



The 4th Scientific Conference of Ain Shams University

Towards a National Innovation System

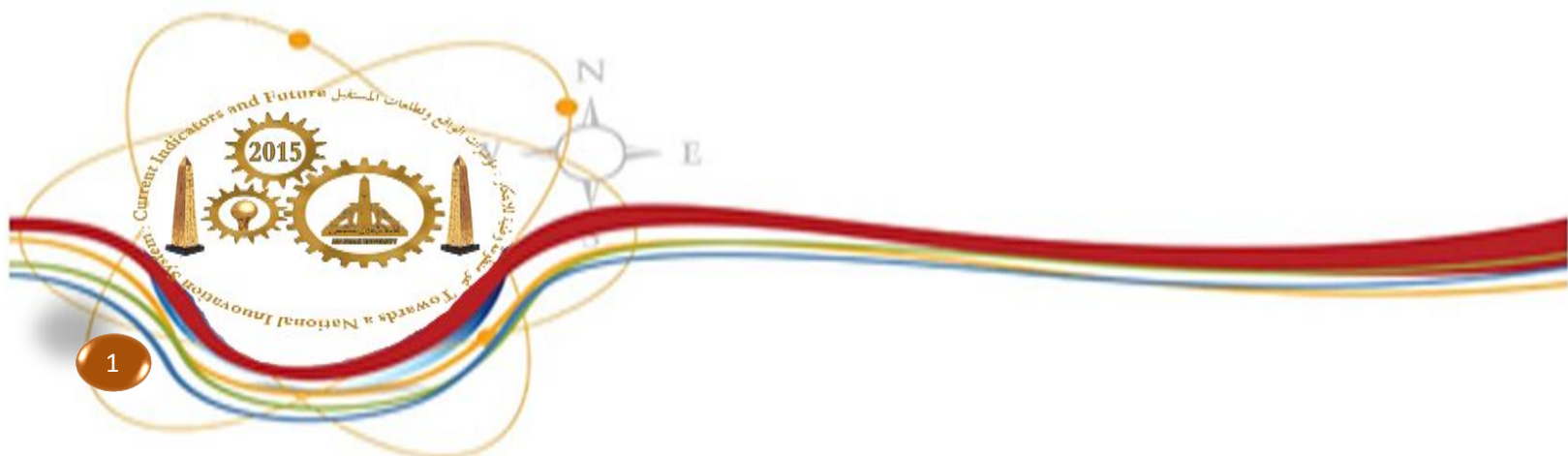
Current Indicators & Future Prospects

From 27th to 29th April 2015

Venue: Grand Conference Hall

Faculty of Pharmacy

Ain Shams University



Preamble:

A new phase in Egypt has started formed by the forces of change among which is the growing trend towards globalization, new economy, green economy, as well as the acceleration of world competitive powers, and the emergence of “sustainability of the competitive advantage” concept which applies to developmental institutions especially the national system for higher education and research. For such a system to be recognized as distinguished and competitive, the need emerges to conduct all conclusive reformatinal and developmental operations to strengthen its cooperation with active categories in society on one part, and achieve higher levels of national development on another.

No society is capable of reaching the goals of a comprehensive, sustainable development, and facing the demands of the future except with knowledge, technological development and innovation, through channeled academic research, which is considered in any society the cornerstone to academic progress and development. Therefore, advanced countries strove to increase their support of academic research and its development. Methods and multiple forms were founded to achieve the utmost avail of academic research in its various types with special attention to the innovative, technological and industrial side. As a result, there emerges an escalation in endowing chaired positions in advanced and future sciences, expanding the establishment of research and technology parks, incubators, centers for innovation and excellence, the valleys of research and development, all are efforts aiming at initiating fertile domains for innovation.

The national systems for innovation came into existence to embody the real concern with the interactive participatory concept to build a new economy and adopt a new way to reflect upon science and technology focused on the intertwined causal relations between scientific activity and economic performance. Moreover, they represent the importance of effecting more interconnection and integration among the functions and activities of science and technology institutions, along with creativity (transforming ideas into useful products and services) with respect to its being the end aim to all scientific and technological efforts, as well as prime incentive to these activities and creative works. The aforementioned institutions include governmental bodies, scientific councils, funding establishments, universities, special research foundations, and technology-built industries.

Although these institutions vary in policies, goals, and special programs, they need within the national system for innovation to be unified by a comprehensive discipline which targets them toward achieving common social and economic goals.

