

EDITORIAL

Dear Readers,

This is a unique year indeed in the history of our Journal. It marks the **Golden Jubilee of 50 years** of publication of the **Journal of Engineering and Applied Science**, the first Scientific Journal of its kind in Africa and the Middle East. **Issue 1 of Volume 1** was **published in 1953**. The title of the Journal at that time was the “**Bulletin of the Faculty of Engineering**”. The tradition between 1953 and 1972 was to assign editing of the journal to selected Professors cooperating with the successive Deans. Since 1972 production of the Journal started to be included among the duties of the then newly established post of the Vice-Dean of the Faculty for Postgraduate and Research. Unfortunately, we could not keep track of the names of those pioneer colleagues who patiently made sure of the quality of editing the Journal between 1953 and 1975, when the Journal started to have named Editors and Editorial Boards. In the late 1970s the Journal title was changed to the “**Scientific Engineering Bulletin**”.

In its modern era of development beginning **in 1991 starting with Volume 38**, the journal started to appear under a different cover, the current one, and with a different, classical but indeed novel, title as the “**Journal of Engineering and Applied Science**”. Since 1991 not only the title and the cover of the journal were changed, but also we started new refereeing policy, new administrative procedures, new logistic scheme, new production format and we even moved to a newly furnished three room office with ample space, which is still the current premises. These achievements have been implemented under a carefully designed Development Plan phased out over successive “3-year” stages. The Plan achieved its objectives with patience, innovative thinking, sustainable effort, cooperation and understanding from authors of submitted papers and with sometimes the need for hard decisions.

Consequently, in **1997** international recognition of the Journal started to follow in an amazing impressive fashion. Successively, distinguished internationally recognized Indexing and Abstracting Publishing Agencies have decided to include the Journal of Engineering and Applied Science in their international well known databases. Currently the Journal is Indexed and Abstracted in the databases of the following publishing agencies:

1997/now: “**Ei**”, Engineering Index, Engineering Information Incorporation, USA

1997/now: “**AMR**”, Applied Mechanics Reviews, American Society of Mechanical Engineers, ASME, USA

1998/now: “**INSPEC**” Database, The Institution of Electrical Engineers, IEE, UK

2000/now: “**Compendex**” Database of the Engineering Information Incorporation, USA

2000/now: “**Paper Chem**”, Database of the Engineering Information Incorporation, USA

2001/nov: “CSA”, Cambridge Scientific Abstracts, USA with branches in the UK and France.

2001/nov: “Elsevier Publishers Database”, Elsevier Publishers, the Netherlands.

Also, since **1998/1999** the Journal started to be internationally marketed via **EBESCO** Subscription Services, USA and **SWEETS** Subscription Services, the Netherlands. Furthermore, the **British Library** at Boston Spa, UK subscribes in the Journal since 1999.

This success is attributed to many participants. We start by the authors who provide high standard research papers based on remarkable research effort. Then comes the role of our distinguished referees, who review the papers with high accuracy and sharpness making sure to accept only top-level papers for publication. Furthermore, is the tight, but fair, refereeing policy that has been adopted and sustained by the Board over the last 10 years. This selective process has always insured that only quality research papers are published. Accordingly, over the last 5 years, the average rejection rate is more than 30% out of all submitted papers, and the papers accepted outright with no modification are only about 10% of all accepted papers. In addition, we record with thanks and appreciation the role of the successive Deans of the Faculty of Engineering, always being sincerely supportive and encouraging. Last but not least, are the great traditions that have been inherited over the past 50 years from the generations of distinguished Editors and Editorial Boards of the Journal, who contributed much, in their own utmost capacity, and thus provided a sound foundation to the current success. The support we receive from time to time from Cairo University Administration is greatly admired. Furthermore, the discounted printing prices we receive from the Faculty of Engineering Press are really appreciated. We also acknowledge the continued cooperation with the Faculty of Engineering Computer Laboratory, the support we received in 1991 from the Faculty ALUMNI and we remember with thanks the generosity of the Faculty Library, which hosted the Journal office for many years till we moved to our new premises in 1991.

On this happy moment we pay tribute and acknowledgement to all previous not named and named Editors and members of the Editorial Boards of the Journal. Also, we pay tribute to the successive Deans and Vice Deans for Research and Postgraduate of the Faculty of Engineering who always gave generous support of the administration. Without such support the Journal could not have functioned the way it actually did. Each of those distinguished colleagues, at his/her own level of participation, has played an important role and participated with endeavor and sincerity providing irreplaceable background, depth of knowledge and wealth of experience enlightening the way for the success of the Journal of Engineering and Applied Science. Names of those extraordinary colleagues are listed hereinafter in a **List of Honor and Integrity**. We are really thankful to all.

