stakeholder Engagement through Economic Diplomacy: Egypt Fostering Multilateralism & International Cooperation" published by the London School of Economics in June 2021. She follows success principles she calls "The 4 C's": Competence, Connections, Confidence, and Charm.



**Dr. Ashraf Al-Arabi**

**President, Institute of National Planning**

Professor Ashraf El-Araby is the President of the **Institute of National Planning** in Cairo. He is a board member of the Egyptian Financial Regulatory Authority, a member of the Coordinating Council for Monetary and Fiscal Policies, Secretary-General of the Arab Society for Economic Research, and a Member of the Boards of Trustees of both King Salman International University and the Arab Planning Institute in Kuwait. He is also a Member of the Egyptian Academy of Scientific Research and Technology and Egypt's Scientific Institute, and currently serves as Chairman of the Advisory Council of the National Media Authority (Maspero) in Cairo. Professor El-Araby was Minister of Planning and International Cooperation (2012) and Minister of Planning, Monitoring, and Administrative Reform until 2017. During his tenure, he also represented Egypt as Governor to the World Bank, the European Bank for Reconstruction and Development, the Arab Fund for Economic and Social Development, and the African Development Bank. He served as advisor to the Arab Planning Institute (2017–2022) and board member of the Central Bank of Egypt (2019–2023). He holds his PhD in Economics from Kansas State University (2004) and is a prominent expert in planning, macroeconomic policy, education economics, and labor market dynamics. He has numerous publications and his academic excellence has been acknowledged through several awards including “Best Graduate Instructor Award” at Cairo University (2006) and “Emerson Memorial Scholarship for Best Graduate Student” from Kansas State University, USA, (2003).



**Dr. William Eimicke**

**Professor, International and the Public Affairs (SIPA), Columbia University**

Dr. William B. Eimicke is Professor of Practice in International and Public Affairs and the founding director of the Picker Center for Executive Education of Columbia University's School of International and Public Affairs. The Picker Center runs the School's Executive MPA program (EMPA), SIPA's audio-visual case study program, and the school's executive training programs. Eimicke teaches courses in management, cross sector partnerships, applied policy analysis, and innovation. He also teaches at Peking University and the Universidad Externado de Colombia. Through the Picker Center. Eimicke has helped create and has directed a number of major executive training programs including the Brazil Mayors program, Hong Kong Civil Service Advanced Leadership Program, and a wide range of customized programs for public and private organizations in USA, China, Northern Ireland, South Africa, Singapore, UNDP, Saudi Arabia, Malaysia, and Colombia. Since 2013, the Picker Center has created 10 short documentary film cases with companion written cases covering cross sector partnerships and program innovation in New York City, Brazil, India, Ghana, Afghanistan, Rwanda and the Republic of Congo with new student-initiated cases under development in Peru and Costa Rica. Professor Eimicke also serves on the Advisory Board of Central Park Conservancy's Institute for Urban Parks which helps urban parks across NYC, around the USA and throughout the world improve their quality, accessibility and financial stability, often through cross-sector partnerships. He is also the co-author (with fellow SIPA faculty member Howard W. Buffett) of **Social Value Investing-A Management Framework for Effective Partnerships** (Columbia University Press 2018). He served as FDNY Deputy Fire Commissioner for Strategic Planning and Policy (2007-10) under Mayor Michael Bloomberg where he led numerous innovations to reduce response time to fires, establish a computerized risk-based inspection program, and provide advanced management training for senior Fire and EMS officers (FOMI). The FDNY Officers Management Institute (FOMI) was designated as a Top 50 Innovations in American Government for 2008 and 2009 by the Harvard Kennedy School of Government.

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| 11:00 – 12:30 AM | <p style="text-align: center;"><b>Session 1</b></p> <p style="text-align: center;"><b>Innovation and Scientific Research: Development Dimensions and International Experiences</b></p> |
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|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman   | <p><b>Dr. Sharif Hammad</b><br/><i>Former Minister of Scientific Research</i></p>                                                                                                                                                                                |
| Speakers   | <ul style="list-style-type: none"> <li>• Developmental and Cognitive Dimensions of Scientific Research and Innovation: Indicators and Implications<br/><b>Dr. Moataz Khorshid</b>– <i>Former Minister of Higher Education and Scientific Research</i></li> </ul> |
|            | <ul style="list-style-type: none"> <li>• International Experiences in Employing and Governing Emerging Technologies to Support Sustainable Innovation Ecosystems – <b>Dr. Maggid Khashba</b>– <i>Professor, Institute of National Planning (INP)</i></li> </ul>  |
|            | <ul style="list-style-type: none"> <li>• Business Environment Challenges to Innovation Driven Startups in Egypt (<b>Presentation</b>)– <b>Dr. Hesham Hadaka</b>– <i>Advisor to Minister of Higher Education and Scientific Research</i></li> </ul>               |
| Discussant | <p><b>Dr. Walid El-Zawawy</b><br/><i>Secretary-General of the Council of Research Centers, Institutes, and Authorities, and Acting Head of the Sector for Scientific Research and Innovation Affairs at (MoHSR)</i></p>                                          |



**Chairman**

**Dr. Sharif Hammad**

**Former Minister of Scientific Research**

Dr. Sherif Hammad is the former Minister of Scientific Research and one of the most prominent academic and industrial leaders in the field of embedded systems and engineering in Egypt, with over three decades of experience spanning higher education, scientific research, and entrepreneurship in the technology sector. He currently serves as a member of the Board of Trustees for several leading Egyptian universities, including the Egypt University of Informatics (EUI), the Egypt-Japan University of Science and Technology (EJUST), and the Université Française d'Égypte (UFE), where he has contributed to shaping strategic policies for higher education and scientific research since 2016. Dr. Hammad is the founder and CEO of Garraio LLC, a company specializing in automotive embedded systems solutions, providing services to global automotive manufacturers, developing AutoSAR tools, and building capacity in embedded and IoT software. Academically, he has been a Professor of Embedded Control Systems at the Faculty of Engineering, Ain Shams University, for over 33 years, where he has taught and managed advanced academic and research programs in digital control, embedded systems, model-based design, autonomous driving, machine learning, cybersecurity, and robotics. He has also served as Chairman of the Mechatronics Department and as Dean of the faculty, contributing to curriculum development and the advancement of scientific research. Dr. Hammad served as Egypt's Minister of Scientific Research (2014–2015), leading national policies to support innovation and scientific research, and has held executive positions in industry, including CTO of Rockwell Automation and Senior Engineering Manager at Mentor Graphics, where he founded the Volcano team specializing in automotive software. He also co-founded the start-up Avelabs and has made significant contributions to engineering project management and entrepreneurship. Dr. Sherif Hammad combines academic, administrative, and industrial expertise and is considered one of the most influential figures in advancing the technology and engineering sectors in Egypt and the region.

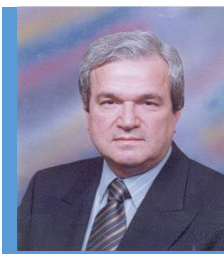


### Discussant

**Dr. Walid El-Zawawy**

**Secretary-General of the Council of Research Centers, Institutes, and Authorities, and Acting Head of the Sector for Scientific Research and Innovation Affairs at (MoHSR)**

Graduated from the Faculty of Science - Alexandria University - 1988 with excellent grades and was assigned the position of research assistant at the National Research Center, Chemical Industries Research Division. I was appointed as a researcher in the same division and was included in it and its committees. I worked as a visiting professor at Virginia Polytechnic Institute and State University in the United States of America, from March 2005 till May 2007, and a visitor at the International College of Paper, Printed Communications and Biomaterials (école internationale du papier, de la communication imprimée et des biomatériaux) in France during 2007-2008. On July 2016, I held the position of head of the Chemical Industrial Research Division until April 2019. In addition to scientific publishing in international journals and participating in international conferences in the United States of America, France, Spain and the Arab Republic of Egypt, I supervised many master's and doctoral theses, and participated in more than twelve research projects funded by the Science and Technological Development Fund (STDF), the Academy of Scientific Research and a partnership between Egypt and the United States of America, France, Germany and Japan. I was registered in Who's Who in Science and Engineering for the year 2007-2008 and also received certificates of appreciation for distinguished scientific publication at the National Research Center. Also, I participated as a group leader with a team of researchers and experts in the field of pulp and paper industry in both Egypt and France, which developed scientific programs and curricula to develop the skills of workers in the field of paper industry, in the TVET program (Assistance to the Reform of the TVET System – ETP concept) - a program between the European Union and Egypt in the period from 2010 to 2012. On April 8, 2019, I was appointed Secretary of Council Centers, Institutes and Research Bodies with the rank of Vice President of a university by decree of the President of the Arab Republic of Egypt for a period of four years and was appointed for second period on April 8, 2023. Besides that, I'm acting as the Head of Scientific Research and Innovation Sector at the Ministry of Higher Education and Scientific Research since January 24, 2022.



### Speaker

#### Professor Dr. Moataz Khorshid

#### **Former Minister of Higher Education and Scientific Research Advisor to Minister of Former.**

Professor at the Faculty of Computers and Artificial Intelligence Cairo University; Former Minister of Higher Education and Scientific Research; Dr. Motaz Khorshid holds a PhD in Engineering in the field of Computer Science and Simulation Modeling, and Doctor of State (PhD) in Management Sciences from the University of Paris, France. His master's thesis was in the field of industrial engineering from the Faculty of Engineering at Cairo University. He also obtained an advanced diploma in development planning methods and a bachelor's degree in mechanical engineering from Ain Shams University in Egypt. Prof. Motaz Khorshid held several leadership positions, including: Egyptian Minister of Higher Education and Scientific Research; Vice President of Cairo University for Graduate Studies and Research; Vice President of the British University in Egypt; Chief Technical Advisor at the United Nations in the field of Development Planning and Decision Support Systems; Dean of the Faculty of Computers and Artificial Intelligence, Cairo University; Senior Researcher at Kuwait Institute for Scientific Research (KISR). He has published numerous scientific papers in local and international journals in the fields of modeling and simulation, decision support systems, macroeconomic analysis, higher education planning and management, scientific research and innovation systems, and development planning. He also developed macroeconomic, sector-specific and microeconomic models to analyze development policies for Egypt, Kuwait, Yemen, and Palestine. Dr. Motaz Khorshid is an advisor to several regional and international institutions, including: The World Bank, the United Nations Development Program, the United Nations Population Fund, the Economic and Social Commission for Western Asia, and the United Nations Department for Economic and Social Affairs. He chairs the scientific committee of the Union of Mediterranean Universities and is an active member of the International Network for Economic Modeling and the Economic Research Forum for the Middle East and North Africa. Dr. Motaz Khorshid was awarded the "Academic Excellence Award" by the French government for his efforts in supporting bilateral relations between Egypt and France in the fields of culture, education, and scientific research.

