ISLAMIC ACADEMY OF SCIENCES
Newsletter

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Ben Ali patronises Tenth IAS Conference on IT

Under the patronage of His Excellency the President of the Republic of Tunisia Mr Zine El-Abidine Ben Ali, the Islamic Academy of Sciences convened its tenth international conference under the title *Information Technology for Development in the Islamic World*, during 20-24 November 2000.

The conference, which was held at Khamsa Corinthia Hotel, Gammarth, Tunis, was an open activity in which over 120 participants representing over 25 countries participated. It was organised and sponsored by the following organisations:

- Islamic Academy of Sciences (IAS), Amman, Jordan;
- Secretariat of State for Scientific Research and Technology, Tunis, Tunisia;
- Islamic Development Bank, Jeddah, Saudi Arabia;
- OIC Ministerial Committee on Scientific and Technological Co-operation (COMSTECH), Islamabad, Pakistan;
- OPEC Fund for International Development, Vienna, Austria;

The main objectives of the conference were:

a) To appraise some contemporary (theoretical and practical) concepts in Information Technology (IT) with the aim of introducing them into national development policies in OIC and developing countries;
b) To define some areas of importance for possible inclusion in IT policies, and develop innovative proposals for future activities in IT;
c) To assess the status of IT applications in the Islamic world, with particular reference to countries with extensive or limited experience in this field;
d) To define a role for governments and NGOs in IT development;
e) To study the impact of developments in IT on medicine and education; and
f) To facilitate the free exchange of views among experts on IT policies;

In addition to a number of keynote presentations from Tunisia and Pakistan that reviewed the status of Information Technology (IT) in the Islamic world, an Internet visio-conference was organised in which Dr Vinton G Cerf, the eminent American academic and one of the "founders" of the Internet, presented a keynote paper on the future of the Internet and its applications.

In order to generate academic interaction among the participants, the conference was mostly divided up into roundtable discussions (three in all), in which short communications were followed by lively discussions on a number of important issues. The roundtables addressed the themes of IT Policy Issues; IT and Education and National IT Scenarios.

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Academy Patrons, send messages to IT Conference

As is customary on such occasions, the Patrons of the Islamic Academy of Sciences both sent messages to the Tenth IAS Conference on Information Technology. The message of HE the president of the Islamic Republic of Pakistan was delivered by Dr M A Mahesar, and the message of HRH was read out at the opening session of the conference by HE Dr Adnan Badran, IAS Treasurer, and former Assistant DG, UNESCO.

H E the President of the Islamic Republic of Pakistan

The Patron of the Islamic Academy of Sciences in his message to the conference which was read by Dr M A Mahesar, COMSTECH, reiterated that the rapid growth of information technology continued to alter the cultural, social, economic and scientific landscape of the world.

Through its unprecedented scale of penetration in almost every element of human affairs, information technology created new challenges. To meet these challenges and obtain maximum benefits from this wonderful and potent tool of multi-dimensional development, the Ummah must devise measures and explore strategies, he added.

The IAS Patron added that while making information technology an engine of growth and integration of the Ummah through the Internet, "we must remain on guard for preserving and promoting Islamic values and our rich cultural heritage."

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General Assembly convenes Eleventh Meeting

The General Assembly of the IAS convened its eleventh meeting in Tunis (Tunisia) on 22 November 2000.

The meeting was chaired by Dr Abdel Salam Majali, IAS President, and attended by more than 35 Fellows, as well as Moneef Zou'bi, Director General, IAS.

At the start of the meeting, the Director General presented the IAS Secretariat report which detailed activities undertaken during the previous year including the fund raising campaign embarked upon by the President and the Secretariat to generate income for the Waqf of the IAS.

The DG also briefed the General Assembly on the work of the science and organising Committees responsible for organising the 2000 conference, and the untiring efforts of both committees to ensure that both the academic content of the conference as well as the logistical details of it were of international standard.

The General Assembly reviewed and ratified the various Statements of Accounts that were presented by Dr Adnan Badran, IAS Treasurer, who presented the main features of the Academy's financial details in his presentation.

The General Assembly deliberated for some considerable time over a proposal submitted by the Council that incorporates a number of amendments to the procedure governing the "Election of new Fellows."

The General Assembly ratified the results of 2000 Fellowship Elections as presented in a proposal from the Academy Council.

The General Assembly also spent some considerable time discussing the programme of action of IAS, the IAS Medical Journal, Academy visibility as well as planned activities for 2001, including a list of possible themes that can be adopted for the Eleventh Conference of the Islamic Academy of Sciences.

New Academy Fellows elected

At its Tunisia meeting, the General Assembly of the Islamic Academy of Sciences ratified the results of the 2000 Fellowship elections. The elections resulted in 18 candidates obtaining the required number of votes, thus becoming the newly elected Fellows of the Islamic Academy of Sciences.

The eighteen newly elected IAS Fellows are:

1.	Prof. Naim Afgan	Bosnia/ Mechanical Engineering
2.	Prof. Ishfaq Ahmad	Pakistan/Physics
3.	Prof. Attia A Ashour	Egypt/Mathematics
4.	Prof. Ahmad Azad	Bangladesh/Australia/Biochemistry
5.	Prof. Azret Bekkiev	Balkar/Russia/Radiophysics
6.	Prof. Ramazan Demir	Turkey/Biology
7.	Prof. Hamza El-Kettani	Morocco/Physics
8.	Prof. Abdul Qadeer Khan	Pakistan/Metallurgical Engineering
9.	Prof. Iftikhar Malik	Pakistan / Medicine/ Pathology
10.	Prof. Akmet Mazgarov	Tatarstan-Russia/ Petrochemistry
11.	Prof. Syed Qasem Mehdi	Pakistan/ Molecular Biology
12.	Prof. A. Mekhrabov	Azerbaijan/ Materials Science
13.	Prof. S. Al-Mudhaffar	Iraq/ Biochemistry
14.	Prof. Ibrahim Al-Naimi	Qatar/ Chemistry
15.	Prof. Riazuddin	Pakistan/ Physics
16.	Prof. Lorenzo Savioli	Italy/ Medicine
17.	Prof. M A Waqar	Pakistan/ Biochemistry
18.	Prof. Ibrahima Wone	Senegal/ Medicine

With the 2000 Fellowship election over, the number of IAS Fellows stands at present at 88.

The Editorial Board congratulates the new members of the IAS on their election and wishes them success in the service of the Islamic Academy of Sciences.

IAS Council holds Twenty Sixth Meeting

Alongside the tenth conference of the Academy held in Tunis (November 2000), the IAS Council convened its twenty sixth meeting under the chairmanship of Dr Abdel Salam Majali, President of the Academy.

The Council discussed a wide range of issues including Academy finances, Academy conferences, activities and programmes of the IAS, Academy Fellowship Elections and Academy Publications and visibility.

The Council explored ways and means of generating additional funds for the Waqf of the Academy to enable it to implement more activities and programmes. The President presented a number of ideas on this matter and also briefed the Council on the contacts IAS had established with Sarawak (Malaysia), Malaysia as well as Qatar and the Republic of Tunisia.

The Secretary General presented a number of ideas on how to increase the visibility of the Academy, and establish further contacts with countries and organisations.

The Council also extensively deliberated over a set of amendments to the Bye-Laws governing the "Election of New Fellows," taking into consideration the experience gained in the subject over the last few years.

The Council also commended the effort of the committee that undertook the task of editing and publishing the 1999 Conference Proceedings book.