Furthermore, as a symbol of gratitude to all previous colleagues who participated in editing the journal over the last fifty years and as an honor to all of us indeed, we reprint the **Editorial of Issue 1 of Volume 1, 1953/54**. This was brilliantly written by the late great Professor and Dean of the Faculty of Engineering **Prof. Ibrahim Adham El Demirdash**, the founder of the Journal. As you will notice from his Editorial, Professor El Demirdash wrote about a dream of internationalizing our Journal and taking it across the borders. This dream has come true after 44 years of publication of the first issue when the Journal of Engineering and Applied Science started in 1997 to gain international recognition. This is demonstrated in the above list of abstracting and indexing publishers who publish, in their databases, the abstracts of papers that appear in the Journal of Engineering and Applied Science. We are further pleased to follow the Editorial with a word from the current Dean **Prof. Ali Abdel Rahman**, who gives the Journal full support and the Board continuous encouragement, following the footsteps of all previous Deans.

To complete our celebrations, all six issues of Volume 50 will bear on the cover the statement: “**The Golden Jubilee of the Journal - 50 Years of Publication 1953/2003**” to commemorate this very special memorial year.

Till the future generations of the Faculty of Engineering staff celebrate the **Diamond Jubilee** of the **Journal of Engineering and Applied Science** in **2028**, we hope to have left in hand a sound foundation for much more success.

The Editorial Board
February 2003

EDITORIAL of Issue 1, Volume 1, 1953/1954

Appeared in the Journal first page under the title “**FORWARD**”,
printed in “*Italics*” letter format and font “14”

(Reproduced as it exactly appeared)

FORWARD

It is a privilege and pleasure to be invited to write the introduction of this bulletin, which is the first of its kind to be published at the Faculty of Engineering, Cairo University.

Right from the first moment I took office it was apparent to me that such a bulletin must come to light. Some of the theses, dissertations, and research work in general, prepared in this Faculty are not published and only a few copies are kept in the library. This limits the possibilities of easy access by anyone who seeks reference. The same applies to some unpublished work of our mission members abroad. Consequently a good deal of work, which might otherwise be useful, is practically lost to the engineering profession.

Further, I feel that many scientific workers of our staff, who are discouraged from publication by printing difficulties, will welcome this technical bulletin, which is ready to undertake the task of both editing and printing.

Many of my colleagues have willingly collaborated in the actual preparation of this volume. It is to their combined effort that the Faculty is indebted, and to each of them many thanks are due.

Our aim is to be able to mail this bulletin, which reflects the activities of our staff and scientists, to similar institutions and colleges abroad. If it serves as a means of contact with those enlightened centres of knowledge, if it helps even in a small measure the cause of free interchange of science, and if it assists in some way scientific research and technical writing in this country, it would have achieved its purpose. It is to this end that I offer this bulletin as a behest and a call to my colleagues in the field of engineering science, and am confident that it will meet with their full cooperation and support.

Prof. Dr. I. A. El DEMIRDASH,
*Dr. Sc. Techn. (E.T.H., Zurich),
Dean, Faculty of Engineering, Cairo University*

MESSAGE FROM THE DEAN

Dear Friends and Colleagues,

I am really lucky to have been in my position as a Dean of the Faculty of Engineering, Cairo University when our remarkable “**Journal of Engineering and Applied Science**” is celebrating its **Golden Jubilee of 50 years of Publication**. This internationally acknowledged Journal is by all means a product of our distinguished Faculty, which make every one of us to be proud of, indeed. I am sure that you all share this feeling of pride with me. The Journal has always been the window of exposing the results of engineering research to the engineering community in Egypt and the World at large. I am happy also to learn that the Journal is serving as a research outlet not only for my colleagues of the staff of our Faculty but also for many researchers from other Faculties of Engineering and Engineering Research Institutions in Egypt and the Arab World.

I would like in this happy occasion to pay my respect and to express my gratitude and thanks to our colleagues and professors who participated over the years in editing the Journal. This chain of hard work and sincere scientific effort that extended since publication of the First Issue of the First Volume back in 1953 till the publication of the First Issue of the Fiftieth Volume now in the beginning of 2003, shall always be greatly acknowledged by all. In addition, to be fair, I believe that we equally should register and offer our thanks and appreciation to the current Editorial Board, with their innovative effort and careful planning and wise management, they took the Journal of Engineering and Applied Science to its new era of development. This has lead to the wide international recognition our Faculty Journal uniquely enjoys among all other sister engineering Journals in the region. These distinguished colleagues have been respectfully working hard and in silence over the past decade, letting their achievements talk. We all acknowledge their remarkable accomplishments with deep respect, thanks and sincere appreciation.

On behalf of the administration I assure the Editorial Board and all colleagues that the Faculty will continue to support the Journal and the Board so that we can sustain and expand this success.

Congratulations to all of us on this happy **Golden Jubilee**.