## Developmental and Cognitive Dimensions of Scientific Research and Innovation: Indicators and Implications

**Abstract:** To support science and technology decision makers in developing effective research and development policies, the need arise for credible analytical measures to assess the progress towards knowledge economy and society. The purpose of this paper is to establish a composite index for research, development and innovation (RDI) as well as its use to assess the performance of countries and economies of the world in the fields of research and development, innovation and creativity initiatives and their growing societal and developmental impact in the knowledge era. In spite of the global consensus on the measurable component of the research and development function, multiplicity of models is used to measure sources of production, applications and outcomes of innovation. In this respect, the paper proposes a comprehensive conceptual model to estimate innovation and assess its impact. Compared with previous efforts to measure RDI, the proposed composite index concentrates in a clear manner on its developmental and societal impact as well as its growing linkages domestically and globally. These issues witness considerable interest in the knowledge era of the twenty third century, including the unprecedented progress in intelligent technologies and digital transformation. In this respect, the composite index is used to estimate the performance of research and innovation in (131) countries based on (50) indicator per country, as well as their regional, economic and political grouping in (2024). Furthermore, the paper addresses a number of questions related to the regional and global leading countries with respect to scientific research and innovation, as well as the performance and ranking of the Arab nations in relation to the Middle East and North Africa and the Arab region.

**Keywords:** Research and Development, Creativity and Innovation, Composite Index, Developmental and Societal impact, knowledge Leadership.



### Speaker

**Dr. Hesham Hadara**

**Advisor to Minister of Higher Education and Scientific Research**

**Prof. Dr. Hesham Haddara** is a distinguished academic and thought leader in the fields of electronics, telecommunications, and innovation policy in Egypt and the Arab region. He currently serves as **Professor of Electronics and Electrical Communications** at the Faculty of Engineering, Ain Shams University, and holds the position of **Advisor to the Minister of Higher Education and Scientific Research for Innovation and Entrepreneurship**. With over 30 years of academic and professional experience, Dr. Haddara has played a pivotal role in advancing engineering education and bridging the gap between scientific research and industrial application, particularly in areas such as digital communications, embedded systems, advanced electronics, and the Internet of Things (IoT). In addition to his academic career, Dr. Haddara is the **founder of Innovetry**, a leading innovation consultancy firm that delivers strategic solutions in technology management, innovation policy, and organizational transformation across the MENA region. He has also held several key leadership positions, including Head of the Department of Electronics and Communications Engineering at Ain Shams University and Chairman of **Nawah**, a foundation dedicated to fostering entrepreneurship and technological innovation. Dr. Haddara has supervised numerous master's and doctoral theses, and has an extensive record of publications in peer-reviewed international journals and conferences. He is widely recognized for his contributions to national innovation policy, his leadership in establishing university-based incubators and accelerators, and his efforts to promote a culture of entrepreneurship among young researchers. His career reflects a unique synthesis of academic excellence, entrepreneurial vision, and strategic advisory leadership in science, technology, and higher education development.

**Business Environment Challenges to Innovation Driven Startups in Egypt**

**(Presentation)**



**Speaker**

**Dr. Magid Khashba**

**Professor, Institute of National Planning**

A professor of Management: Business Administration at the Institute of National Planning (INP). Experience includes preparing many futures studies both at an individual capacity and as part of a team of researchers as well as participation in many consulting missions related to strategic planning, sustainable development, human resource development. He performed many advisory tasks related to Governance and Organizational Restructuring in many institutions in Egypt and abroad, including:

- Chairing an advisory team for Preparing a strategic plan and organizational restructuring, establishing a quality, follow-up, and performance evaluation system for the Secretariat of the Supreme Council of Universities: 2024-2025.
- Chairing an advisory team for the strategic, organizational and functional restructuring of the Bibliotheca Alexandrina 2022-2023.
- Preparing a “National Strategy for Statistics and Information-NSSI” for the Sultanate of Oman, as well as a Strategy for the (National Center for Statistics & Information: NCSI) in the Sultanate, 2022- 2023.
- Principal Researcher on a project for developing the capabilities of planning officials in the services directorates in the Egyptian governorates with the US AID, 2020.
- Principal Researcher on the consulting team for the organizational, administrative and strategic structure for the “Upper Egypt Development Authority”, 2020.
- Principal Researcher on the organizational and administrative restructuring team for the (Abu Dhabi Waste Management Center: Tadweer), 2019.
- Principal Researcher on the team for the establishment of the (National Manpower Development Center) in the State of Kuwait. 2015.
- Principal Researcher for the Strategic Plan for the (Sudanese Sea Ports Authority), 2018.
- Member of the team responsible for restructuring of the (Ministry of Finance) in the State of Kuwait, 2009.

Dr. Khashaba has cooperated as a consultant with many, international, regional and local organizations such as: United Nations Population Fund: UNFPA, Central Agency for Public Mobilization and Statistics: CAPMAS, USAID, Arab Planning Institute in Kuwait: API. Economic/Social Commission for Western Asia (ESCWA), United Nations Economic Commission for Africa (UN ECA).

### International Experiences in Employing and Governing Emerging Technologies to Support

**Abstract:** Emerging Technologies represent a key focus for enhancing development, national and institutional competitiveness, and quality of life worldwide. These include Artificial Intelligence, Nanotechnology, Robotics, Autonomous Vehicles, IoT, Human-machine Interfaces, Neuroscience, Synthetic Biology, Genomics, , Telemedicine, Blockchain, Autonomous Weapons Systems, and more. Investment in emerging technologies has accelerated as their roles in all areas of development expand, with the emerging technologies market expected to grow approximately sixfold by 2033, reaching \$16.4 trillion. In light of this, the issue of emerging technology governance in relation to innovation and support for sustainable development has become a top priority on global agendas. This includes the recent World Economic Forum (WEF) meeting in 2025, which addressed the issue from a technological/ethical integration perspective, leveraging these technologies to address major global challenges such as climate change, inequality and inequity gaps, and employment challenges, among others. The study addressed the issue through three main axes: Axis 1: Governance of emerging technologies to support sustainable innovation – global concepts and features; Axis 2: Multiple global initiatives for governance of emerging technologies to support sustainable innovation; Axis 3: The Egyptian case: Governance of emerging technologies to support innovation in light of global experiences> The study concluded with conceptual reviews and presentations of the best global experiences in the field of emerging technology governance, proposing a national model for the governance of these technologies. This model aims to enable Egypt to govern these technologies and harness them in a proactive, comprehensive, and responsible manner to support national innovation and sustainable development. The study proposed that the (National Council for Education, Research, and Innovation) established in 2024, be responsible for implementing the proposed model. This council is responsible for developing the national strategy, plans, and programs for developing education, research, and innovation, as well as monitoring their implementation mechanisms in coordination with relevant ministries, agencies, and authorities.

**Keywords:** Emerging Technologies, Emerging Technology Governance, Sustainable Responsible Innovation, Tech for Good, Framework for Anticipatory Governance of Emerging Technologies.

|                |                                                                         |
|----------------|-------------------------------------------------------------------------|
| 1:00 – 3:00 PM | <b>Session 2</b><br>Green Innovation to Support Sustainable Development |
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|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman    | <b>Dr. Khaled Fahmy</b><br><i>Professor, Institute of National Planning and Former Minister of Environment – Executive Director of CEDARE</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Speakers    | <ul style="list-style-type: none"> <li>• The Role of Green Innovation in Achieving Sustainable Development in Egypt: An Exploratory Study – <b>Dr. Khalid Attia</b> – Vice President, Institute of National Planning for Research and Graduate Studies</li> <li>• Food Innovation in Facing Climate Change Challenges – <b>Dr. Khaled Addour</b> – Senior Researcher, National Center for Research and Development in Fisheries and Aquaculture, Algeria</li> <li>• Green Innovation in Egypt: Funding and Implementation Prospects for Sustainable Development – <b>Mr. Mohamed El – Husayni Abdel Hamid</b> – Researcher, Secretariat General of the House of Representatives</li> <li>• AI Legislation as a Tool to Stimulate Innovation in the Green Economy: A Legal Framework for Achieving Sustainable Development – <b>Counselor Ahmed Mokhtar El-Mansi</b> – Technical Office of Specialized Courts Sector – Ministry of Justice</li> </ul> |
| Discussants | - <b>Dr. Mohamed Hegazy</b> Innovation and Digital Transformation Legislation Consultant<br>- <b>Dr. Nezar Samy</b> -Project Officer, Inclusive Growth and Innovation UNDP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |



**Chairman:**

**Dr. Khaled Fahmy**

**A Professor at Institute of National Planning and Former Minister of Environment.**

He currently serves as the Executive Director of the Center for Environment and Development for the Arab Region and Europe (CEDARE) since January 2025, where he leads the center's efforts in supporting environmental and development issues at both the regional and international levels. Dr. Fahmy served as Egypt's Minister of Environment from June 2014 to June 2018, during which he led the implementation of major national programs for the protection of natural resources, the development of environmental legislation, and the strengthening of partnerships with the private sector and civil society. He also held the position of Minister of State for Environmental Affairs in 2013, contributing to the formulation of public policies and the development of national action plans for environmental protection. Dr. Khaled Fahmy has extensive academic experience, having worked as a Professor of Environmental Economics at the Institute of National Planning between 2018 and 2020, where he contributed to the development of postgraduate programs and supervised numerous applied research projects in the fields of green economy and environmental policy analysis. He also served as Senior Governance Advisor at CARE International Egypt, where he participated in the design and implementation of capacity-building and decentralization support programs, in addition to acting as a consultant for various national and international organizations. Dr. Fahmy's expertise spans more than 25 years in dealing with policy issues related to environmental management, governance, and economic development, with a particular focus on the economics of industrial pollution, institutional and legal aspects of environmental management, environmental impact assessment studies, environmental action plans, and the evaluation of environmental policy reform programs. He has led and participated as a key expert in several major projects funded by the United States Agency for International Development (USAID), in cooperation with the Egyptian Environmental Affairs Agency, the Ministry of Local Development, several governorates, and civil society organizations. Dr. Khaled Fahmy has published more than 20 reports and studies on environmental management issues, led numerous scientific research teams, and is a core member of the Global Scenario Group (GSG), making him one of the leading decision-makers and experts in environmental policy and sustainable development in Egypt and the region.