IAS Publishes new book

The IAS has recently published the proceedings volume of the Ninth IAS Conference which was held at Tehran (Iran), during July 1999, under the title of "Science and Technology Education for Development in the Islamic World."

The book which was edited by Mehmet Ergin, Mustafa Doruk and Moneef R. Zou'bi, is divided up into six main parts.

Part One contains the statements and messages presented at the inaugural session of the conference. Part Two includes the five papers that dealt with the essence of scientific knowledge and the interpretation of Islam as its source. Furthermore, the fundamental principles underlying science education are discussed from the viewpoint of Islam and the Islamic environment.

Part Three is devoted to contemporary issues in science education in the Muslim world. The articles in this part concentrate on views and suggestions on how to improve the present strategies, ranging from the enhancement of open universities to the restructuring of engineering education.

Part Four is devoted to the current state of science education in Islamic countries, and expectations for development in the future. The variety of articles included in this part provides a true reflection of the wide spectrum of experience gained by several countries.

The Ninth IAS Conference provided a fruitful platform for debate on Islamic philosophy and its relation to physics and metaphysics. Contributions of this nature are arranged in Part Five under the title "Topics Related to Science Education and Scientific Development in the Islamic World." Sustainable development, the view of the World Bank regarding scientific advancement in the new millennium together with the ranking criteria for the evaluation of scientists are additional topics addressed in this part.

Part Six is the appendix which includes the list of participants in the conference, the conference scientific and organising committees, the names of IAS Fellows and Council Members as well as various details about our Academy.

EDITORIAL LETTER

Information Technology for the future

One of the objectives of the Islamic Academy of Sciences is to promote the "free exchange of ideas and knowledge" and to "maintain, increase and disseminate knowledge." The emergence of a global knowledge society, based on the use of information and communication technologies unimaginable half a century ago, makes the fundamental mission of the IAS and its sister OIC organisations more topical than ever.

Yet the extraordinary technical possibilities of Information Technology (IT) are no substitute for the required resolve of our decision-makers in the Islamic World to increase and indeed focus on individual and collective development, especially in science and technology.

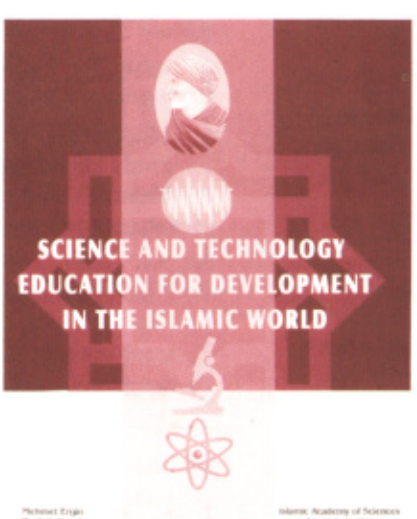
Naturally, in our quest to formulate policies in the area of IT and development, we need to keep a number of fundamental principles constantly in mind. The right to education and access to information are but a couple of such principles that should govern our IT outlook.

Whenever we assess the potential of IT, we find ourselves somehow addressing the question - where will the IT revolution lead to, and – how can we as developing countries benefit from such a phenomenon? If we agree that the so-called IT economy is not an end in itself, but a means for the prosperity of a society and its members, then we have to conclude that our aim must be to build a "knowledge society," based on knowledge-sharing.

We are all gravely concerned by the risks of the digital divide that is developing between the IT advanced and the developing countries that are still trying hard to catch up. We are concerned by the inter-country digital divide too. If we do not overcome this digital divide, then we are left with a semi-backward society that is fragmented and mainly made up of small islands of wealth in a sea of dire need.

Let us not make the same mistake today that was made for development in the past. Let us integrate the full social, cultural and ethical dimensions of sustainable human development into our approach to IT.

MRZ



Science and Technology Education for Development in the Islamic World - Proceedings of the ninth international conference, Tehran (Iran) (1999) - Published by the Islamic Academy of Sciences (2000). *Hardcover, 525 pages, 266×190 mm, illustrated, English, ISBN 9957-412-00-7,* ***Editors: M Ergin (Turkey), M Doruk (Turkey) and M R Zou'bi (Jordan). Price US$40-00, including p&p.***

IAS Tunis Declaration on
Information Technology for Development in the Islamic World

Adopted in Tunis (Tunisia), on the
27 Sha'aban 1421
24 November 2000

PREAMBLE

WHEREAS Allah (God) Subhanahu-Wa-Ta'ala has created Man in the best of forms, provided him with the abilities and resources to improve his well-being, endowed him with reason, dignified and honoured him, and granted mankind the inheritance of life and resources of nature;

WHEREAS Allah has made the pursuit of knowledge an absolute obligation and its acquisition a source of pride and dignity, and has urged human beings to seek, utilize and disseminate it for the benefit of humanity;

WHEREAS the teachings of Islam emphasize the importance of the well-being of man, and underline the fact that Man's relationship to the universe and to his fellow-man must be one of stewardship and complementarity respectively, and never one of mastery;

WHEREAS Information and Communication Technologies (ICTs) have now become the prominent features of "globalization," and are continuously reaching new levels in advancement and complexity;

AND WHEREAS the majority of OIC and developing countries seem to lack a clear vision in the field of Information Technology (IT), and are thus lagging behind in this area;

NOW, THEREFORE the Islamic Academy of Sciences:

(i) **APPRECIATING** the activities being carried out by many governments, academic institutions, and non-governmental organizations in the area of information and communication technology;

(ii) **REALIZING** that some OIC member countries actually face steadily rising child and adult alphabetic and numeric illiteracy, and the prospect of computer illiteracy that is looming large on the horizon;

(iii) **ACKNOWLEDGING** that information technology can represent an area where rapid and meaningful advancement can readily be made by OIC countries;

(iv) **STRESSING** that emphasis on advancement in IT should not be at the expense of investment in basic sciences, which are the backbone of sustainable S&T advancement;

MOREOVER

(a) **OBSERVING WITH CONCERN** the lack of a long-term IT policy at the national level in most OIC member countries;

(b) **NOTING WITH CONCERN** the limited number of centres of excellence and the general deficiency of S&T institutions in many OIC member countries;

(c) **NOTING WITH CONCERN** the limited number of enrolled students and quality-graduates, as well as the low level of instruction at science and vocational institutions;

(d) **NOTING WITH CONCERN** the lack of specialized IT-based educational programmes at all levels of education in most OIC countries and the inadequacy of educational institutions;

(e) **NOTING WITH CONCERN** the widening inter-country and trans-country digital divide that is developing as a result of the information technology rush;

(f) **OBSERVING WITH CONCERN** the difficulties faced by some OIC member countries in combating alphabetical adult illiteracy and in promoting computer awareness among the adult population;

(g) **BEING CONCERNED** at the lack of IT standards at the national, as well as regional levels in OIC and developing countries;

(h) **BEING CONCERNED** at the lack of adequate infrastructure available in most OIC countries to sustain the growing IT sector in them;

(i) **NOTING WITH CONCERN** the absence of co-ordination between the various agencies involved in IT education within the educational process;

(j) **NOTING** the apparent slow adoption of advanced educational and IT tools such as personal computers, access to the Internet, etc ... and the general inadequacy of educational infrastructure;

(k) **NOTING** the lack of up-to-date IT curricula for all stages of the educational process, as well as the shortage of qualified and motivated teaching staff ;

THE ISLAMIC ACADEMY OF SCIENCES MEETING AT TUNIS DURING NOVEMBER 2000 CALLS UPON the international community to:

(i) **EXTEND**, in the spirit of co-operation, all possible help to developing countries in the area of technology transfer, as well as debt relief, to enable them to divert more resources to develop their IT infrastructure ;

(ii) **EXTEND** free-trade agreements with developing countries and open up their IT markets to products, especially software, being developed in the Third World ;

(iii) **CONTINUE** to support research projects of importance in the developing countries;

AND CALLS UPON the leaders and decision-makers of Islamic countries to: →

(a) **RE-DEFINE** national development objectives in the area of science and technology, especially IT, in view of globalization and the information revolution;

(b) **EVALUATE** their IT policies and where possible incorporate them into national S&T policies;

(c) **DIVERT** available resources to science education, with a view to building up a scientific and technological manpower base capable of adapting and developing new - including information and communications-technologies;

(d) **INTRODUCE** IT programmes at the various stages of the educational process;

(e) **PROMOTE** the adoption of PC-clusters at educational institutions to facilitate optimum use of computers at such institutions by students and faculty;

(f) **FACILITATE** the use of Internet to all sectors of society and adopt a subsidised e-rate policy to enable the public to use the Internet at low cost;

(g) **ESTABLISH** training institutions for IT, especially for personnel involved in e-commerce;

(h) **SPEED UP** the introduction of e-systems into national infrastructures including e-government, ...;

(i) **INTRODUCE** appropriate legislation, including tax and customs exemptions, to promote the various aspects of the IT industry;

(j) **AIM TO** develop a coherent national IT system with a view to interlink such a system to other systems at the regional level at some point in the future;

(k) **ESTABLISH** linkages and partnerships between OIC member countries in IT to facilitate inter-country co-operation by governments, industry and academia...;

(l) **EMPHASISE** the key role played by contemporary applied mathematics and basic sciences education for gaining mastery in IT;

(m) **MONITOR** the influence of the Internet so as to maximize the benefits of its availability and where necessary enact regulations to minimize any physical, psychological and social damage that could result from introducing this new medium;

AND FURTHER CALLS UPON the relevant OIC and other organisations to:

(i) **PROMOTE** the supervised use of the Internet at homes, in schools and universities as well as government and private sector concerns as a means of education and communication;

(ii) **PROMOTE** inter-connectivity of world-wide web sites of OIC countries, institutions, universities, etc ...;

(iii) **ESTABLISH** an Islamic portal that encompasses all the web sites originating form within OIC member countries;

(iv) **ENCOURAGE** and support OIC-based IT industrial ventures;

(v) **DEVELOP** databases of IT human resources in OIC countries to facilitate appraising national strengths and weaknesses;

(vi) **CONTINUE** to address developments in basic sciences and mathematics, and not to marginalize this backbone of S&T development;

(vii) **ENCOURAGE** and promote the publication of quality research material of OIC scientists on the Internet;

AND FURTHER PROPOSES THE CREATION OF AN ISLAMIC IT FUND to help poorer OIC countries to upgrade their IT infrastructures and invest in small to medium-sized IT industrial ventures; and

THE STRENGTHENING OF THE ISLAMIC BROADCASTING CORPORATION (IBC) to enable it to project Islamic values, as well as address emerging scientific and technological areas in the twenty first century, and promote distance education in the Muslim world. The IBC must cater for coming generations in the areas of sport, culture, entertainment, information technology, besides combating the blatant propaganda against Islam.

IAS Resolution on *the Developments in the Middle East*

Adopted in Tunis (Tunisia), on the 27 Cha'aban 1421 24 November 2000

The Islamic Academy of Sciences is extremely concerned about the deteriorating situation in the occupied Palestinian territories and the genocide being committed by Israel against the civilian Palestinian population.

The Islamic Academy of Sciences urges the international community to take prompt action to stop Israeli atrocities against the Palestinians, and to mobilize all possible efforts to help Palestinians to attain their legitimate right to establish their independent state with "Al-Quds Al-Shareef" as its eternal capital.

The Islamic Academy of Sciences also calls for action in such other areas of the world where countries of might and power are taking action against defenceless nations.

(Continued from page 1)

The "Education" session was particularly appealing to some Fellows of the Islamic Academy of Sciences who are involved in higher education.

In the "Scenarios" session, speakers from Tunisia, Jordan, Indonesia, Turkey, Iran and Malaysia were invited to present highlights of their national experiences in the area of the development of the IT sector. Emphasis was especially placed on the future courses of action that these countries will take in the field of IT and its applications.

At the conclusion of the conference, the Islamic Academy of Sciences adopted the IAS Tunisia Declaration on Information Technology for Development in the Islamic World.

The declaration noted that the majority of OIC and developing countries seemed to lack a clear vision in the field of IT, and that IT can represent an area where rapid and meaningful advancement can readily be made by these countries. The declaration highlighted some of the problems that face Islamic countries in the area of IT, and re-iterated IAS's long standing view that countries need to upgrade their national science and technology policies, and, where appropriate, incorporate IT elements into such policies.

Some specific recommendations concerning adult illiteracy (including the looming computer illiteracy), the growing digital divide that is widening between IT rich and the IT poor countries, and communities, were also made.

The IAS also adopted a Resolution at the conclusion of the conference in which it expressed its deep dismay at the developments that were taking place in the occupied Palestinian territories.

As part of the follow-up action, the Academy will circulate the IAS Tunis Declaration to concerned individuals and relevant agencies throughout the world, so that some measures can be taken to implement the recommendations decided upon at the conference.

The Academy will also publish the complete proceedings of the conference in a quality volume that will be distributed internationally. Such a book, like all other published IAS proceedings, will become a valuable reference to experts when drawing national IT policies.

Through IAS Fellows, personal contact and correspondence, the IAS will promote the ideas that were developed at the conference among the decision making circles of the Islamic World, and will provide whatever help it can to get the various recommendations implemented.

Prof. Sadok Chaabane

In his address, Prof. Sadok Chaabane, representative of the President of Tunisia and Minister of Higher Education, after welcoming the Fellows of the Academy and the conference participants on behalf of the Tunisian government, went on to emphasise that Information Technology linked together the older sectors of sciences in an astounding interactive manner, and had a considerable effect on the growth of the various other sectors of knowledge.

He went on to say that IT would eventually spearhead the promising future industries and sort out the professions that would dominate the world in the coming decades.

To all of us, he went on to say, "information technology is simultaneously the problem and the solution. We have either to take possession of it and thereby accelerate our endeavours to catch up with those who are ahead of us, or we miss this opportunity, and thus make the gap wider."

Dr Chaabane went on to mention the goals that were defined by the President of Tunisia in the science and technology field, mentioning that the first of such goals was to raise the expenditure allocated for scientific research and technological innovation to 1% of the gross national product (GNP), i.e. raising the size of such expenditure threefold during the current five years.

President Ben Ali, he added, had also been careful to broaden the base of educated people so as to produce outstanding scientists. Tunisia, he explained, has attained a 100% rate of school enrolment for children aged six years old, has started its preschool education and has approved the decision that students cannot leave school before the age of 16. It had also been decided that completing the basic schooling successfully must be at a rate of 80%.

Another landmark was that higher education enrolment was to rise up to 30% in the year 2004 for young people aged 19-24, he indicated. Thus Tunisia, by the middle of the decade would come near to the mean indicator of the Organisation for Economic Co-operation and Development OECD, Dr Chaabane added.