The national system for innovation proposes a comprehensive vision as per the connectivity between scientific activity and economic performance. It represents a relatively new entity in Egypt. Therefore, a need arises to truly understand what forms this system? How does it function? How can a move from the system of science and technology to the national system for innovation be effected in light of the turn to a new economy via: understanding the structure and performance of scientific institutions in Egypt, the analysis of the national systems for innovations to their basic elements, specifying the role of each element within the frame of the study system performance? Moreover, the factors governing building these systems will be defined, as well as the mechanics according to which a relatively independent institution is creatively self-organizing, thus achieving a set of common goals.

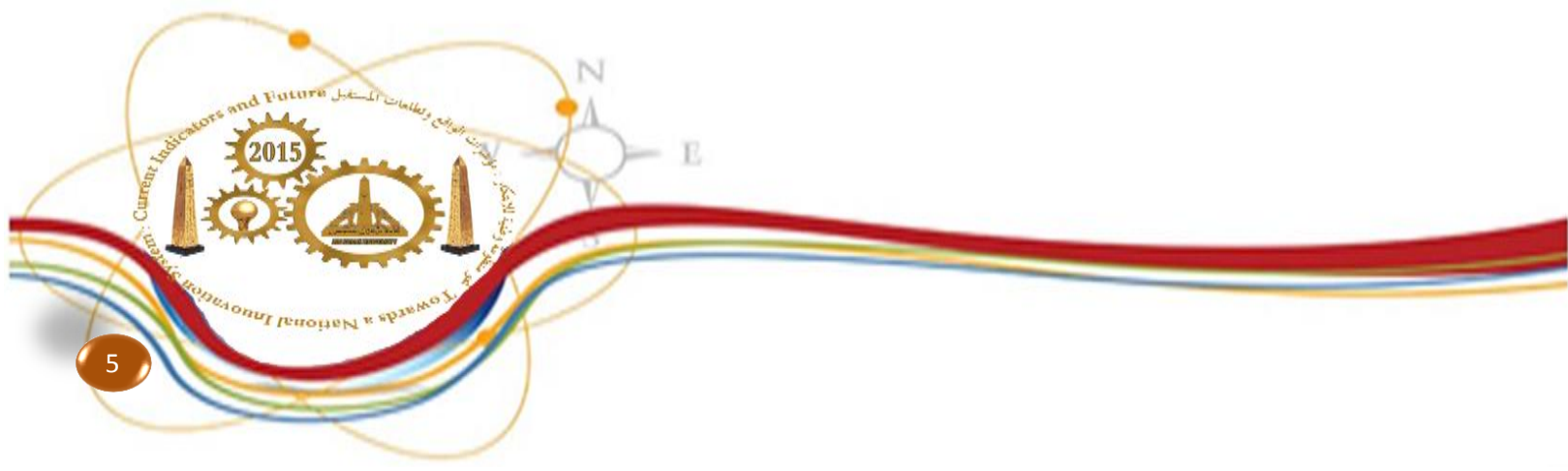
Within this context ASU proposes through its conference varied visions to help build the National Innovation System which holds together education, scientific research, and industry to support the local development of the nation and build a future for generations to come. The NIS includes mechanisms to draw a technological standards of performance, means of cooperation, and strategies for development through research groups in both sectors of education and scientific research. It sets the goal to achieve an infrastructure of state-run scientific research connected with industry, serves the local market needs and the state developmental plans. In consequence it allocates the required investments for advancing science and technology in the country.

Goals:

This conference aims to achieve the following:

- 1- Providing an evaluational frame for the national march of higher education, academic research, technological development, and innovation from 2000 to 2015.
- 2- Depicting the features of the national system for higher education and academic research in light of the basics of new economy (industrialization, scientific and technological empowerment, networking, social epistemological mind, thought and epistemological culture, risks and explorations, good governance, and creative empowerment.
- 3- Presenting initiatives to build scientific and technological capacities nationally, regionally, and internationally (technological parks, technological cities, science/research parks, science cities, excellence centers, technological incubators, hi- tech based communities, innovation networks, virtual technological research centers, technology poles, and technological oases.