**Discussant: Dr. Mohamed Hegazy**

**Innovation and Digital Transformation Legislation Consultant Former Minister of Scientific Research**

Dr. Mohamed Hegazy is a renowned leader in public policy, legislative drafting, and regulatory affairs with over 20 years of expertise in driving digital transformation, shaping AI policies, and crafting frameworks for emerging technologies. His work spans intellectual property rights (IPR), data protection, cybersecurity, e-commerce, and ICT governance, positioning him as a key figure in advancing the global digital economy. As Head of the Legislative Committee at Egypt's Ministry of Communications and Information Technology (MCIT), Dr. Hegazy spearheaded the Cybercrime Law and Data Protection Law, setting benchmarks for digital governance. At the helm of the Intellectual Property Rights Office at ITIDA, he led initiatives that significantly strengthened IP enforcement, including establishing the Middle East's first digital forensic lab for IP cases. Dr. Hegazy has collaborated with global organizations such as UN-ESCWA, WIPO, USAID, and GIZ, advising on AI, data governance, and innovation strategies across the MENA region. He has also empowered thousands of stakeholders through over 100 training programs, equipping them to navigate the complexities of cybersecurity, digital forensics, and policymaking. With a PhD in Intellectual Property Law, Master of International Commercial law, and multiple certifications in data privacy, cybersecurity, and governance.



**Discussant: Dr. Nizar Samy**

**Project Officer, Inclusive Growth and Innovation UNDP**

Dr. Nezar is a seasoned expert in Technology Management, Strategic Innovation, Digital Transformation, and Entrepreneurship, with over 25 years of experience spanning government, academia, international development, and the private sector. He currently serves as a Project Officer at UNDP, leading national initiatives in digital transformation, innovation, and inclusive growth. Throughout his career, Nezar has held pivotal roles including Chief Technology Officer at ENSTINET, Deputy Executive Director at the Egyptian Banking Institute, and founder of key departments at Nile University. He has led and advised on multi-million-dollar projects across sectors such as ICT, banking, education, and healthcare, both in Egypt and the MENA region. Nezar is the founder of the nationally recognized “Nilepreneurs” initiative, under the auspices of the Central Bank of Egypt, which supports SMEs and startups.



**Speaker**

**Dr. Khalid Attia**

**Vice President of INP for Research and Graduate Studies and Former Director of Environmental Planning and Development Center at INP**

He possesses extensive academic, research, consultancy, and training experience both in Egypt and internationally. He holds a PhD from the University of Strathclyde in the United Kingdom (1999) and has diverse teaching experience at both undergraduate and postgraduate levels, having taught multiple courses to undergraduate and graduate students in Egypt and abroad, with particular focus on environmental accounting, planning, and sustainable development. He is distinguished by his diverse research output through peer-reviewed scientific publications in his field of specialization. He has supervised and examined numerous master's and doctoral dissertations both in Egypt and internationally. He has contributed to building and developing various curricula and study plans for academic and professional programs at both graduate and undergraduate levels. As a certified international trainer, he possesses advanced expertise in artificial intelligence and e-learning. He possesses extensive managerial and consultancy experience through his participation in numerous advisory activities with various international and national organizations, including the World Bank, African Development Bank, and civil society institutions, serving as either projects manager or consultant. He has held multiple leadership positions chairing and serving on academic and administrative committees in various educational institutions. He holds membership in specialized professional associations and has received various grants and recognition awards, reflecting his research, academic, and professional excellence in the fields of environmental accounting, planning, and sustainable development .

### **The Role of Green Innovation in Achieving Sustainable Development in Egypt: An Exploratory Study**

**Abstract:** This study aims to demonstrate the importance of implementing green innovation as a strategic orientation for the Egyptian state to achieve sustainable development through balancing economic growth, social dimension, and environmental preservation, where it reviewed the conceptual framework of green innovation and its measurement indicators and clarified its relationship with the three dimensions of sustainable development, and conducted an exploratory analysis of the experiences of developed, developing, and Arab countries in implementing green innovation to extract lessons learned for Egyptian decision-makers. The study concluded that green innovation encompasses the development of new products and processes that reduce environmental impact and enhance sustainability, and that the success of developed countries relied on intensive investment in research and development and public-private partnerships, while developing countries depended on strong government support and infrastructure development, whereas the practices and experiences of Arab countries in implementing green innovation were characterized by focusing on the renewable energy sector and adopting long-term national strategies with challenges in financing and capacity building. The study recommended the necessity for Egypt to implement national policies that support the application of green innovation through the following: increasing spending on research and development, developing institutional partnerships, adopting a circular economy strategy, linking tax incentives to environmental sustainability, expanding renewable energy, supporting smart agriculture, mandating projects to comply with sustainable building standards, and developing low-emission public transportation, and that successful implementation of green innovation in Egypt requires a comprehensive strategic vision, sustainable investment, and institutional cooperation, with the necessity of developing national measurement indicators and studying the role of digital transformation and artificial intelligence in enhancing green innovation.

**Keywords:** Green Innovation, Sustainable Development, Circular Economy, Environmental Policies, Egypt



### Speaker

**Dr. Khaled Addour**

**Senior Researcher, National Center for Research and Development in Fisheries and Aquaculture, Algeria**

He is a Researcher in International Maritime Law at the Department of Aquatic Ecosystems at the National Center for Research and Development in Fisheries and Aquaculture in Algeria, Head of the Center's Environment and Quality Control Department, and Legal Advisor from 2015 to 2020. He holds a Bachelor's degree in Public Law in 2006, a Diploma in Administrative Law from the Institute of Arab Research and Studies in Cairo in 2010, a Master's degree in International Law from the University of Constantine in 2014, and a PhD in 2021. He worked as a teacher at several universities in Algeria during the period from 2014 to 2020. He holds a fellowship in International Maritime Law from the Korean Maritime Institute in South Korea in 2019 and a UNNF fellowship in Maritime Law in the United States of America in 2022. He is a former member of the Egyptian Society of International Law and a member of the Board of Directors of the Economic Institution for Fishing and Aquaculture EPE CNRDPA COMPANY SPA and a former Secretary General of the Syndicate of Permanent Researchers.

### Food Innovation in Facing Climate Change Challenges

**Abstract:** Food innovation has become a solid foundation for ensuring food security in the medium and long term, whether through providing smart agricultural innovations, establishing sustainable fish farms, enhancing biodiversity, and relying on modern technology to mitigate environmental impacts, reduce costs, and save time. Food innovation also contributes to finding food alternatives, improving transportation and storage technologies, ensuring supply chains for products, preserving and smart packaging of food, and other innovations that contribute to ensuring food security. To this end, the international community, in partnership with the private sector, has sought to play a pivotal role by supporting financial and economic aspects, valuing cooperation, creating appropriate environments for food innovations, and assisting developing countries in developing programs to mitigate the effects of climate change to ensure food security. Despite all the efforts made in this regard, challenges at the international and national levels have contributed to slowing down the processes of sustainable food transition and ensuring food security in the medium term.

**Key words:** food innovation; food security; climate change; sustainable development



**Speaker- Mr. Mohamed El – Husayni Abdel Hamid**

**Researcher, Secretariat General of the House of Representatives**

Master's degree in Economics and Political Science, Faculty of African Graduate Studies, Cairo University, Department of Economics, with a very good grade, 2023.- Diploma in Political Science and Political Science, Faculty of African Graduate Studies, Cairo University, Department of Good Economics, 2014.- Bachelor's degree in Commerce, Faculty of Commerce, Cairo University, Minor Section, with a good grade, 2011

**Green Innovation in Egypt: Funding and Implementation Prospects for Sustainable Development**

**Abstract:** Supporting innovation in general can be a key driver for achieving sustainable development. This research aims to provide a deeper understanding of how green innovation can improve environmental performance, reduce negative environmental impacts, and significantly influence both the economy and society. The study analyzes the role of green innovation as a vital tool for achieving sustainable development in Egypt by exploring its theoretical framework and its relation to the dimensions of sustainability. It also focuses on the mechanisms of green innovation financing and the challenges it faces in the Egyptian context, while highlighting the importance of innovative financing tools in supporting and promoting green innovation. The research sheds light on Egypt's efforts to foster the transition toward a green economy through various policies, initiatives, and projects, such as the expansion of renewable energy, clean transportation, and waste management systems. Additionally, it examines green finance tools and analyzes the financing gaps that hinder the acceleration of the green transition, emphasizing the opportunities to strengthen public-private partnerships. The study adopts both the descriptive analytical approach and the case study method to provide an in-depth analysis of the current situation and practical applications of green innovation in Egypt. The research concludes with a set of recommendations for policymakers to enhance the supportive environment for green innovation and activate its role in achieving the goals of sustainable development, contributing to the creation of a competitive, low-carbon economy capable of addressing environmental, social, and economic challenges—aligned with the goals of Egypt's Vision 2030 for comprehensive and sustainable development.

**Keywords:** Green innovation, sustainable development, green finance, environmental challenges, social development, renewable energy, natural resources.