He went on to say that all university institutions in Tunisia have been linked to the Internet, and that there was a keenness on expanding the faculty members' linkage, on installing Internet connections within university campuses and on opening wider horizons for electronic inter connection amid the tertiary stage students.

Dr Chaabane went on to say that the President had approved the introduction of family computer at a cost not exceeding US$600 financed through easy-term loans. He also called for future reduction in the expenses incurred for Internet use so that Tunisia would be best known for supporting competitiveness.

Prof. Chaabane went on to call on Muslims to increase their competitiveness and to make information technology an instrument for the augmentation of the returns of the older economy and an additional causeway into a promising new economy, which has many highly paid employment opportunities while opening wider prospects for product and service exportation. "Nowadays Tunisia is convinced that it has no choice but to join the general trend of the countries which surpassed it, that epistemological economy is the future itself, and that passing into this economy comes only through control and even concentration on teaching, on research and renovation and on opening horizons for and diversifying production."

Tunisia today, he added, has an ambitious programme to renew the content of instruction and use information technology for distance

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learning. Such a plan, he went on to say, would not be viable unless an outstanding teaching subject matter is worked out and written in digital terms. "We have also started to invite teaching cadres to rewrite their university lectures and lessons, muster talents around each single lesson, analyse these lessons, come in contact with the best exhibits in other universities and translate these lessons into various languages," he added.

The Minster of Higher Education concluded that the present world and the one in the offing is a rapidly changing one replete with surprises and can only be faced with a clear foresight and a sober and balanced approach. Consequently, "we have to provide for a great deal of flexibility in our teaching and research institutions and share together our private initiative so that we may able to correctly predict what will come and to quickly get acclimatised to new developments." The main characteristic of the world is that it is an interlaced and open one where it is impossible for any state to work without continuously looking into its position within the context of other countries, he added. "We are moving under the same circumstances and we are careful to comprehensively meet with major economies and other civilisations and cultures, which will be a difficult task unless we all hasten to get properly involved in these networks and concentrate on linkage instruments; but most particularly be careful to contribute to production and enlistment of our countries," he concluded.

(Continued from page 1)

Dissemination of information through the Internet must not be allowed to become a medium of one sided flow of information. It must be utilised to spread the authentic knowledge of Islam and its cultural values, he added.

The President of Pakistan went on to thank the President of Tunisia for granting his patronage to the conference and for his personal interest in the conference, and to the government of Tunisia for hosting the event and making arrangements for such a distinguished body of Muslim scientists, scholars, intellectuals and thinkers to debate issues of urgent concern to the Ummah.

HRH Prince Al-Hassan Ibn Talal

In his message to the conference, delivered by Prof. Adnan Badran, HRH Prince Al-Hassan, Patron of the IAS indicated that the theme of Information Technology was on the top of the world agenda. It is directly linked to the application of knowledge through creativity and innovation, he added.

However, he pointed out, if there is no "knowledge", particularly in frontier areas of science, there is nothing to apply; this is why "generation of knowledge and its transfer" through strengthening education at all levels, in terms of quality and relevance is becoming crucial for building the knowledge-based society .

HRH went on to call on the Islamic countries to target 6% of their GNP to invest in education, to build the competitive human capital for the global competitive economy during this decade. He went on to warn that education alone was not enough and that our countries needed to turn the wheels of research and development (R & D) at universities and research institutions and invest in science.

The IAS Patron called on Islamic countries to target a minimum of 1% of their GNPs to invest in science, by the end of this decade. OECD countries were already investing 6% of their GNP in education; and were investing 2.8 – 3.0 % of their GNP in science (R&D), he added.

HRH went on elaborate the point concerning striking a balance between tradition and modernity adding that the new information highways will reach the unreached and include the excluded. In addition however, it would invade our privacy and uncharted territory, he warned. "This is a powerful tool to bridge the gap between info-rich and info-poor societies. Knowledge and access to information are going to be the main criteria to govern progress and become dominant in the global market economy. The concept of " interactive multimedia " and " virtual university " will change the whole concept of the university of today."

New learning processes, life-long and distance education at various levels of degrees and diplomas would be carried out at home, from the words, images and sounds of the computer screen, using state-of-the art interactive learning packages, written and designed by Nobel laureates of various disciplines, he explained.

With that scientific and information revolution, HRH added, our countries would still have too many unacceptables remaining in our developing world. With the level of illiteracy of 850m throughout the world mostly in rural areas, 70% of them women, Prince Hassan wondered how could we develop a true democratic institution under such unacceptable circumstances? HRH went on to pose the question of how could we empower women who form 50% of the planet's population, when men form 95% of government posts and 90% of parliamentary seats? He also posed the question of how can we go on, while the voice of virtually half the planet goes unheard?

HRH went on to explain that civic rights and building justice and democratic institutions towards peace and development could not be achieved with half the human beings being marginalised.

HRH went on to pose the question of how could we develop equality while 70% (representing over 2 billion people) in the developing world have no access to electricity, and how could we supply basic energy needs at a time when our present way is far from being sustainable? It is really a shame for today's humanity that they have landed a man on the moon and conquered space and harnessed technology while still 24 people die of hunger every minute, 35 thousand every day, and 13 million die from hunger every year, he remarked. It is unacceptable that villagers go hungry and thirsty from polluted water, and epidemic diseases wipe out their children. Malaria is taking a toll of 2 million deaths per annum and the number will increase to reach 3 million by the end of the decade, mostly in Africa, he added. How could we justify that the combined wealth of 400 people is greater than the total income of the poorest half of the world's population, he asked.

The IAS Patron went on to explain that the world is in a state of rapid transition, and that we were living in an age of renewal and transformation. "When people renew, they usually take stock of their past failures and past success stories and compare themselves with others. They heighten ethical values and education and look for a renewed hope, new rigour and vigour to do the impossible and to not take "no" for an answer . Usually when people renew, they go back to the "charisma of the founder" to reinstate it," he concluded. →

Prof. Abdel Salam Majali

In his statement at the opening session of the conference, Dr Abdel Salam Majali firstly thanked H E President Zain-el-abiddin bin Ali for his kind patronage and support of the conference, that brought together experts and scholars form many countries.

He went on to say that the IAS meeting in city of Tunis was a special occasion in many ways, especially as it came only a few days after the conclusion of the Ninth OIC Summit in Doha (Qatar), convening in the same spirit of brotherly interaction and co-operation for the betterment of our Islamic Ummah.

He added that it was the first major activity that the Academy organises in North Africa, and the first to be organised after the turn of the century. It was special as well, IAS President added, because of the relevance and contemporary nature of the theme it addressed namely "Information Technology".

Dr Majali went on to say that the IAS by focussing on the important topic of Information Technology was rising to the challenge of the new situations, new prospects, new needs and new concerns generated by the global information revolution, from which our countries can benefit, if they manage to harness information technology for development.

Moreover, he went on to say, in addressing the topic of IT, "we are fortunate to be able to rely on the history of our Islamic Ummah in always adapting to new sciences and technologies. Indeed scientific progress, knowledge and open-mindedness are part of our common Islamic heritage and hence they are a central concern to all Muslims."

Dr Majali then stated that one of the Academy's objectives was to promote the "free exchange of ideas and knowledge" and to "maintain, increase and disseminate knowledge."

The emergence of a global knowledge society, based on the use of information and communication technologies unimaginable half a century ago, makes the fundamental mission of the IAS and its sister OIC organisations more topical than ever, he explained. Yet, he added, the extraordinary technical possibilities of Information Technology (IT) were no substitute for the required resolve of our decision-makers in the Islamic World to increase and indeed focus on individual and collective development, especially in science and technology.