- 4- Outlooking the future of scientific and technological specializations and the expansions of the demands made by high-priority developmental sectors.
- 5- Proposing visions as per the 'know how' of transforming Egyptian universities into research, and entrepreneurial universities.
- 6- Acknowledging the mechanics of reinforcing national capacities to promote higher education, developmental technology and innovation.
- 7- Identifying the prime factors affecting the innovative environment in higher education and research institutions.
- 8- Understanding the dynamics according to which national innovation systems function, in terms of interconnecting the national establishments for innovation with an inseparable bond.
- 9- Defining introductions, foundations, standards, and modern general directives to structure and develop the national system for innovation in conformity with its dynamic nature.
- 10- Proposing a scientific and technological cooperation strategy among Arab states, Africa, and the world.
- 11- Demonstrating the topmost expertise, regionally and globally, in the field of structuring and developing national systems for innovation, and considering benefits befitting the Egyptian case encompassing both its conditions and ambitions.



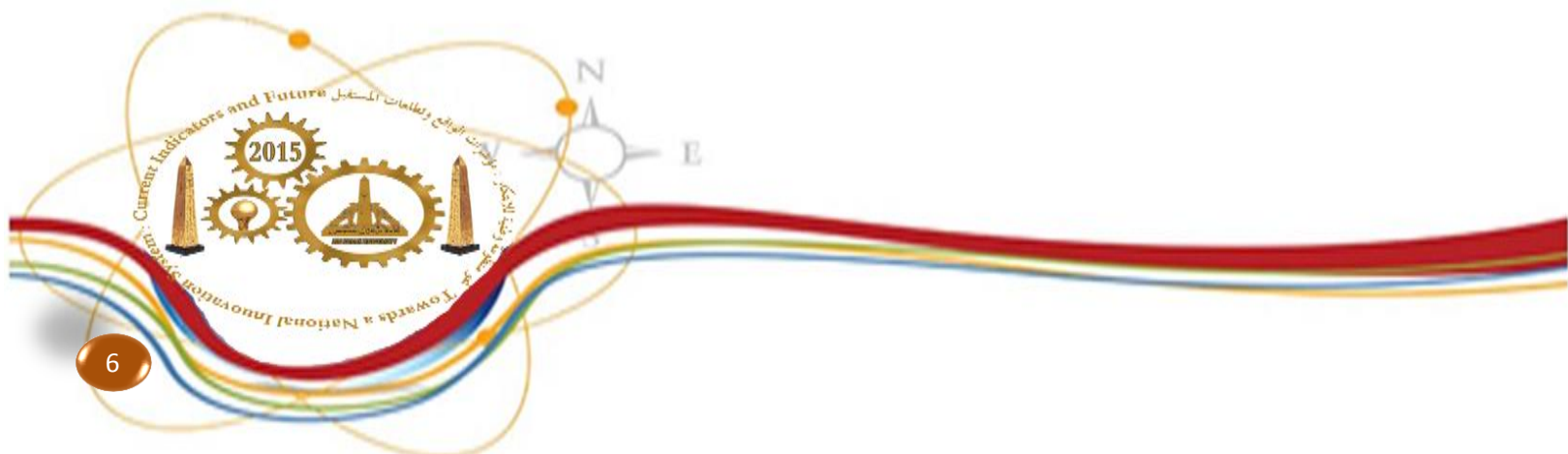
Conference Topics:

First Topic: Evaluating the national pursuit of higher education, academic research, technological development, and innovation 2000-2015

- ❖ Observation and diagnosis of the de facto conditions of national system for higher education, academic research, technology and innovation.
- ❖ Defining the national policies, and strategies that guide the system for higher education, scientific research, technology, and innovation (the information and communication strategy, social and economic strategy, wide-ranging strategy for numerous developmental sectors, others).
- ❖ Conducting internationally standardized comparative analysis observing the performance of the national system for higher education, scientific research, technological development, and innovation.

Second Topic: The future of the national system for higher education, scientific research, and innovation in light of the basics of new economy

- ❖ World trends in control of the future of higher education, scientific research and innovation.
- ❖ The future of scientific and technological specializations and the growth of demands made by high priority sectors.
- ❖ The prime factors affecting the innovative environment in higher education and scientific research foundations.