**Speaker- Mr. Ahmed Mokhtar El – Mansi**

**Technical Office of Specialized Courts Sector – Ministry of Justice**

A PhD researcher in a joint supervision program between Wake Forest University in the United States of America and Cairo University, with a dissertation titled "The Legislative and Regulatory Framework for the Use of Blockchain Technology and Artificial Intelligence in Financial Technology: A Comparative Study of Egypt and the United States." Holds a Master's degree in Cybercrime and Digital Evidence from the British University. Lecturer at the German University, the National Defense College, and the Information Technology Institute (ITI) at the Ministry of Communications regarding the legal framework for artificial intelligence technology, the legislative framework for personal data protection, cybercrime, and blockchain. A member of the Scientific Committee for the First Regional Conference on Modern Judicial Trends in the Field of Intellectual Property Protection in Traditional and Digital Environments, and the Implications of Using Artificial Intelligence with Respect to Copyright, under the (WIPO).

**AI Legislation as a Tool to Stimulate Innovation in the Green Economy: A Legal Framework for Achieving Sustainable Development**

**Abstract:** The world is undergoing a rapid transition toward a green economy as a key pathway to achieving sustainable development. Artificial intelligence (AI) has emerged as a fundamental driver of this transformation. However, the absence of a comprehensive legislative framework that keeps pace with technological advancements poses a significant challenge to the effective utilization of AI in supporting green economic initiatives. This paper aims to examine the legislative landscape in Egypt concerning the environmental applications of AI and to explore successful international experiences in order to propose a legal framework that fosters green innovation and enhances the effectiveness of public policies. The study adopts a comparative analytical methodology, combining an examination of Egyptian and international legal texts with data analysis from global organizations such as the United Nations, the World Bank, and the organization for Economic Co-operation and Development (OECD). The findings culminate in a set of legislative recommendations designed to create a supportive legal environment for AI-driven innovation, thereby advancing Egypt's progress toward the United Nations Sustainable Development Goals.

**Keywords:** Artificial intelligence, Green Economy, Legislative Framework, Sustainable Development

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| 3:00 – 4:30 PM | <b>Session 3</b><br><b>Financial Technology Innovations and Sustainable Development</b> |
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| 3:00 – 4:30 PM | <b>Session 3</b><br><b>Financial Technology Innovations and Sustainable Development</b>                                                                                                    |
| Moderator      | <b>Dr. Ashraf Al-Arabi</b><br><i>President, Institute of National Planning</i>                                                                                                             |
| Speakers       | <ul style="list-style-type: none"> <li>• <b>Dr. Hala Elsaid</b><br/> <i>Economic Advisor to the Egypt's President and Former Minister of Planning and Economic Development</i> </li> </ul> |
|                | <ul style="list-style-type: none"> <li>• <b>Dr. Islam Azam</b><br/> <i>Vice Chairman, Financial Regulatory Authority (FRA)</i> </li> </ul>                                                 |
|                | <ul style="list-style-type: none"> <li>• <b>Mr. Ibrahim Sarhan</b><br/> <i>Chairman and Executive Director of E – Finance for Financial and Digital Investments</i> </li> </ul>            |



**Moderator**

**Dr. Ashraf Al-Arabi**

**President, Institute of National Planning**

Professor Ashraf El-Araby is the President of the **Institute of National Planning** in Cairo. He is a board member of the Egyptian Financial Regulatory Authority, a member of the Coordinating Council for Monetary and Fiscal Policies, Secretary-General of the Arab Society for Economic Research, and a Member of the Boards of Trustees of both King Salman International University and the Arab Planning Institute in Kuwait. He is also a Member of the Egyptian Academy of Scientific Research and Technology and Egypt's Scientific Institute, and currently serves as Chairman of the Advisory Council of the National Media Authority (Maspero) in Cairo. Professor El-Araby was Minister of Planning and International Cooperation (2012) and Minister of Planning, Monitoring, and Administrative Reform until 2017. During his tenure, he also represented Egypt as Governor to the World Bank, the European Bank for Reconstruction and Development, the Arab Fund for Economic and Social Development, and the African Development Bank. He served as advisor to the Arab Planning Institute (2017–2022) and board member of the Central Bank of Egypt (2019–2023). He holds his PhD in Economics from Kansas State University (2004) and is a prominent expert in planning, macroeconomic policy, education economics, and labor market dynamics. He has numerous publications and his academic excellence has been acknowledged through several awards including “Best Graduate Instructor Award” at Cairo University (2006) and “Emerson Memorial Scholarship for Best Graduate Student” from Kansas State University, USA, (2003).



### Main Speaker

#### Dr. Hala Elsaid

#### **Economic Advisor to the Egypt's President and Former Minister of Planning and Economic Development**

Dr. Hala H. Elsaid, a distinguished economist and academic, currently serves as the Economic Advisor to the President of Egypt, a role she assumed in July 2024. This follows her tenure as Minister of Planning and Economic Development from December 2019 to June 2024, and Minister of Planning, Monitoring and Administrative Reform from February 2017 to December 2019. Her excellence in leadership was recognized when she was named the Best Arab Minister by the Arab Government Excellence Award in November 2020. Dr. Elsaid established Egypt's first sovereign wealth fund and served as its founding Chairperson, an important achievement that significantly contributed to the country's economic development and investment strategy. She led the implementation of the National Sustainable Development Strategy (Egypt Vision 2030) and initiated the National Structural Reform Program in 2021, focusing on labor-intensive sectors crucial for economic growth. In the banking sector, Dr. Elsaid served on the Central Bank's Board of Directors and as Executive Director of the Egyptian Banking Institute. She has also been an Advisor to the Central Bank Governor and held positions on various financial boards. Currently, she serves as a Non-Executive Board member of Société Arabe Internationale de Banque.

In recognition of her commitment to social responsibility and community development, Dr. Elsaid serves as a Member of the Board of Trustees of both the Magdi Yacoub Foundation and Ahl Masr Foundation, contributing to vital healthcare initiatives and community welfare programs. Dr. Elsaid earned her PhD in Economics with Highest Honors from Cairo University in 1989. She became the first elected Dean of the Faculty of Economics and Political Science in 2011 and served as Cairo University's Assistant President for Scientific Research and Exterior Relations from 2013 to 2016.



**Speaker**

**Dr. Islam Azzam**

**Vice Chairman of the Egyptian Financial Supervisory Authority (EFSA) or the Financial Regulatory Authority (FRA)**

Dr. Islam Abdel Azim Azzam has served as Vice Chairman of the Board of Directors of the Financial Regulatory Authority (FRA) since January 2021. He is also a Professor of Finance at the School of Business at the American University in Cairo (AUC), which he joined as a full-time professor in 2005. At AUC, he has taught courses in corporate finance, international finance, financial derivatives, investment, and econometrics to graduate and undergraduate students. Since earning his Ph.D. in Econometrics and Monetary Policy from the University of California, Irvine in 2003, Dr. Islam has served as a visiting professor at several universities in the United States, South Africa, and Saudi Arabia. Dr. Azzam has extensive experience in finance and investment, serving as a board member for numerous listed and unlisted companies on the Egyptian Stock Exchange. He has also been appointed as a financial advisor to the Ministry of Investment, the Mortgage Finance Authority, and the Capital Market Authority. Dr. Islam Azzam has published numerous research papers on foreign direct investment, the transformation of stock exchanges into joint-stock companies, and the ownership structure of financial institutions in several internationally recognized specialized journals



### Speaker

**Mr. Ibrahim Sarhan**

#### **Chairman and Executive Director of E – Finance for Financial and Digital Investments**

Ibrahim Sarhan is E-finance's Chairman of the Board and CEO. Sarhan brings valuable experience, having held several leadership positions in the fintech and telecommunications industry, with a solid and extensive track record of more than 30 years. Prior to finance, Sarhan spent 13 years at IC, and before that, held key management stints at Triangle and Raya Integrated before establishing E-finance in 2005. Throughout his career; Sarhan has joined several Community Service and Board Memberships such as the American Chamber of Commerce, the Software Industry Chamber and the Federation of Egyptian Industries. More recently, Sarhan had been elected as a Board Member of the Institute of National Planning, MCDR, Egypt Air, etc. Sarhan holds a Bachelor of Commerce from Cairo University and a Senior Executive Management Diploma from Harvard University in 2011.

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|----------------|--------------------------------------------------------------------------|
| 10:00 – 11:30S | <b>Session 4</b><br><b>Social Innovation and Sustainable Development</b> |
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| Chairman   | <b>Dr. Majid Othman</b><br><i>Director of the Egyptian Center for Public Opinion Research (Baseera) and<br/>Former Minister of Communications and Information Technology</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Speakers   | <ul style="list-style-type: none"> <li>• International Social Innovation Policies in Light of New Public Governance Indicators: A Critical Analytical Perspective – <b>Dr. Nevine Zakaria</b> – Professor of Sociology, Ain Shams University</li> <li>• Human and Knowledge Capital Development to Support Innovation in Egypt (<b>Presentation</b>) – <b>Dr. Hani Ayad</b> – Former Executive Director, Innovators Support Fund (ISF)</li> <li>• Social Innovation and Solving the Economic Empowerment Dilemma of Women Working in Agriculture in Egypt: Opportunities and Limits – <b>Dr. Howida Roman</b> – Professor, National Center for Social and Criminological Research and Visiting Professor, INP</li> </ul> |
| Discussant | <b>Dr. Ahmed Zayed</b><br><i>Professor of Sociology, Cairo University – Director of Alexandria Library</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



**Chairman**

**Dr. Majid Othman**

**Director of the Egyptian Center for Public Opinion Research (Baseera) and Former Minister of Communications and Information Technology**

Professor of Statistics, at the Faculty of Economics and Political Science, Cairo University and CEO of the Egyptian Center for Public Opinion Research (Baseera). He is also a Member of the National Council for Woman, Board Member of the National Planning Institute, Rapporteur for the Higher Advisory Committee for Human Development, Vice Chairman of the Arab Union for Statisticians, member of the international advisory board (School of Global Affairs & Public Policy – American University in Cairo), member of the board of trustees of the French University in Egypt, Vice Chairman of Takatof Organization, member of the board of trustees of Al-Nas Hospital, and member of the board of trustees of WOMENOVATION. He is currently the Lead Author of the National Human Development Report. Dr. Osman was appointed Minister of Communications and Information Technology in 2011; he acted as the Chairman of the Egyptian Cabinet of Ministers' Information and Decision Support Center (IDSC) from January 2005 to February 2011 and was the director of the Cairo Demographic Center in 2004.