Dr Majali emphasised that in our quest to formulate policies in the area of IT and development, we need to keep a number of fundamental principles constantly in mind. The right to education and access to information are but a couple of such principles that should govern our IT outlook, he added. "Whenever we assess the potential of IT, we find ourselves somehow addressing the question - where will the IT revolution lead to, and – how can we as developing countries benefit from such a phenomenon? If we agree that the so-called IT economy is not an end in itself, but a means for the prosperity of a society and its members, then we have to conclude that our aim must be to build a "knowledge society," based on knowledge-sharing."

Dr Majali expressed his concern by the risks of the digital divide that was developing between the IT advanced and the developing countries that were still trying hard to catch up, adding that in every country, alongside the business community, it was the scientists, the academics and researchers who were the first to use E-Mail and Internet, while other large groups in our countries were left out of the knowledge revolution.

He went on to review the recommendations issued at the various IT seminars organised recently that especially highlighted the goal of "access-to-all," and propagated a number of objectives, which he proposed should be adopted in formulating IT policies, which included;

- The need to focus on developing a learning culture;
- Promote knowledge as a global public product available to all;
- Encourage and respect cultural and linguistic diversity and local content in cyberspace, and
- Establish a dialogue on info-ethics and work to establish an Islamic Info-ethics Programme.

In the area of education, Dr Majali said, OIC countries should define and implement policies on education and IT at all levels of learning: primary, secondary and third level learning. A significant effort in the use of IT in informal education and in lifelong learning is also essential if the new information society is to be an inclusive knowledge society, he added.

Developing countries and their educational communities need wide access to IT for education. The international community should work to promote the sharing of educational experience and courseware, and in particular in making widely available educational material in the public domain, he re-iterated.

One way to achieve this in the Islamic World, he added, would be to link all relevant sources into an Islamic Web-Park or OIC Education Portal which the IAS proposes to be established in collaboration with COMSTECH and the Islamic Development Bank. Such a Portal should become a world-wide recognised reference web site, he emphasised.

Dr Majali went on to mention the problem of funds and the fact that most OIC countries were not always able to allocate sufficient national resources to education. "What resources are available have to be carefully divided up leaving precious little provision for facilities and opportunities for lifelong education along with the required level of IT support." Thus, he proposed, "we must be able to find the resources to provide concessionary rates for Internet access in schools, academic institutes and public libraries, as a sure means to encourage the various groups of society to engage in IT activities. Such schemes, sometimes known as "e-rates" have been successfully promoted in several countries, most notably the USA."

The recent World Education Forum in Dakar, Senegal, Dr Majali went on to mention, adopted a Framework for Action which holds the promise of a major new departure both for the quantity and the quality of educational provision. He went on to express his hope that the role of NGOs in following up the Dakar recommendations, based on the co-ordination, strengthening and enlargement of education-for-all partnerships, would make IT access-to-all, central to its efforts in education.

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A view from the Conference

Dr Majali went on to express the need to encourage national policies to promote public domain information and to ensure the provision of information and applications to improve education, health, the environment and governance. The availability of public domain and other heritage information, he explained, is an indispensable element in the development of a knowledge society for all. To this effect, governments and publicly-funded institutes such as universities should be equipped and strongly encouraged to make their public domain information available, he added.

Other areas that needed to be addressed, he emphasised, were the issues of cultural and linguistic diversity, of freedom of expression on the Internet and the threat to privacy. In this context, any Information For All programme must provide a platform for international collaboration on information access and on ethical, legal and social consequences of the use of IT. "We need to look and evaluate the various Info-ethics Programmes that have been developed over the last few years, and develop one of our own Islamic version that would reaffirm the importance of universal access to information in the public domain and to define ways in which it may be achieved and maintained in the Global Information Infrastructure."

IAS President went on to say that our Info-ethics programme would encourage international co-operation in the promotion of the principles of equality, justice and mutual respect in the emerging Information Society, as well as identify and encourage debate on major ethical issues in the production, access, dissemination, preservation and use of information in the electronic environment.

He went on to emphasize that "Muslims have a great deal to contribute to any Info-ethics programme or indeed any ethical reference that humanity need to develop. I say this specifically with the recent advances in Biotechnology in mind. I feel that with our comprehensive *Aqeedah* with its divine origin and universal application can propose logical questions that advances in this area pose."

Re-iterating the mission of the IAS, he said that inspite of its modest resources, the academy has established itself as an institution of the *Ummah*, striving to bring the scientists of the Muslim World together. It has been fortunate in this endeavour to have the support of its distinguished patrons, the President of Pakistan and HRH Prince Al-Hassan of Jordan.

The President concluded by thanking the Islamic Development Bank, the OPEC Fund and the ALECSO for co-sponsering the conference, and acknowledged the effort of the Advisory Science Committee, the Organising Committee, the Director General of the IAS and his efficient staff, and the local Fellows Marrakchi, Benlakhdar and Boukhris.

IAS delegates visit the ancient city of Kairawan

Delegates participating in the IAS Tunisia Conference visited the famous city of Kairawan on Wednesday 22 November 2000.

The delegates were received by the "Wali," or the governor of the state of Kairawan who talked about the history of this great city, and explained that the city was first built as an army camp or outpost by the conquering Muslim army, around the year 50 after Hijra.

The delegates were then taken on a tour of grand mosque of Kairawan, which was first built by the great Muslim leader of the Ummayyad era Okba Ibn Nafe'.

Education and Science in Turkmenistan

A G BABAEV*
Desert Research Institute,
Academy of Sciences of Turkmenistan.

Ashkabad, Turkmenistan

Turkmenistan is located in Central Asia. Its territory is 490,000 sq. km. With a population of about 5 million, 74% being Turkmen. 80% of its territory is desert with dry hot climate. Crop-growing is possible only under irrigation. The main source of irrigation water being the Amu-Darya river. The most important cash-crop is cotton; viticulture, horticulture, vegetable-growing, and forage-production are also practised. Sheep, goats and camels graze on vast desert and mountain range-lands. Cows, horses, donkeys are raised under stall conditions. Oil, gas, energy, chemical, textile, silk, and food production are the most developed branches of industry.

Turkmenistan is a country of ancient civilisation. It's territory has a lot of archaeological remains of antiquity: Mergian culture, first crop growing settlements of the third millennium BC (Altyn Depe etc.) have been excavated on the plane of the Kopet-Dag mountains. Remains of the ancient Merv were found in the Murgab river delta. Its 2500th anniversary was celebrated by the UNESCO in the year 2000. Merv was the centre where scholars such as Al-Khawarizmi, Biruni, al-Farabi, Ibn-Sina, Omar Khayyam and others lived.

This area was ravaged with fire and sword by Alexander the Great, Arab Khalifs, Chengiz Khan and Tamerlane. At the end of the 19th century (1870) and until 1993, central Asia including Turkmenistan was forcefully made a part of the Russian Empire.

In 1917 - in the course of the October Revolution under the guidance of Lenin - it was made part of the Soviet State. On October 27 1924, Turkmenistan turned into one of the 15 republics of the Soviet Union.

In 1993, as a result of the disintegration of the USSR, Turkmenistan together with other Union Republics obtained its political and economic independence.

In 1992, by referendum, Saparmurat Niyasov was elected the first president of Turkmenistan. In the difficult transitory period, he managed to maintain political stability, protect its population against international conflict and economic upheaval.