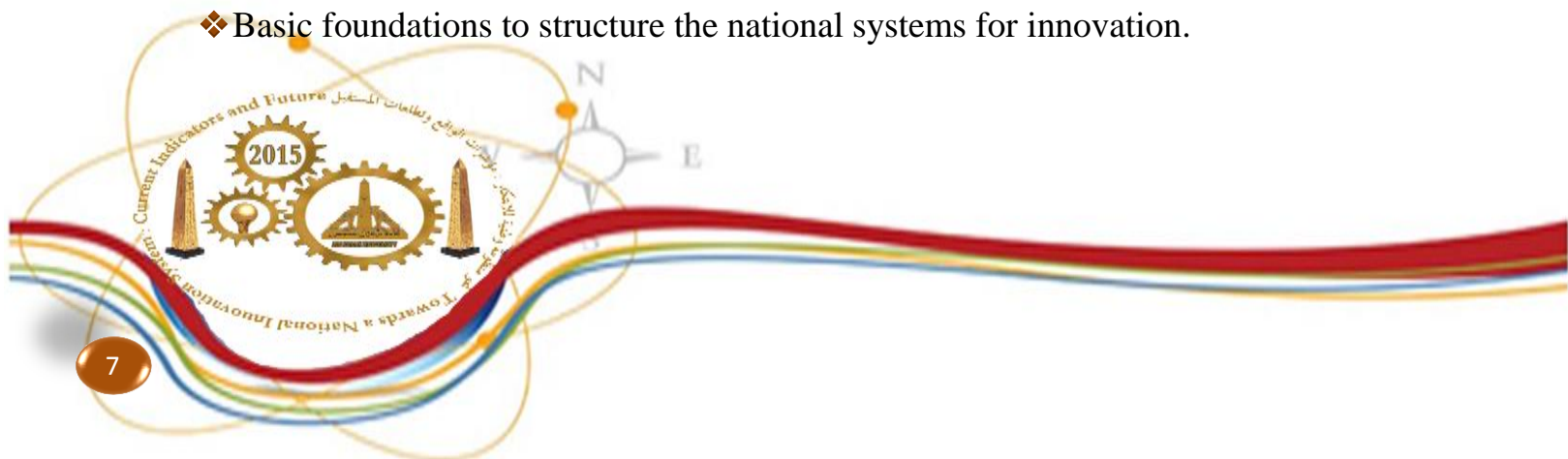
- ❖ Scientific and technological capacity building initiatives internationally, regionally, and nationally (technology parks, technology cities, science/research parks, science cities, centers of excellence, technological incubators, hi-tech based communities, innovation networks, virtual technological research centers, technology poles, and technological oases.
- ❖ Business and technology incubators performing as scientific research support mechanisms.
- ❖ Centers for technological transformation at universities transforming scientific ideas or patents into produceable, marketable prototypes.
- ❖ Establishing the culture of entrepreneurship in the university in specific, and in society in general.
- ❖ Transforming Egyptian universities into research, entrepreneurial universities.

Third Topic: mechanics for reinforcing national capacities to promote scientific research, technological development and innovation.

- ❖ Technological innovation in higher education and scientific research institutions.
- ❖ Mechanics of innovation management in higher education and scientific research institutions.
- ❖ Entrepreneurship and knowledge system in support of Triple Helix in higher education and scientific research institutions.

Fourth Topic: National systems for innovation.

- ❖ The national system for innovation: intellectual basics, validations, and goals.
- ❖ Basic foundations to structure the national systems for innovation.