#### **Discussant**

**Dr. Ahmed Zayed**

**Professor of Sociology, Cairo University – Director of Alexandria Library**

He is one of the most prominent social thinkers in the Arab world, serving as the Director of the Bibliotheca Alexandrina since August 2022 and as a Professor of Sociology at the Faculty of Arts, Cairo University. He has an academic and administrative career spanning more than thirty years. Dr. Zayed has held several prominent leadership positions, including Dean of the Faculty of Arts at Cairo University, Egypt's Cultural Advisor in Riyadh, and Head of the Sociology Department at the Institute of Arab Research and Studies. He also served as Dean of the Institute for Leadership Development in Helwan and was an advisor to the Social Issues Program at the Cabinet Information Center, as well as a member of the Egyptian Senate. Dr. Zayed has contributed to the establishment of several universities and colleges. He was a member of the Supreme Committee for the establishment of new private universities (such as Galala University, King Salman University, Alamein University, New Mansoura University, and the Technological Universities). He has an outstanding record in the development of educational and cultural policies. He has authored and translated more than 200 scholarly works. Among his most notable books are: Contradictions of Modernity in Egypt, Discourse of Everyday Life in Egypt, Political Construction in the Egyptian Countryside, and The Voice of the Imam, in addition to translations of influential academic works such as Life is Politics and The Social Mind. He has received prestigious awards, including the State Appreciation Award in Social Sciences in 2007 and the State Award for Excellence in Social Sciences in 2004. He is considered one of the most prominent figures in culture and thought in Egypt and the Arab world, with influential membership in numerous committees and councils, most notably: the Supreme Council for Culture, the National Council for Women, and the Social Sciences Committee of the Egyptian National Commission for UNESCO.



**Speaker- Dr. Nevine Zakaria**

**Professor of Sociology, Ain Shams University**

Dr. Nevine Zakaria Mohamed Amin, Professor of Political Sociology and Ex-Head of the Department of Philosophy and Sociology, Ain Shams University, and a current member of the Board of Directors of the General Authority for the National Library and Archives until March 2026. She has taught several courses at the Faculty of Economics and Political Science, Future University. She obtained her PhD in Sociology in 2009 from Ain Shams University with distinction. She also held a postdoctoral fellowship at the Social Science Research Council (SSRC) at New York University (NYU) from May 20, 2012, to July 15, 2012. She has over twenty-six years of academic experience and has published numerous studies, the most recent of which was published on May 31, 2025, by Springer Nature under the title: "New Public Governance as a Mediator between Health Policies and Social Security in Egypt Under the Outbreak of Covid-19.

**International Social Innovation Policies in Light of New Public Governance Indicators: A Critical Analytical Perspective**

**Abstract:** This paper examines international social innovation policies and analyzes the extent to which such policies are applied to new public governance indicators. International social innovation policies are presented according to five main determinants: game changers' provisions with their Seminal, Exogenous, and Endogamous factors; other trajectories linked to Structural opportunity contexts for agency; social innovation procedures regarding global changes and the determinants of their effectiveness; relations of participatory, partnership, and intersectoral networking; and directions of transformative social innovation in the Global South. The paper reached several conclusions, perhaps the most important of which is the positive impact of Seminal (motivating), Exogenous (impeding), and Endogamous (supporting) factors on the dynamics of social innovation policies, which is linked to the strategic orientation of New Public Governance. The positive contribution of analyzing the nature of the theoretical relationship between regional entrepreneurship and innovation from the perspective of the Knowledge Matching hypothesis (KM) is to link knowledge to market needs in local economies. Building trust within social innovation programs and projects is linked to the availability of an information infrastructure accessible to key stakeholders. The paper recommends the formation of a high-level ethical think tank to select innovative policies that promote the integrity and sustainability of community ideas, values, and culture, and reflect its needs and aspirations.

**Keywords:** New Public Governance - Social Innovation Policies - Partnership - Information Infrastructure — Cultural Lag



### Speaker

**Dr. Hani Ayad**

#### **Former Executive Director, Innovators Support Fund (ISF)**

As the Chairperson of the Egyptian Youth Entrepreneurs Association (YEN), I'm passionately dedicated to building a thriving innovation ecosystem in Egypt. My mission is to empower young entrepreneurs by fostering a dynamic environment where ideas can flourish. YEN serves as a central hub, connecting ambitious innovators with vital resources, experienced mentors, and strategic investors to facilitate collaboration and knowledge sharing. Beyond his leadership at YEN, I bring over 15 years of multifaceted experience in academia and industry. My deep expertise is underpinned by my Ph.D. in Green Supply Chain Management from the University of Strathclyde, UK, which equipped me with advanced knowledge in optimizing operations, reducing environmental impact, and enhancing competitiveness. As an Assistant Professor of Entrepreneurship, Logistics, and Supply Chain Management, I blend this academic rigor with practical insights, equipping the next generation with the tools to navigate complex challenges and drive sustainable growth. He previously had the privilege of serving as the Executive Director of the Innovation Support Fund under the Ministry of Higher Education and Scientific Research (MOHESR). In this impactful role, I led strategic initiatives and played a pivotal part in shaping policies and implementing programs that directly empowered young entrepreneurs across Egypt. His career journey also includes serving as a Vice Dean at the Arab Academy for Science Technology and Maritime Transport (AASTMT), where I focused on enhancing student experience and cultivating a culture of innovation.

**Human and Knowledge Capital Development to Support Innovation in Egypt**

**(Presentation)**



**Speaker**

**DR. Howida Roman**

**She is a Professor of Political Science at the National Centre for Sociological and Criminological Research and Visiting Professor at Institute of National Planning.**

She worked as a professor of political science at Misr University of Science and Technology (MUST) from 2003 to 2007, and taught the course on Civil Society Theories at the Faculty of Economics and Political Science, Cairo University, from 2000 to 2015. She worked as a consultant for the EU Migration Project from 1998 to 2003, as well as a consultant at the Social Contract Centre, where she headed the Civil Society Unit from 2007 to 2012. This was a joint project between IDSC and UNDP. Roman worked as a consultant for the Egyptian Initiative for Integrated Development (ENID) from 2012 to 2020. She also participated in updating the Egyptian Sustainable Development Agenda 2030 with the Ministry of Planning and Economic Development during the period 2019-2020, where she was responsible for six of the social goals. She also participated in preparing the Egyptian Human Development Report 2021, specifically in the section on social protection. She recently published a book in 2023 titled "A Guide to Comprehensive Social Protection in the Arab Region." She also has numerous writings and research on civil society issues, democratic transition, development studies, and women's studies. She has published a number of books, including "Political Participation of Women" and "Women and Work in Egypt", as well as "The Electoral System in Egypt. Finally, Roman is a member of the boards of trustees of several civil society organizations concerned with the development of Egyptian society.

## **Social Innovation and Solving the Economic Empowerment Dilemma of Women Working in Agriculture in Egypt: Opportunities and Limits**

**Abstract:** This paper seeks to examine the role of social innovation in advancing the economic empowerment of women in Egypt, with a focus on women working in the agricultural sector as a group in need of supportive interventions related to increasing their income, expanding their economic opportunities, and providing social protection. The concept of women's economic empowerment goes beyond merely obtaining employment opportunities to encompass broader dimensions such as the ability to participate in markets, control productive resources and assets, and access decent work, among others. Therefore, social innovative solutions must address these dimensions, as each represents a challenge in Egypt. Similarly, the success of innovative solutions requires an enabling environment. The main challenge facing social innovations is how to scale them up so that they are not confined to limited, small-scale experiments. This necessitates policy, institutional, and regulatory adjustments to ensure an environment that is conducive to innovation on one hand and facilitates the scaling up of successful experiments on the other.

**Keywords:** Social Innovation, Agricultural Sector, Women's Economic Empowerment

11:30 – 1:00 PM

Session 5

Innovation Financing and FinTech

|            |                                                                                                                                                                                                                                                                                                                                    |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman   | <b>Dr. Khaled Zakaria</b><br><i>Director, Macroeconomic Policy Center, Institute of National Planning</i>                                                                                                                                                                                                                          |
| Speakers   | <ul style="list-style-type: none"> <li>Competitive Financing to Support Research and Innovation: The Role of Science and Technology Development Fund (STDF) in Egypt (<b>Presentation</b>)– <b>Dr. Walaa Shata</b> – <i>Executive Director of Science and Technology Development Fund (STDF)</i></li> </ul>                        |
|            | <ul style="list-style-type: none"> <li>Innovative Climate Finance in Egypt: Harnessing Technology and Partnerships for Sustainable Development– <b>Mohamed Alaa Eldin</b> – <i>Senior Financial Expert, Export Development Bank</i></li> </ul>                                                                                     |
|            | <ul style="list-style-type: none"> <li>The Role of Financial Innovation and FinTech in Achieving Sustainable Economic Growth in Egypt – <b>Dr. Heba Elsayed Mohamed</b> – <i>Assistant Professor of Economics, Future University, KSA</i> and <b>Dr. Lamia Gadou</b> – <i>Lecturer of Economics, Zagazig University</i></li> </ul> |
| Discussant | <b>Mr. Sherif Sami</b><br><i>Financial Expert and Former Chairman, Financial Regulatory Authority</i>                                                                                                                                                                                                                              |



**Chairman**

**Dr. Khalid Zakaria**

**Director, Macroeconomic Policy Center, Institute of National Planning**

Professor Doctor at the School of Economics and Political Science, Cairo University. He is also the head of the Macroeconomic Policy Center at Egypt's Institute of National Planning. He also served as a visiting professor of public policy and finance in the American University in Cairo and New York University, USA. Actively involved in research on public economics and finance and public policy and administration reform with emphasize on the issues of political economy, governance, institutional reform, public financial management, decentralization, Intergovernmental fiscal affairs, local governance, public assets management, and policy analysis and evaluation. Ph.D. and M.Phil. Degrees in Public Administration (public finance specialization) from Wagner School of Public Service, New York University, in years 2005 and 2003, respectively. Master degree from Cairo University in Privatization Programs Management in 1996. Research grants from the Lincoln Institute of Land Policy, the World Bank, the University of Pretoria, and the American University in Cairo. Worked as a public and local finance, public administration reform, national and local planning, and decentralization consultant for different international institutions and corporations, including the WB, IMF, the UNDP, the UNHABITAT, the EU, and the USAID, in several development projects in countries of the Middle East and North Africa region, mainly Jordan, Yemen, Morocco, Syria, Saudi Arabia, Oman, and Egypt. Served as a member in various ministerial committees in Egypt on finance, urban development, planning, governance, and local development issues including national planning system, regional and local planning, international development grants, and formulating laws for local administration, planning, local revenue mobilization, and civil service. Publications on governance, public and local administration reform, public financial management, fiscal decentralization, education finance, government fiscal and institutional reform, and local governance issues.