The programme "10 Years of Stability," worked out and adopted by Parliament in 1992 was a well-thought out approach towards developing new political system, based on principles of democracy and openness. In its foreign and home policies, the programme has a number of priorities: openness to the world community, following principles of democracy and social protection of the population, obtaining the status of a neutral state and transformation of Turkmenistan into an active peacemaking centre, able to create necessary conditions for international dialogue for those who are in need of it.

Among all these major and minor issues, much attention was paid to education and science. In 1993, the Programme "Bilim" (knowledge) was ushered in. It provided a number of measures directed towards a drastic expansion in pre-school, school, vocational and university education.

At the beginning of 1995, there were about 1890 schools in Turkmenistan where one million boys and girls were studying. Among the main directions of the programme "Bilim" was teaching three languages - Turkmen, Russian and English. Over 80 text-books and guide-books were compiled on the basis of this new programme. In all schools, teaching is going on in 4 directions: Humanities, Natural and Mathematical Sciences, Chemical and Biological Sciences, and Exact Sciences.

At present, there are 14 institutes of higher learning in Turkmenistan: the State University and the related higher educational institutes - Medical, Polytechnical, Agricultural, Pedagogical; Institutes of Economy, Transport and Communication, Sports, Culture, Military Institute, Institute of World Languages; Conservatoire, and Higher Militia School. Over 40,000 students are learning in these institutes.

With every passing year, the role of science is growing in solving scientific-technological, ecological, and socio-economic problems. At present there are over 60 research institutes in Turkmenistan where about 6,500 people work.

The main centre for fundamental research is the Academy of Sciences of Turkmenistan, set up in 1951. Its 18 research institutes carry out investigations in the following fields:

1) Physio-mathematics;
2) Eco-biological Science; and
3) Humanities.

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* Professor of Physical Geography and Fellow of the Islamic Academy of Sciences.

The largest institutes within the framework of the Academy of Sciences are: the Desert Research Institute, the Institute of Chemistry, Seismology and Physio-Technological Institutes.

The Desert Research Institute, founded in 1962, has become a recognised international centre for arid land investigation and desertification control. Since 1967 the institute has been publishing an international journal "Problems of Desert Development" which since 1980 is being translated, published and distributed in English speaking countries by the US publishers "Allerton Press."

In 1991, the Academy of Agricultural Sciences was set up with 12 research institutes covering agro-biological sciences.

In 1992, the Academy of Medical Sciences was also founded with 5 research institutes within its framework

Some ministries have their sectoral institutes: Institute of Oil and Gas; Institute of Anti-seismic Construction, Institute of Geological Prospecting and Institute of Pedagogical Investigations.

In 1993, the Higher Council on Science and Education, headed by the President of Turkmenistan, Saparmurat Niyazov, was set up in order to concentrate scientific potential, improve co-ordination among academics and institutes of research, and strengthen their material-and-technical basis. Two international prizes - Mukhammat-al-Khorezmi (Khawarizmi) for Science and Technology, awarded once every 2 years and the annual Maglymguly Prize for Humanities (Literature, Arts, and Architecture) have important stimulating impact upon the development of sciences and culture in Turkmenistan.

Research institutions and some scientists have broad regional and international links, institutional and personal. Exchange of information, joint projects, conferences, symposia, meetings in different branches of science are being carried out. Monographs, papers and scientific journals are being constantly published.

On October 27 1995, Turkmenistan celebrated its 4th year of independence.

IAS Ibrahim Memorial Award 2001

Call for Nominations

The Islamic Academy of Sciences, Amman, Jordan, has instituted an Award in the name of one its Founding Fellows, the late Prof. Muhammad Ibrahim (1911-1988), who was an eminent medical doctor of medicine from Bangladesh. Prof. Ibrahim dedicated a great deal of time and effort to medical research that proved to be of benefit and value in his country and internationally.

The purpose of this Award is to promote scientific research in the field of medicine and medical sciences in the various Organistaion of the Islamic Conference (OIC) Countries.

Faculties and Schools of Medicine at universities, Academies of Sciences and other learned societies as well as private sector institutions throughout the Islamic World are invited to nominate young scientists and technologists working in the medical field, for this Award.

IAS Ibrahim Memorial Award 2001

Awardees would be invited to the end of year conference of the *IAS*, where he/she would be presented with a commemorative medal and/or shield, and a compilation of *IAS* literature, as well as a taken cash honorarium.

Travel expenses of Award would be covered from the Award Fund and by the Academy.

Contact *IAS* Secretariat further details
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KFAS
مؤسسة الكويت للتقدم العلمي
KUWAIT FOUNDATION
FOR THE ADVANCEMENT
OF SCIENCES

The Islamic Organization for Medical Sciences

Invites nominations for prizes to be awarded by

The Kuwait Foundation for the Advancement of Sciences

The **Kuwait Foundation for the Advancement of Sciences (KFAS)** has instituted two prizes to be awarded every alternate year to support and promote scientific research in the field of **Islamic Medical Science** in the following areas:

1- **Medical Practice, addressing professional and well-documented clinical and laboratory experiments.**
2- **Appropriate documentation of Islamic Medical Heritage including Medical Islamic Jurisprudence.**

Nomination for the prizes are subject to the following:

1- Documents submitted to KFAS should be original, published and academically significant in the field of Islamic Medical Sciences.
2- Nominations proposed by universities, scientific institutes, international organizations, individuals, past recipients of the prize and academic bodies are invited.
3- Closing date for acceptance of Nominations and/or Application including Nominee's Curriculum Vitae and all supportive documentation is Dec. 31, 2001.

Each prize consists of a cash sum of K.D. 6,000/-(U.S.$ 20,000/-approx.), a KFAS shield and a certificate of recognition.

Winners will be invited to receive their prizes at the Prize Awarding Ceremony during the commencement of the Organization's Conference.

Mailing Address:

Director General
Kuwait Foundation for the Advancement of Sciences
P O Box 25263, Safat – 13113, Kuwait
Tel: +9652429780/ Fax: +965-2403891
Email: prize@kfas.org.kw

Academy Publishes "Personalities Noble"

In 1983, the National Science Council of Pakistan and Hamdard Foundation published what was to become a very famous book. The name chosen by the then editor Hakim Mohammed Said for the book was "Personalities Noble."

The book contained a brief description of the life and scientific contributions of 26 towering figures of the golden age of Islam.

Demand on the book was such that within a few years only a few rare copies were still in existence.

Realising the importance of the book, and appreciating its value a reference, especially to the younger generations in the Islamic world, *IAS* decided to publish a second revised edition of "Personalities Noble," in both English and Arabic.

IAS Secretariat staff together with the help of one Jordan's most senior translators worked on re-editing and revising the Arabic and English manuscript. Some touching-up on the portraits had to be done by an expert for added quality as well.

The book has now appeared in a 150-page volume, with the Arabic text on one side and English on the other.

IAS hopes to market the book to schools, universities as well as individuals throughout the Islamic world in order to generate the interest of the readers in the great Islamic heritage in science and contribute in a very small way to the long sought after revival and rejuvenation, of science and technology in Islamic and developing countries. All proceeds from the sale of "Personalities Noble" will go to the Waqf (Account) of the Islamic Academy of Sciences.