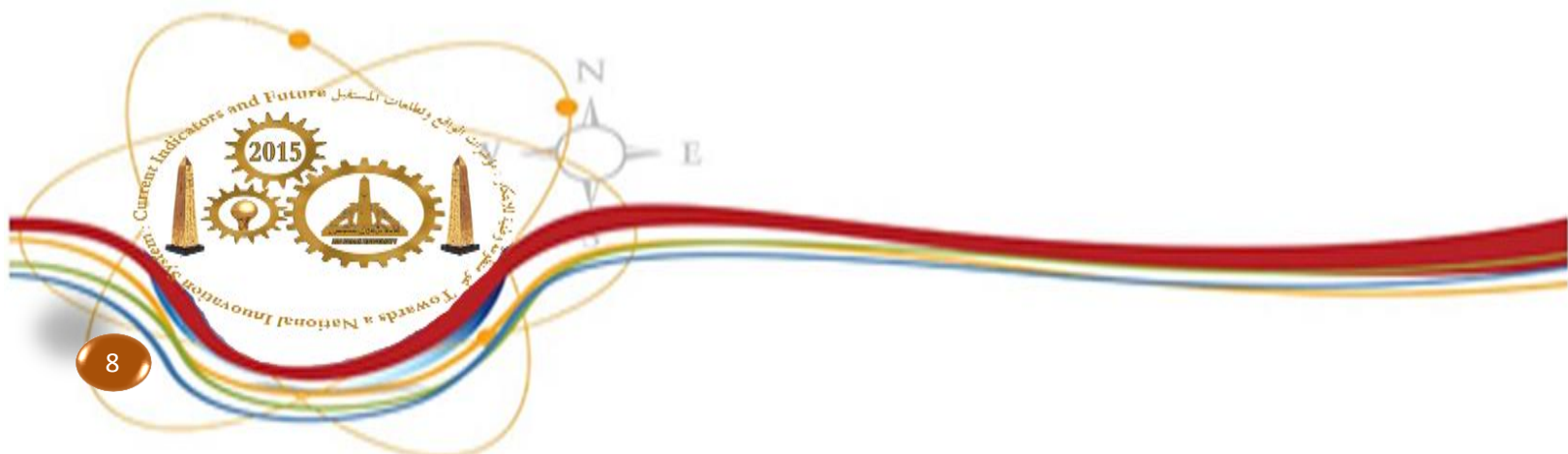


- ❖ The challenges of the transformation from the system of science and technology to national systems for innovation.
- ❖ The role of higher education and research institutions in structuring national systems for innovation.
- ❖ The strategy for an Arab, African, and world technological cooperation.
- ❖ The strategy for interconnecting scientific and research activity and national economic performance (the Quadruple Helix to reinforce national innovative capacities, the Triple Helix concept, and the examples of transferring, settling, and developing strategic and advanced technologies, etc).
- ❖ Pivotal elements of success.

Fifth Topic: Expertise and distinguished regional and international practices in the structuring and developing of national innovation systems.

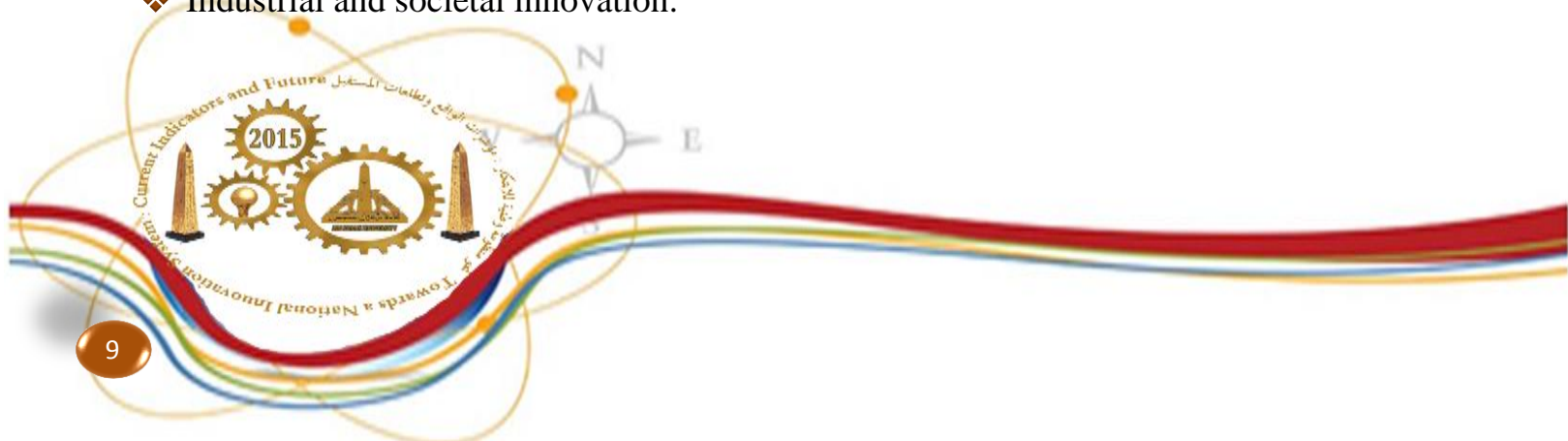
Sixth Topic: the conference receives studies in all research areas (energy, industry, information and communication technology, biological and environmental resources, health and social development, education and human resources, culture, basic sciences, and humanities), representing the basics for structuring the national system for innovation and its development focussing on the creative, technological and industrial aspects.