#### **Discussant**

**Mr. Sherif Sami**

#### **Financial Expert and Former Chairman, Financial Regulatory Authority**

Sherif is a financial markets and investment advisor. He is the Chairman of the National Asset Management & Investment SAE and chairs the Investment Advisory Board of the Arab Agricultural Investment & Development Authority. He serves on the boards of the National Investment Bank, the Universal Health Insurance Authority, the French University in Egypt and other investment and education companies. Sherif is the former Chairman of CIB Egypt and the Egyptian Financial Regulatory Authority. He was also board member of the Central Bank of Egypt, the General Authority for Investment & Free Zones (GAFI) and Banque Du Caire. He is the founding managing director of Misr Capital (the Banque Misr investment arm). Sherif started his career with the global consulting firm Accenture, working in Chicago, Riyadh and Beirut. He has extensive practical experience spanning more than three decades in the banking and financial sector, where he has played a pivotal role in developing Egyptian and Arab capital markets. He holds advanced academic qualifications in economics and finance and has contributed to formulating financial and investment policies at the national level. He actively participates in international economic conferences and provides specialized consultancy services to governments and major financial institutions. He also supervises advanced training programs in investment and portfolio management, and contributes to developing young banking cadres through professional mentoring and guidance programs.



**Speaker: Dr. Walaa Shata**

**Executive Director of Science and Technology Development Fund (STDF)**

Walaa Sheta is a Professor of Computer and Informatics and has been serving as the Executive President of Egypt's Science, Technology, and Innovation Funding Authority (STDF) since July 17, 2020. STDF is the primary governmental organization responsible for funding scientific research, technology, and the entire innovation cycle in Egypt. With over two decades of experience in scientific research and government service, Professor Sheta has led numerous national and international initiatives that have advanced scientific research, strategic partnerships, and community services. Before joining STDF, he served as the Deputy President for Research at the City of Scientific Research and Technology Applications, where he was also the Dean of the Informatics Research Institute. Additionally, he held an appointment as an Adjunct Professor at the University of Louisville. Professor Sheta's research contributions and consulting work span high-performance computing applications, 3D images processing, and human-computer interaction. He has co-chaired several international conferences, and his research group has published in top-ranked peer-reviewed journals. He has mentored over 40 graduate students, research engineers, and postdoctoral researchers, many of whom now hold leading positions in academia and industry. Furthermore, Professor Sheta has served as an advisor at the Ministry of Communication and Information Technology (MCIT), where he contributed to digital transformation initiatives in the health sector and professional training programs.

Competitive Financing to Support Research and Innovation: The Role of Science and  
Technology Development Fund (STDF) in Egypt

**(Presentation)**



**Speaker-Mr. Mohamed Alaa**

**Financial Expert at Egyptian Export Development Bank**

Mohamed Alaa El-Din is an award-winning financial expert working at the Egyptian Export Development Bank, where he leads innovative projects in sustainable finance, green finance, and financial inclusion. He has collaborated with prominent international institutions including the African Development Bank, Inter-American Development Bank, European Investment Bank, and Emirates NBD. Academically, he serves as a research fellow at the American University in Cairo and the British University in Egypt, and as an associate researcher at Monash University, Australia. He holds a Master of Business Administration from Buckinghamshire New University in the United Kingdom and is currently a PhD candidate in Finance and Economic Development at the University of Almeria, Spain. He has received multiple awards including the UNCTAD Award for Best Research Paper, Misr El Kheir Foundation Award for Innovation in Circular Economy, and the Egyptian Banking.

**Abstract:** This research addresses Egypt's climate challenges including water scarcity, rising temperatures, and coastal erosion. Despite global climate funds availability, Egypt faces access barriers due to bureaucratic procedures and limited capacity. The study analyzes climate finance instruments like blended finance, green bonds, and public-private partnerships using qualitative analysis of Green Climate Fund data. Results show traditional approaches are insufficient while innovative methods mobilize private capital effectively. The Benban Solar Complex exemplifies successful blended finance implementation. The research emphasizes technology's transformative role, particularly blockchain and AI, in enhancing transparency. It proposes framework enhancements through digital platforms, innovative financial instruments, and strategic partnerships to establish Egypt's regional climate leadership.

**Keywords:** Innovative Climate Finance, Strategic Partnership, Sustainable Development



**Speaker- Dr. Heba Elsayed Mohamed**

**Assistant Professor of Economics, Future University, KSA**

**Assistant Professor of Economics** at the College of Administrative and Human Sciences, Almustaqbal University, Saudi Arabia. **Economic Researcher** at Argaam Center, Saudi Arabia. **Assistant Professor of Economics** at the College of Economics and Administration, Qassim University, Saudi Arabia (2017–2022). **Lecturer** in the Department of Economics and Finance, College of Economics and Administration, Qassim University (2012–2017). **Ph.D. in Financial Economics** from Zagazig University (2017). **Master's Degree in Economics** with a focus on Macroeconomic Policy from Zagazig University (2008). Author of several published research papers in both international and local journals, specializing in macroeconomic policy and foreign direct investment, particularly in the manufacturing sector. Additionally, has written articles on evaluating the performance of investment funds in Egyptian banks and energy economics.



**Speaker- Dr. Lamia Gadou**

**Lecturer of Economics, Zagazig University**

Lecturer of Economics in the Department of Economics, Faculty of Commerce, Zagazig University. Ph.D. in Financial Economics from Zagazig University (2024). Masters in Economics specializing in International Trade from Zagazig University (2015). Published research papers in international journals in topics related to banking risks, as well as environmental economics.

### **The Role of Financial Innovation and FinTech in Achieving Sustainable Economic Growth in Egypt**

**Abstract:** This study examines the impact of financial innovation and financial technology (FinTech) on sustainable economic growth in Egypt over the period 2000–2023, utilizing the Autoregressive Distributed Lag (ARDL) regression model. Sustainable growth is proxied by the Human Development Index (HDI), while financial innovation is represented by four key indicators: financial inclusion (the percentage of adults with bank accounts), financial depth (private sector credit as a percentage of GDP), research and development (R&D) expenditure, and the number of automated teller machines (ATMs). The results of the Bounds test for cointegration confirm the presence of a long-run equilibrium relationship among the variables, with the calculated F-statistic significantly exceeding the critical values at all conventional levels of significance. Long-run estimates indicate that all explanatory variables are statistically significant. Specifically, financial innovation has a direct and positive impact on sustainable growth, with R&D expenditure exerting the greatest influence, followed by financial inclusion, ATM density, and financial depth. In the short run, financial inclusion and ATM penetration demonstrate temporary negative effects. Nevertheless, the error correction term suggests a relatively rapid adjustment toward long-run equilibrium in response to short-term deviations. Overall, the findings emphasize the role of financial innovation in advancing sustainable economic growth in Egypt. The study recommends enhancing investment in financial technologies and establishing supportive regulatory frameworks to strengthen economic resilience and contribute to the achievement of the Sustainable Development Goals (SDGs).

**Keywords:** Financial Innovation, FinTech, Sustainable Economic Growth, Human Development Index (HDI)

|                |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|
| 1:30 – 3:00 PM | Session 6<br>Productive Technology Transfer as a Catalyst for Sustainable Development |
|----------------|---------------------------------------------------------------------------------------|

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman    | <b>Dr. Samiha Fawzy</b><br><i>Professor of Economics, Faculty of Economics and Political Science – Former Minister of Trade and Industry</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Speakers    | <ul style="list-style-type: none"> <li>Technology Transfer &amp; Commercialization in Higher Educational Institutions “ Opportunities &amp; Challenges (<b>Presentation</b>) – <b>Dr. Mohamed Galal</b> – Dean of Engineering, AI – Azhar University and Innovation &amp; Entrepreneurship Advisor to the University President</li> <li>Industry Localization and Tech Transfer Aligned with National Sustainable Development Priorities – <b>Dr. Omnia El – Hussein</b> – Administrative Sciences Center, Zagazig University</li> <li>Unveiling the Impact of Innovation on Sustainable Industrial Development in Egypt – <b>Dr. Hanan Abdel Khalek</b> – Assistant Professor of Economics, Damanhour University</li> </ul> |
| Discussants | <b>Eng. Mohamed Abdel Karim</b> – Former Chairman, Industrial Development Authority (IDA)<br><b>Dr. Steve Colen</b> – Professor of Practice, School of Public and International Affairs, Columbia University<br><b>Dr. Anyi Wang</b> – Associate Research Scholar at the Research Program on Sustainability Policy and Management, Columbia Climate School                                                                                                                                                                                                                                                                                                                                                                   |



### Chairman

#### Dr. Samiha Fawzy

#### **Professor of Economics, Faculty of Economics and Political Science – Former Minister of Trade and Industry**

Dr. Samiha Fawzy was appointed Minister of Trade and Industry in the Arab Republic of Egypt on January 30, 2011, building on her extensive career in both civil service and academia. Prior to her selection as Minister of Trade and Industry, Dr. Fawzy held multiple positions across diverse fields, including First Assistant to the Minister of Trade and Industry since July 2004, as well as board member of multiple institutions and committees, including the Egyptian Telecommunication Regulatory Authority (ETRA), the Egyptian Institute of Directors (EIoD), the Egyptian Competition Authority (ECA), the Egyptian Bank for Exports Development, the National Council for Women, and the General Authority For Investment. She Also was assigned the position of the First Economic Advisor to the Chair pf the Egyptian Parliament. A Professor of Economics at Cairo University – as well as Deputy Director of the Egyptian Center for Economic Studies (ECES), a leading public policy think tank – Dr. Fawzy is an active contributor to the field of economic research within Egypt and the Middle East and North Africa region as a whole. She has published extensively on various topics, including; trade, industrial economics, investment theories, multi-national corporations and corporate governance. Dr. Fawzy received her Ph.D. in Economics from Cairo University in 1984. She is married with two daughters, four granddaughters and a grandson.