الأكاديمية الإسلامية للعلوم

الأكاديميـة الإسلامية للعلوم مؤسسة مستقلة، غير سياسية، غير حكومية، وغير ربحية، تضـم زملاء (أعضاء) مؤسسون ومنتخبون يمثلون المجتمع العلمي الإسلامي المبدع في شـتى مـناطق ودول العالم، وتهدف إلى الارتقاء بمناح العلوم والتكنولوجيا المختلفة في العالم الإسلامي.

جـاء تأسـيس الأكاديمية بناء على توصية تقدمت بها اللجنة الدائمة للتعاون العلمي والتكنولوجي (COMSTECH) إلى مؤتمر القمة الإسلامي الرابع، الذي عقد في الدار البيضاء عام ١٩٨٤، حيث تم إقرار هذه التوصية.

إثـر دعوة من حكومة المملكة الأردنية الهاشمية وبرعاية كريمة من صاحب السمو الملكـي الأمير الحسن بن طلال، عقد المؤتمر التأسيسي للأكاديمية في شهر تشرين أول (أكـتوبر) ١٩٨٦، بمشاركة شخصيات بارزة من دول إسلامية مختلفة تمت دعوتهم من قبل المؤسسات المنظمة للمؤتمر ليكونوا زملاء مؤسسين للأكاديمية.

أما الأهداف الرئيسية للأكاديمية فهي:

- تقديـم النصـح والمشورة إلى الأمة الإسلامية ومؤسسات الدول الأعضاء في منظمة المؤتمر الإسلامي، حول أمور تتعلق بالعلوم والتكنولوجيا وتطبيقاتها؛
- تنفـيذ بـرامج ونشاطات علمية وتكنولوجية، وتشجيع التعاون بين الباحثين في البلدان الإسلامية المختلفة حول مشاريع ذات أهمية مشتركة؛
- تشـجيع ودعم البحث العلمي حول أهم المشاكل التي تواجه البلدان الإسلامية، وتحديد التكنولوجيات المستقبلية الملائمة لغايات تبنيها واستخدامها؛
- صـياغة مقاييـس للإنجاز والتحصيل العلمي، ومنح الجوائز والأوسمة للإنجازات العلمـية المتمـيزة، بغـية تطويـر مراكز الإبداع في فروع العلوم المختلفة وتحفيز المبدعين.

نشرة الأكاديمية الإسلامية للعلوم

نشرة دورية تصدرها الأمانة العامة للأكاديمية الإسلامية للعلوم، عمان، الأردن.

رئيس التحرير: المهندس منيف رافع الزعبي، مدير عام الأكاديمية الإسلامية للعلوم.

مساعد التحرير: لينا جلال، مسؤول برامج.

ترحـب لجـنة التحرير بكل المقالات، وخصوصاً القصيرة منها، وللجنة الحق في تقريـر مدى ملائمة المقالات المقدمة للنشر وفقاً لتعليمات الأكاديمية.

العنوان البريدي	العنـــوان
الأكاديمية الإسلامية للعلوم ص. ب. ٨٣٠٠٣٦ عمان ١١١٨٣ المملكة الأردنية الهاشمية.	١٧ شارع جيبوتي – الدوار السادس تلفون: ٣٨٥ ٥٥٢٣، ١٠٤ ٥٥٢٢ فاكس: ٨٠٣ ٥٥١١-٦-٩٦٢

البريد الإلكتروني: ias@go.com.jo secretariat@ias-worldwide.org

الموقع على الإنترنت http://www.ias-worldwide.org

Prof. Ali Ali Hebeish

Prof. Ali Hebeish was born on 21 December 1936. He is married with 2 children.

He earned his BSc from Cairo University (1960), MSc in Applied Chemistry from the same university in 1965, PhD in Chemistry from Gujarat University in India in 1968, and was awarded a DSc from Cairo University in 1983.

Prof. Hebeish was Research Fellow, National Research Centre (NRC), Cairo, Egypt; 1960-1961; Associate Researcher, 1962-1967; Researcher, 1968-1974; Associate Professor, 1974-1979; Professor, 1979-1984; Under Secretary of State, Office of the President, Academy of Scientific Research and Technology (ASRT), Cairo, Egypt, 1985-1988; Vice-President (ASRT), 1988-1991; President (ASRT), 1992-1996.

He has been Emeritus Professor, NRC, since April 1996.

He was a Fellow of the Alexander von Homboldt Foundation (1973-1975), carrying out research work on problems associated with easy care finishing of cotton and viscose rayon. Dr Hebeish has over 360 publications to his credit both in his field of specialisation, "Textile Chemistry and Chemical Technology" and other fields, and has supervised over 65 MSc and PhD theses. He is also accredited with 9 patents and 9 books.

Dr Hebeish is a Fellow of both the African and Third World Academies of Sciences. He is also an elected Fellow of the IAS (1994).

He is President of the Egyptian Association for Scientific Culture, and President of the Egyptian Textile Society (1993-todate).

He is the awardee of the state Prize in Chemistry, Egypt, 1972; Order of Science and Arts, First Grade, Egypt, 1974; and the Prize of Production of the Republic of Egypt for the years 1985 and 1990.

Prof. Hashim El-Hadi

Prof. El-Hadi was born in Sudan in 1939. He is married and a father of 4.

He is the Vice-Chancellor of Sudan International University since 1998.

He was previously Vice-Chancellor of Khartoum University (1994-1998), Dean of Veterinary Science (1992-1994), Dean of Students (1990-1992), Professor of Animal Physiology (1991)., Associate Professor at the same university (1977-1991) and Associate Professor at King Faisal University in Saudi Arabia (1979-1987). He was Vice-Dean of Veterinary Medicine at King Faisal University, Saudi Arabia (1982-1984).

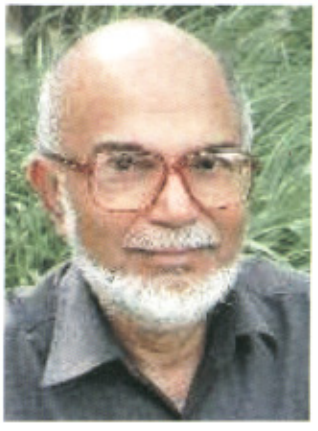
Before that, Prof. El-Hadi spent 15 years at the Department of Physiology and Biochemistry, University of Khartoum, successively occupying the posts of Research Assistant and Lecturer (1964-1977).

Prof. El-Hadi has a number of scientific publications in renowned international journals to his credit. He supervised and examined a number of postgraduates, and refereed the promotion of internal and external candidates for associate and full professorships. He participated in the various administration committees at Khartoum (Sudan) and King Faisal (Saudi Arabia) Universities.

Dr El-Hadi is the Chairman of the Sudan Veterinary Association and member of the Sudan Veterinary Council (1997-todate), Member of the Editorial Board of the Sudan Journal of Animal Production, Member of the World Poultry Science Association, Member of the Euro-Arab Veterinary Association (1997-todate).

He is also Board Member of the Association of International Universities (1995-2000).

Prof. El-Hadi is an elected Fellow of the Islamic Academy of Sciences (1994).



Prof. Ahmad Shamsul-Islam

Born on January 1, 1926, Prof. Shamsul Islam studied Botany, Plant Breeding and Genetics and earned the following degrees: BSc (1945) and MSc (1947) at Presidency College, Calcutta, PhD (1954) from Manchester University.

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

He is the founder editor of Sind University Research Journal; Pakistan Journal of Botany; Science Series of Dhaka University, Dar-es-Salam University Scientific Research Journal; and Bangladesh Journal of Botany.

He has published over 100 papers and two textbooks. He also wrote a book entitled, "Character building through the teaching of the Qur'an."