The Dean
Prof. Ali Abdel Rahman

LIST of HONOR and INTEGRITY

Deans of the Faculty of Engineering, 1953/2003

(Since publication of Issue 1, Volume 1 of the Journal, 1953)

1952/1956: Prof. Ibrahim Adham El Demirdash,
1956/1958: Prof. Abdel-Aziz Saleh
1958/1962: Prof. Sherif Nouman
1962/1964: Prof. Ibrahim Adham El Demirdash,
1964/1966: Prof. Anwar Khafagi
1966/1968: Prof. Ahmed El Erian
1968/1969: Prof. Hasan Ismail
1969/1972: Prof. Abdu El Saied
1972/1973: Prof. Fouad Assal
1973/1976: Prof. Saied Abdalla
1976/1977: Prof. Galal Maghrabi
1977/1981: Prof. Yehia Kabil
1981/1989: Prof. Ahmed Aziz Kamal
1989/1993: Prof. Farouk Ismail
1993/1995: Prof. Hasan Mahmoud Imam
1995/2001: Prof. Mahmoud El Sherbini
2001/ now: Prof. Ali Abdel-Rahman

Vice Deans of the Faculty of Engineering for Postgraduate and Research, 1972/2003

(Post initiated in 1972)

1972/1978: Prof. Hasan El-Sebilgi
1978/1984: Prof. Saied Ezz
1984/1990: Prof. Saad El-Raghi
1990/1994: Prof. Abdalla Khalil Basiouni
1994/1997: Prof. Mohamed Ezzat Sobaih
1997/ now: Prof. Ahmed Bahgat

Editors of the Journal of Engineering and Applied Science, 1953/2003

1953/1972: Different Professors (names unfortunately not recorded) undertook editing responsibilities in cooperation with successive Deans of the Faculty.
1972/1975: Different Professors (names unfortunately not recorded) undertook editing responsibilities in cooperation with the Vice Dean of the Faculty for Postgraduate and Research.

LIST of HONOR and INTEGRITY
(continued from last page)

1975/1978: Prof. Nasief Raafat
1979/1981: Prof. Mostafa Kamel
1982/1984: Prof. Saad El-Raghi
1984/1987: Prof. Hamdy Abdel-Aziz
1987/1990: Prof. Abdel-Halim Shousha
1991/ now: Prof. Ali Soliman Huzayyin

Members of the Editorial Board
of the Journal of Engineering and Applied Science, 1975/2003
(formal Editorial Boards started in 1975)

1975/1978: Prof. Mostafa Kamel
1978/1981: Prof. Nasief Raafat
1978/1981: Prof. Hasan Imam
1978/1981: Prof. Mahmoud El Refaie
1978/1981: Prof. Mokhtar Nashed
1978/1981: Prof. Saad El-Raghi
1978/1981: Prof. Farouk Ismail
1978/1981: Prof. Samir Riad (Tresurer)
1978/1981: Prof. Mahmoud Fouad
1981/1984: Prof. Essam El-Din Khalil
1981/1985: Prof. Amir Baiyoumy
1981/1986: Prof. Isam Abo El Dahab (Treasurer)
1985/1987: Prof. Rashad El Metini
1985/1985: Prof. Abdalla Bazaraa
1986/1988: Prof. Ali Soliman Huzayyin
1987/1989: Prof. Abdel-Wahid El-Deeb (Treasurer)
1989/ now: Prof. Adel Abdel-Gawad
1989/1994: Prof. Hani Helal
1990/ now: Prof. Mohamed Megahid (Treasurer)
1994/ now: Prof. Ali Ezzat Salama

Editorial Assistance of the Journal of Engineering and Applied Science,
1991/2003
(Position initiated 1991)

1991/1994: Dr. Ali El-Shafie (Production)
1991/1996: Dr. Mohamed Taha (Production, 1994/1996)
1991/1996: Dr. Saied Kasseb

LIST of HONOR and INTEGRITY
(continued from last page)

- 1996/1999:** Dr. Mohamed Naiem (Production)
1999/2002: Dr. Salwa Abdel-Hafieze (Production)
2000/2002: Dr. Noha Salem
2000/2003: Dr. Karim Rakha (Subscriptions Officer)
2002/ now: Dr. Mohamed Mostafa Ahmed
2003/ now: Dr. Maged Hamed (Production, Subscriptions and Marketing)

Journal Secretariat

- 1953/1981:** Many secretaries, names not recorded (part-time)
1981/1984: Mrs Fatma Abd El-Aziz (part-time)
1984/1987: Mrs Rasmia Mohamed Kotb (part-time)
1987/1990: Mrs Fatma Abd El-Aziz (part time)
1991/now: Mrs Fatma Abd El-Aziz (full time journal secretary, post initiated in 1991)