### **Discussant**

**Eng. Mohamed Abdel Karim**

**Former Chairman, Industrial Development Authority (IDA) Professor— School of International and Public Affairs,  
Columbia University (TBD)**

Mohamed Abdulkareem is a senior CEO and consultant with extensive experience in leading industrial transformation across government entities, private sector companies and local and international advisory engagements. Involved in shaping the national industrial policy, implementing initiatives to deepen industry and green transformation, identifying investment opportunities for industrial sectors and leading business restructuring and technology transfer initiatives. A former Assistant Minister of Trade and Industry and Chairman of the Board of Directors of the Industrial Development Authority of Egypt. His leadership focused on enhancing the competitiveness of industrialization in Egypt, deepening local industrialization, and localizing technology. He has served as CEO and Managing Director of several prominent national companies, consistently delivering impactful results in complex environments. As a consultant in manufacturing technology, governance and strategy, Mohammed has advised government bodies, boards and businesses on industrial growth and technology-driven transformation. His work includes providing guidance on manufacturing technology upgrades, developing strategies for the application of Fourth Industrial Revolution technologies, and conducting technology readiness and application-level assessments. He specializes in the institutionalization of family businesses through governance frameworks and leading business transformation and restructuring initiatives. Mohamed holds an MBA from the German University in Cairo and a Bachelor of Engineering in Electrical Power and Machinery Engineering from Ain Shams University. He is a certified board member who specializes in corporate governance. He is also a major contributor to various international development programs such as UNIDO, the World Bank and the United Nations Development Program and a member of the boards of directors of important organizations such as the Arab Organization for Industrialization, the National Strategic Committee for the Fourth Industrial Revolution, and the Automotive Strategy and Industry Committee. Electronics and many prominent private sector companies. He is a speaker at domestic and international industrial and economic forums.



### **Discussant**

**Dr. Steve Colen**

**Professor of Practice, School of Public and International Affairs, Columbia University**

**Dr. Steven Colen** is the Senior Vice Dean of Columbia's School of Professional Studies and a Professor in the Practice of Public Affairs at Columbia University's School of International and Public Affairs. He is also the Director of the Master of Public Administration Program in Environmental Science and Policy at Columbia University's School of International and Public Affairs, the Director of the Master of Science in Sustainability Management at Columbia University's School of Professional Studies, and the Director of the Research Program on Sustainability Policy and Management at Columbia University's Climate School. He is a 1970 graduate of James Madison High School in Brooklyn, New York. Colen received his B.A. in Political Science from Franklin College of Indiana (1974) and his M.A. and Ph.D. in Political Science from the State University of New York in Buffalo (1977; 1979). In 1976-77, Colen was a Ford Foundation Fellow in Urban Environmental Policy; in 1978-79, he was a Rockefeller Foundation Fellow in Public and Environmental Policy and Implementation. Dr. Colen is the former Executive Director of Columbia University's Earth Institute. He is a former policy analyst and consultant to the U.S. Environmental Protection Agency. Colen has served on numerous boards and committees, including the Board of the Pew Faculty Fellowship in International Affairs, the Executive Committee and Committee on Accreditation and Peer Review of the National Association of Schools of Public Affairs and Administration, and the U.S. Environmental Protection Agency's Advisory Council on Environmental Policy and Technology. He is a former member of the Advisory Board of the University of Minnesota's Institute on the Environment and the former Chair of the Lotos Club Science and Technology Committee. He formerly served on the Steering Committee for the Porter School of Environmental Studies at Tel Aviv University and formerly sat on the Judging Committee for the Yidan Prize Foundation. He currently serves on the Board of Directors of Homes for the Homeless, the Board of Directors of the Willdan Group, Inc., and the Admissions Committee of the Lotos Club.



### **Discussant**

**Dr. Anyi Wang**

**Associate Research Scholar at the Research Program on Sustainability Policy and Management, Columbia  
Climate School**

Anyi Wang is an Associate Research Scholar at the Research Program on Sustainability Policy and Management at Columbia Climate School. He teaches *Cost-Benefit Analysis* for the Master Program in Sustainability Management at the School of Professional Studies, and at the School of International and Public Affairs, Columbia University. His research interests include issues on sustainability education, sustainability metrics, contingent valuation method and public willingness to pay, pro-environmental behaviors, and technical and vocational education. Dr. Wang is the project leader on the Research Program's work on developing a series of sustainability curriculum for high school students. He has also been extensively involved in the development and update of the China Sustainable Development Indicator System, a metrics framework designed to measure urban sustainability performance. Dr. Wang graduated from the Ph.D. in Economics and Education program at Teachers College. He also holds a Bachelor's Degree in Financial Accounting from Shanghai Jiao Tong University in China, and a Master of Public Administration (Environmental Science and Policy) degree from the School of International and Public Affairs, Columbia University.



### Speaker

**Dr. Mohamed Galal**

**Dean of Engineering, Al – Azhar University and Innovation & Entrepreneurship Advisor to the University President**

Prof. Dr. Mohamed Galal is the Dean of the Faculty of Engineering and the Founding Director of the Innovation and Entrepreneurship Center at Al-Azhar University, where he also serves as Advisor for Innovation and Entrepreneurship. He earned his Ph.D. from the School of Engineering at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany. In 2025, Prof. Galal was appointed as a board member of the Presidential National Council for Education, Research, and Innovation. He is an internationally recognized consultant in technology commercialization, entrepreneurship, innovation management, and organizational restructuring. Prof. Galal has designed and led global capacity-building programs for CEOs, managers of incubators and accelerators, directors of entrepreneurship centers, and startup founders. Over the past decade, he has guided numerous higher education institutions in developing innovation and entrepreneurship ecosystems, supporting their transition toward entrepreneurial management models. He has collaborated with leading global universities, including the University of Birmingham, London South Bank University, George Washington University, Georgetown University, Carnegie Mellon University, the University of Michigan, Oakland University, Missouri State University, RWTH Aachen, Wayne State University, and FAU. Prof. Galal chaired the technology transfer and Innovation Committee at ASRT and has authored more than 40 articles published in high-impact international journals.

Technology Transfer & Commercialization in Higher Educational Institutions “ Opportunities  
& Challenges

(Presentation)



**Speaker- Ms. Omnia El – Hussein - Administrative Sciences Center, Zagazig University**

A PhD candidate with over 10 years of academic and professional experience in economics, sustainable development, and training. A registered PhD thesis. **Academic Qualifications** Master's Degree in Economics – Zagazig University (2015–2017) Thesis: “Demand for Electric Power and its Impact on Sustainable Development in Egypt”; **Professional Experience:** Teaching Assistant of Economics – Higher Institute of Administrative Sciences (2017–present); Head of Training Committee, Quality Assurance Unit – Higher Institute of Administrative Sciences (2022–present); Trainer – Soft Skills Program – Ministry of Communications & ITIDA (2022); Demonstrator of Economics – Higher Institute of Administrative Sciences (2014–2017); and Intern – Qatar National Bank (2011).



**Speaker- Dr. Hanan Abdel Khalek - Assistant Professor of Economics, Damanhour University**

Egyptian economist and Assistant Professor of economics at Damanhour University, Egypt. She earned her master's degree in 2012 and PHD in 2019 from Alexandria University. Her research interests are in international economics, macroeconomic policy, sustainable development, and inclusive growth, with a deep focus on Middle Eastern and African economics. Hanan has recently completed the 'Public Policy Excellence Program' from the Egyptian Center of Economic Studies and the IMF's Institute for Capacity Development “Inclusive Growth” course to further enrich her academic contributions. Publishing in high-profile journals, Hanan is experienced in disseminating the results of her research to academic, policy, and practitioner audiences.

### Unveiling the Impact of Innovation on Sustainable Industrial Development in Egypt

**Abstract:** This research examines whether innovation positively affects sustainable industrial development in Egypt. To address this central question, sustainable industrial development is represented by three dimensions based on the 9<sup>th</sup> Sustainable Development Goal: developing industrial competitiveness, creating economic prosperity, and protecting the environment. Two fundamental indicators account for innovation in this research: the input indicator, which is the gross expenditure on research and development as a percentage of GDP, and the output indicator, which is medium and high-tech exports as a percentage of manufactured exports. Two approaches are used: the Autoregressive Distributed Lag model (ARDL) and the Var-Granger Causality Wald test. The results reveal that both the input and output indicators of innovation improve industrial competitiveness and contribute to environmental protection; however, the output indicator has an insignificant effect on shared prosperity. The causality test highlights a one-way causality from the input indicator of innovation to sustained industrial development. The output indicator only causes industrial competitiveness. The research results highlight the great potential for R&D to promote sustainable industrial development by enhancing competitiveness and environmental quality. Therefore, increased budgetary commitments to R&D are recommended, in addition to coordination between research institutes, government agencies, and producers of high-tech products.