Prof. Shamsul Islam received the President's Gold Medal for outstanding contribution to the field of agriculture of Bangladesh, and an Honorary DSc from India.

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

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

Prof. Agadgan Babaev

Prof. Agajan Babaev was born on May 10, 1929 in Turkmenistan. He is married.

He was awarded a Candidate's Degree in Geography from Leningrad University in 1953, and a Doctorate in Geography from the Institute of Geography of the USSR Academy of Sciences in 1968. He became a full Professor in 1970.

He started out as a Lecturer in Geography at the Turkmen State University (1950-1960), moving on to become Director of the Desert Research Institute in Turkmenistan (1960-1975), (1986-1989) and (1997-todate). He was President of the Turkmenistan Academy of Sciences (1975-1986) and then Lecturer at the Turkmenistan University (1989-1993).

Prof. Babaev has over 300 papers and articles to his credit, including five books and is Chief-Editor of the Journal "Problems of Desert Development." He is the President of the Geographic Society of Turkmenistan (since 1956), Chairman of the Khawarizmi State Prize Committee (since 1992), and Chairman of the State Committee on Desertification Control in Turkmenistan. He is a member of the USSR (now Russian) Academy of Sciences.

In 1979, the Government of Turkmenistan awarded Babaev the honorable title of "Merited Figure of Science and Technology." He was also awarded the State Prize of the USSR (former) in Science and Technology in 1981, the Karpinsky Prize of Germany in 1990 and the General Peel International Prize of the USA in 1992.

He was elected a Fellow of the Islamic Academy of Sciences in 1993.

Islamic Academy of Sciences (IAS)

The IAS is an independent, non-political, non-government and non-profit making organisation of distinguished scientists and technologists dedicated to the promotion of all aspects of science and technology in the Islamic world.

The establishment of the Islamic Academy of Sciences IAS was recommended by the Organisation of the Islamic Conference; OIC Standing Committee on Scientific and Technological Co-operation (COMSTECH), and subsequently approved by the Fourth Islamic Summit held at Casablanca in 1984. The Founding Conference of the Academy was held in Jordan in October 1986.

The government of Jordan graciously hosts the IAS in Amman where the headquarters of the Academy started functioning in 1987.

The main objectives of the Academy are:

- *To serve as a consultative organisations of the Islamic Ummah and institutions in the field of science and technology;*
- *To initiate science and technology programmes and formulate standards of scientific performance;*
- *To promote research on major problems facing the Islamic countries and to identify future technologies of relevance for possible adoption and utilisation; and*
- *To formulate standards of scientific performance and attainment, and to award prizes and honours for outstanding scientific achievements to centres of excellence in all science and technology disciplines.*

IAS Newsletter

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Chief Editor: Moneef R Zou'bi, Director General, IAS.

Editorial Assistant: Lina Jalal, Programme Officer, IAS.

The Editorial Board welcomes all articles, particularly short ones, and would consider the appropriateness of any material submitted for publication in accordance with IAS's own regulations.

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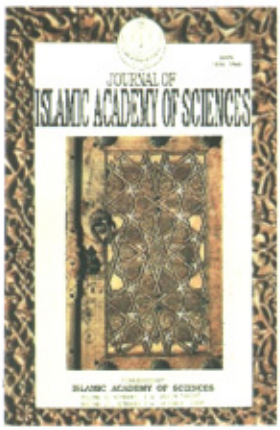

New issue of IAS Journal on the Web

The Science Journal of the Islamic Academy of Sciences was originally launched as a general science journal catering for scientists and researchers throughout the world. Over the years, it was noted that the number of medical papers submitted to the Journal far exceeded the number of papers in any other discipline. That encouraged the Council of the Academy to re-launch the Journal as a specialised medical publication. Prof. Naci Bor, Chief Editor of the Journal has managed to smoothly achieve this objective in 2000.

The Journal is supported by Dr Enver Oren, Hon. FIAS, who offered to have the Journal printed at his company's printing press and provide the paper.

The Academy had previously launched the Internet-based version of the Journal under the Internet Address of (http://www.islamicmedicine.com).

The site is both elegant and informative, and its presence on the Internet represents a qualitative leap forward for the Academy, and its Journal.

The current issue of the Journal that appears on the web is Volume 11, Number 4. It contains five major articles: a Biochemistry paper by Rafi and Naghily; a Neurosurgery article by Yusof, Abdullah and Isa; Nuclear Medicine article by Ilyas, Haider, Saeeda, Javed, Shams and Sameera; a Parasitology article by El-Shaikh, Gabry and Yousef as well as a Psychiatry article by Assadulahi and Ghassemi.

The Journal's web page can be viewed through a hyper-link from the Academy's web page.

Muslim Scholars

Ibn Rushd (1128-1198 AD)

Abul Waleed Muhammad Ibn Ahmad Ibn Muhammad Ibn Rushd, known as Averroes in the West, was born in 1128 AD in Cordoba, where his father and grandfather had both been judges. His grandfather was well versed in Fiqh (Maleki School) and was also the Imam of the Mosque of Cordoba. The young Ibn Rushd received his education in Cordoba and lived a quiet life, devoting most of his time to learned pursuits. He studied philosophy and law from Abu Ja'afar Haroon and from Ibn Baja. He also studied medicine.

Ibn Rushd made remarkable contributions in philosophy, logic, medicine, music and jurisprudence. In medicine his well-known book *Kitab al-Kulyat fi al-Tibb* was written before 1162 AD. Its Latin translation was known as 'Colliget'. In it, Ibn Rushd has thrown light on various aspects of medicine, including the diagnoses, cure and prevention of diseases. The book concentrates on specific areas in comparison to Ibn Sina's wider scope of *al-Qanun*, but contains several original observations by Ibn Rushd.

In philosophy, his most important work *Tahafut al-Tahafut* was written in response to al-Ghazali's work. Ibn Rushd was criticised by many Muslim scholars for this book, which nevertheless, had a profound influence on European thought, at least until the beginning of modern philosophy and experimental science. His views on fate were that man is neither in full control of his destiny nor is it fully predetermined for him. He wrote three commentaries on the works of Aristotle, as these were known then through Arabic translations. The shortest *Jami* may be considered as a summary of the subject. The intermediate was *Talkhis* and the longest was the *Tafsir*. These three commentaries would seem to correspond to different stages in the education of pupils; the short one was meant for the beginners, then the intermediate for the students familiar with the subject, and finally the longest one for advanced studies.

According to Ibn al-Abbar, Ibn Rushd's writing spread over 20,000 pages, the most famous of which deal with philosophy, medicine and jurisprudence. On medicine alone he wrote 20 books. Regarding jurisprudence, his book *Bidayat al-Mujtahid wa-Nihayat-al-Muqtasid* has been held by Ibn Ja'afar al-Thahabi as possibly the best book on the Maleki School of Fiqh. Ibn Rushd's writings were translated into various languages, including Latin, English, German and Hebrew. Most of his commentaries on philosophy are preserved in the Hebrew translations, or in Latin translations from the Hebrew, and a few in the original Arabic, generally in Hebrew script. Ibn Rushd has been held as one of the greatest thinkers and scientists of the twelfth century. According to Philip Hitti, Ibn Rushd influenced Western thought from the 12th to the 16th centuries. His books were included in the syllabi of Paris and other universities until the advent of modern experimental sciences.

(Taken from: Personalities Noble, National Science Council of Pakistan, edited by Hakim Mohammad Said).

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