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Suggested Topics:

- ❖ Advanced and modern industries:
- ❖ Intensive hi-tech industries, i.e. information and communication industries, bioengineering, renewable energy, environmental, and pharmaceutical industries, chemical industries, etc.
- ❖ Advanced technology, new materials, and applications of biotechnology.
- ❖ Atomic energy and its peaceful applications.
- ❖ Radiation technology, and radioactive contamination.
- ❖ Nanotechnology, biotechnology, and microelectronics.
- ❖ New and renewable energy.
- ❖ nanotechnology
- ❖ Environmental causes concerned with the preservation of biological resources, environmental pollution, sustainable development, green economy, the influence of climatic changes on water, agriculture, health, wetlands, fisheries, and beaches.
- ❖ Applications of environment-friendly new technologies.
- ❖ Development, utilization and investment of saltwater/freshwater fisheries.
- ❖ Maritime techniques.
- ❖ Future of transport sector.
- ❖ Pedagogical, educational and academic innovation
- ❖ Medical care.
- ❖ Life sciences (botany, zoology, entomology)
- ❖ Nutrition and biological pharmacy.
- ❖ Industrial and societal innovation.



- ❖ Multi-media computation (scientific, social computation..etc)
- ❖ Safety and security information
- ❖ Space sciences, astronomy, and geology.

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Note Speakers

The conference note speakers are a number of distinguished scientists and experts who are well accomplished in fields pertaining to conference topic(s)

Photo of Speaker

Name/.....

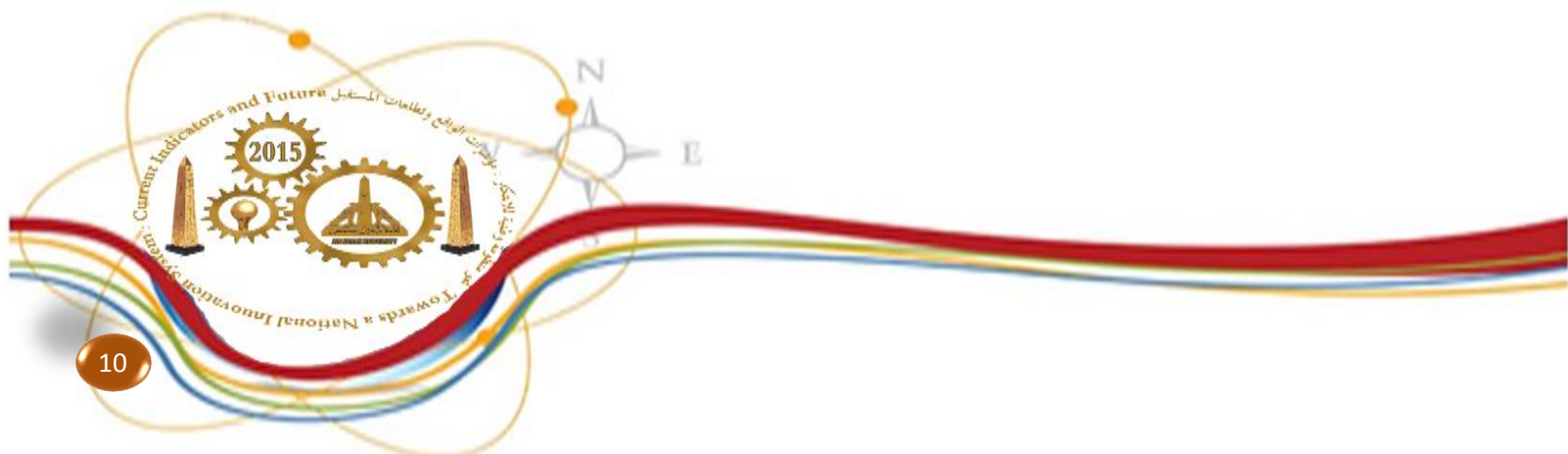
Job Title:

Academic credentials:

Career Experience

Conference designated activities:

- 1- Launching the strategic plan for scientific research, technological development and innovation.
- 2- Honoring selected university figures.



3- Activities parallel to the conference:

- ❖ An exhibition featuring several educational institutions, companies, and training centers.
- ❖ ASU annual convocation

Participants and Attendees

1. Managers and personnel in all ministries and governmental bodies
2. Universities and faculties
3. Institutions, research, rehabilitation and training centers.
4. Economic and developmental public and private organizations, and chambers of commerce.
5. National and international non-governmental organizations.
6. Firms, corporations, and governmental bodies in the field of business entrepreneurship.
7. Media and Journalistic foundations
8. Business men
9. Researchers
10. Students
11. Stakeholders