**Keywords:** Innovation, Sustainable industrial development, Sustainable development goals, Research and development

|                |                                                          |
|----------------|----------------------------------------------------------|
| 3:00 – 4:00 PM | <b>Session 7</b><br>Innovation and emerging technologies |
|----------------|----------------------------------------------------------|

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chairman   | <b>Dr. Alaa Zahran</b><br><i>Professor at the Institute of National Planning and Former President of INP.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Speakers   | <ul style="list-style-type: none"> <li>• <b>Main Speaker Dr. Hossam Osman</b> - Deputy Minister of Higher Education and Scientific Research for Innovation and Scientific Research Affairs (TBC)</li> <li>• Enhancing Responsible Innovation through "Regulatory AI Labs" – Regional and International Experiences – <b>Counselor Asmaa Abdel-Mawla Hassan</b> Administrative Prosecution Authority</li> <li>• Employing Emerging Technologies to Develop Responsible Innovation Business Models in Egypt – <b>Dr. Mai Mostafa</b> – Lecturer, Institute of National Planning</li> </ul> |
| Discussant | <b>Dr. Mahmoud Sakr</b><br><i>Professor at the National Research Center (NRC) and Former President of the Academy of Scientific Research.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                            |



**Chairman**

**Dr. Alaa Zahran**

**Professor at the Institute of National Planning and Former President of INP.**

Dr. Alaa El-Din Mahmoud Zahran is an Emeritus Professor at the Macro Economic Policies Centre at the Institute of National Planning (INP), Specializing in Accounting, Auditing, and financial consulting. He Served as President of the Institute of National Planning from June 2017 to February 2022, and Director of the Macro Economic Policies Center from 2013 to 2017. He has extensive academic experience Spanning More than Three decades, Having Worked as Professor and Associate Professor in the Department of Accounting at the College of Business Administration, King Faisal University, Saudi Arabia, and as a Visiting Researcher at St. John's University in New York, USA. He currently serves as a member of the Editorial Board of the Egyptian Journal of Development and Planning and as a member of the International Union of Arab Academics. He Also Chaired Several Scientific Committees, Participated in the Membership of the Supreme Planning Committee to Develop the Framework for the Medium-term Sustainable Development Plan and the Government's Work Program, and Headed a Group of Strategic Research Projects, Including the "Deepening Local Industrialization in Egypt". He Supervised the Preparation of Five Reports on the "Status of Development in Egypt", for the Years 2018-2022, and the Arab Development Report, in Cooperation with the Arab Planning Institute in Kuwait. He Chaired the INP's International Conferences on "Industrialization and Sustainable Development", "Sustainable Agriculture", "Energy and Sustainable Development", and "The Digital Economy and Sustainable Development". He Also Chaired and Participated in Numerous Distinguished Consulting Services in Various Fields, Including Strategic, organizational, and financial Restructuring, and Establishing Quality and Performance Evaluation Systems for Government and Private Institutions. His Research and Teaching Interests include Strategic Planning, Governance and Sustainable Development, Investment in Capital Markets, Feasibility Studies and Project Evaluation, Intellectual Capital and the Knowledge Economy, Costs and Decision Making, External and Internal Auditing, Financial Accounting, and International Financial Reporting Standards.



#### Discussant

**Dr. Mahmoud Sakr**

**Professor at the National Research Center (NRC) and Former President of the Academy of Scientific Research**

Former Science and Cultural Counsellor, and Head of the Egyptian Education Mission in Japan, Embassy of Egypt, Tokyo, Japan. Former Executive Director, Science, Technology, and Development Fund (STDF), Egypt. Former Vice President, ASRT, Egypt. Former Dean, Institute of Genetic Engineering and Biotechnology, NRC, Egypt. Former Secretary General, Arab Association of Biotechnology, Federation of Arab Scientific Research Council, Arab League. Editor-in-Chief, Journal of Genetic Engineering and Biotechnology, Elsevier. Charmin, BoD, Arab Society of Genetic Engineering and Biotechnology. **Mahmoud M. Sakr** is an emeritus Professor of plant biotechnology at the National Research Center, Egypt, with more than two decades of cumulative experience in Egypt's high-level science, technology, and innovation policies and management. He got his PhD from Tanta University, Egypt, in 1995 (with experimental work carried out at Pavia University, Italy, through fellowships from the Italian Ministry of Foreign Affairs and ICGEB). He obtained a professorship in plant biotechnology in 2006. He received the State Encouragement Award in Agricultural Biotechnology, the National Research Center Awards for Scientific Encouragement and Excellence in Biotechnology, and the award of the International Council for Small Businesses (ICSB). **Internationally**, he served as the Vice President of SESAME (Jordan), NAM (India), and Egypt's Plenipotentiary in the Joint Institute of Nuclear Research (JINR), Russia. Sakr has over 140 scientific publications to his name in the biotechnology field, has authored and co-authored 5 books and two encyclopedias (Egyptian Medicinal Plants and Egyptian Traditional Foods), and has supervised 35 Master's and PhD students from Egypt, Sudan, and Algeria. He has published over 10 international publications and reports on STI policies, management, funding mechanisms, brain drains, brain circulation, climate change, green innovation, empowering youth and women, STEM, science diplomacy, foresight studies, entrepreneurship, and technology transfer and commercialization.



### **Main Speaker**

**Dr. Hossam Osman**

### **Deputy Minister of Higher Education and Scientific Research for Innovation, Artificial Intelligence, and Scientific Research**

Dr. Hossam is responsible for participating in the development of national strategic policies and plans to enhance the innovation impact of higher education and scientific research institutions on competitive productivity, entrepreneurship, and sustainable development in Egypt, based on scientific research outputs and emerging technologies, particularly artificial intelligence technology, within the framework of the government's work program to achieve sustainable development, reduce import bills, and increase exports. He is a member of the National Council for Artificial Intelligence, which is responsible for developing and overseeing the implementation of the National Strategy for Artificial Intelligence. Dr. Othman held the position of Advisor to the Minister of Communications and Information Technology for Technological Innovation, Training, and Electronics Industry, and Deputy Chief Executive Officer of the Information Technology Industry Development Agency for more than eight years, where he participated in developing Egypt's information and communication technology and electronics industry to increase its global competitiveness and make it a key contributor to economic growth. Dr. Othman has over 35 years of experience divided between government and private sector, industrial and academic circles, and local and global companies, inside and outside Egypt, through holding several specialized positions as manager, consultant, researcher, educator, and developer in the field of information and communication technology. Dr. Othman graduated from the Faculty of Engineering at Ain Shams University with a specialization in Computer Engineering in 1985 with distinction and honors, obtained his Master's degree in Computer Engineering from Ain Shams University in 1990, and earned his Ph.D. in Computer Engineering from Queen's University in Canada in 1996, where his dissertation received the Excellence Award in Engineering and Applied Sciences. Dr. Othman has obtained numerous professional certificates from leading institutions such as the Massachusetts Institute of Technology, Harvard University, and Carnegie Mellon University in the fields of technological innovation, entrepreneurship, information technology service delivery, and software development. Dr. Othman is renowned in academic life for his research and studies in the fields of artificial intelligence, pattern recognition, image processing, and embedded systems.



Speaker

**Ms. Asmaa Shehata Hassan**

**Administrative Prosecution Authority**

She appointed as a teaching assistant in the Department of Economics and Public Finance faculty of law Alex Uni. and was later promoted to the position of assistant lecturer. She then joined the Administrative Prosecution Authority. She progressed within the Administrative Prosecution until she attained the rank of Chief Prosecutor. She is also a graduate of the Sustainable Development Ambassadors Program – Fourth Cohort, under the supervision of the National Institute for Governance and Sustainable Development, and she received accreditation as a certified trainer from Ain Shams University. The researcher holds two Master's degrees: one in Law from Alexandria University and another in Public Administration from the American University in Cairo. She published several studies at the intersection of law and public administration. Her most recent paper is titled "Towards Ethical Artificial Intelligence: Insights from the Egyptian Charter and the European AI Act", which is set to be published in the Middle East Review of Public Policy and Administration (MERPPA).

### **Enhancing Responsible Innovation through "Regulatory AI Labs" – Regional and International Experiences**

**Abstract:** Rapid developments in information technology and challenges posed by artificial intelligence that affect societal values, and the security and safety of its members have highlighted the dilemma of how to regulate AI innovation in a way that does not hinder creativity nor compromise the values of transparency, data security, and safety. Leveraging descriptive, analytical, and comparative approaches, the study proposes the idea of adopting AI regulatory sandboxes, which provide a safe and controlled environment for testing AI systems under the oversight and supervision of the competent authority and within a specific objective and timeframe. The study examines the importance of the concept and its role in achieving the Sustainable Development Goals. It also examines the experiences of the European Union, Singapore, and the United Arab Emirates in establishing and operating AI regulatory sandboxes. The study concludes with a recommendation for decision-makers to adopt this approach to ensure the promotion of AI innovation within a safe and controlled environment.

**Keywords:** Responsible AI, Regulatory Sandboxes, Innovation, Sustainable Development



**Speaker- Dr. Mai Mostafa- Lecturer, Institute of National Planning**

Dr. Mai Awad is currently working as a lecturer of Business Administration at the Institute of National Planning. She is also working as a head of Economic Analysis Department at the National Accounts Unit at the Ministry of Planning, Economic Development, and International Cooperation. She obtained her Bachelor degree from the Faculty of Economics and Political science, Cairo University, Economics Department, English Section with Excellent honors. Then, she obtained Masters and a Ph.D. Degrees in Business Administration from the Faculty of Commerce - English Section, Cairo University. She has 15 years of experience in the field of planning and sustainable development. She also worked as an assistant of Chief Executive Officer of Center of Data Analytics and Consultancy (CDAC). She worked as an assistant lecturer at the Faculty of Business Administration at Al-Ahram Canadian University. She conducted a number of policy papers, as part of her responsibility at the Ministry of Planning, Economic Development, and International Cooperation.

**Employing Emerging Technologies to Develop Responsible Innovation Business Models in Egypt**

**Abstract:** The relationship between emerging technologies and responsible innovation business models has become more serious issue than before, as there is an urgent need for innovations that address the “Grand Challenges” of our current era, such as climate change, food security, and poverty, as well as finding solutions to challenges related to the future implications associated with emerging technologies. This research paper presented a proposed model for the relationship between emerging technologies and responsible innovation business models. This proposed model demonstrated that emerging technologies are characterized by five main features that distinguish them from other technologies, namely radical novelty, relatively rapid growth, coherence, prominent impact, and uncertainty. Responsible innovation is also characterized by four basic features: anticipation, inclusion, reflexivity, and responsiveness. Additionally, the proposed model demonstrated that innovation governance plays the role of a moderator variable, influencing the direction and strength of the relationship between emerging technologies and responsible innovation. Furthermore, the paper presented a proposed framework for enhancing the role of innovation governance in Egypt, based on three key elements: assessing innovation impacts, engaging stakeholders, and responsiveness of business organizations. The main contribution of this paper is identifying and clarifying the main features of these concepts and the relationships between them, which helped in understanding the relationship between emerging technologies and responsible innovation, and clarified the important role of innovation governance and its impact on their relationship.

**Keywords:** Emerging Technologies, Responsible Innovation, Business Models, Innovation Governance.