

INTRODUCTION

Before starting the conference, I would like to talk briefly about some important aspects regarding the introduction of computers in Italy and more particularly in our Region – Apulia. I would also like to focus on Bari University's participation in the Handwriting Recognition Conferences and more generally in IAPR activities.

Effectively, it must be said that computing started in Italy well before computers were introduced. In fact, Galileo Galilei invented the Calculating Sector in the sixteenth century, but it was just at the beginning of the nineteenth century that Antonio Meucci, with his research, became the father of the telephone in Italy and contemporaneously Giuseppe Peano made an important contribution to symbolic logic, starting a new era. Then, at the beginning of the twentieth century, Guglielmo Marconi opened up the wireless era.

More recently, I would like to remember Edoardo Caianiello who was another pioneer of mathematical modelling with his contributions on neural networks. It must be said that he was also a talent scout who discovered several smart Italian researchers trained by him at the Arco Felice laboratory near Salerno and all them then became full professors in several Italian Universities. The Arco Felice laboratory is now named after Edoardo Caianiello.

The fact that in 1969 computers were widely introduced in Bari University was without any doubt due to a letter that several years before, the Nobel Prize winner Enrico Fermi, on his return from the US after the II World War, wrote to the Pisa Chancellor Enrico Avanzi. In his letter Enrico Fermi stressed the enormous development that would be generated by computer use, not only in the Italian Universities for teaching and research, but more generally in the Italian industrial and social environments; it was exactly the 11th of August, 1954. Unfortunately, on the 28th of November Fermi died, but his suggestions permanently affected the Italian academic, social and industrial community. In other words, Fermi suggested a route that still remains valid today.

At the beginning of the 1970s in Italy three different projects for computer design were initiated: the first in Milan, the second in Rome and the third in Pisa. At the end of the 1960s, a physicist, Prof. Michelangelo Merlin, was the Head of the Bari University Science Faculty and in 1969 he rented an IBM 360 System. The system was managed by "CSATA", a consortium specifically formed to promote cultural, social, industrial and economic developments in our region. The same year, Alessandro Faedo, Chancellor of Pisa University, on the 11th of July, just at the time of the first space rocket to the moon, went to the US to acquire an IBM 360 system for Pisa University. Together with his delegation, during the IBM committee meeting, he underlined that both Fibonacci, whose numbers were used for the rocket trajectory computation, and Galileo Galilei were Italian. The result was that Alessandro Faedo obtained, free of charge, another IBM 360 system and in the same year, Pisa University initiated its course in Computer Science. One year later, in 1970, also Bari University began its the Computer Science teaching course. This is a clear political demonstration of how it is possible to promote growth.

On the other hand, the interest of Italian researchers in Computer Science was also evident in the organization of a NATO ASI, held on the Isle of Elba in 1968, organized by Antonio Grasselli.^[1] It was the first time that a substantial group of international scientists examined all together some important topics that then generated several Nobel Prizes. Among the scientists participating in the Elba NATO ASI there were Azriel Rosenfeld, who presented the paper: "Figure Extraction", Herbert Freeman, who presented the paper: "A Review of Relevant Problems in the Processing of Line-Drawing Data" and Edoardo Caianiello himself, who gave a lecture entitled: "The Procrustes Program for the Analysis of Natural Languages". There were also many other prestigious scientists , who, together with King Sun Fu, later founded the IAPR, that is, the main sponsor of this Conference on Handwriting Recognition.

I was honoured to celebrate, in 1993, the 25th anniversary of the Grasselli NATO ASI in exactly the same place in which we are now celebrating this thirteenth edition of the ICFHR. A commemorative silver medal was fused for the occasion and it was given by me to Professor Antonio Grasselli, and also by the Chancellor of Bari University, Prof. Aldo Cossu, to Prof. Azriel Rosenfeld, Prof. Herbert Freeman and Prof. Jean Claude Simon.^[2]

Now I would like to express my gratitude to professor Ching Yee Suen for having started the series of meetings on Handwriting Recognition and for having accepted the invitation to be Honorary Chair of this conference.

To introduce my contribution to the Handwriting Recognition field, I would like to say that I started my research in 1970 just utilizing the first model of the DEC pdp 11 System available in Italy, seen in the photo with a young boy called Sebastiano Impedovo.



Degree in Handwriting Recognition, presented in 1982 in Munich ^[11] at the 6-th ICPR, the Hand Writer Identification, presented in Montreal at the 7-th ICPR ^[12] and the work presented in Paris ^[13] at the 8-th ICPR 1986 on Handwriting Fixed Point Analysis.

In 1990, Professor Ching Yee Suen^[14] invited me to the first of this wonderful series of Conferences that still continue to attract hundreds of young researchers active in the field today. In fact, on the 2nd and 3rd of April 1990 in Montreal, Prof. Ching Yee Suen started the first event by organizing a Workshop on Frontiers in Handwriting Recognition. At that time 25 scientists participated in the event, seven papers were presented and were collected in a proceedings book published by the Centre for Pattern Recognition & Machine Intelligence (CENPARMI) of the Concordia University. Also an exhibition of 10 industrial and academic systems was promoted and 11 companies sponsored the workshop.

Immediately afterwards, Prof. Jean Claude Simon and I together organized the second edition of the Workshop that was held at Chateau de Bonas in France. It was in September 1991 and was held for five days. 76 participants attended the workshop. 31 lectures and 11 posters were presented. Furthermore, 12 companies sponsored the event, enriching our scientific community. The 42 papers presented were collected by me and Jean Claude in a book entitled "From Pixels to Features III" , edited by the North-Holland Publishing Company in 1993, after each paper had been updated with the suggestions made during the workshop^[15].

Moreover, in order to facilitate the introduction of young researchers into the field of handwriting recognition and to give them both theoretical and practical tools, immediately afterwards, a fifteen day NATO ASI was organized by myself. The lectures during the school were held by important scientists, and I would like to remember amongst others Joan Pao, already international President of IBM and one of the promoters of the Nobel Prize to David Hunter Hubel, and many others like Santiago Ramon Y Cajal. The papers were published in another book entitled "Fundamentals In Handwriting Recognition" in 1994 by Springer-Verlag Berlin^[16]. The school was attended by 78 participants coming from 15 countries. I well remember that on that occasion Prof. Ching Yee Suen for the first time attracted the attention of participants to the necessity to have some standard data base for comparing the results of our research.

The third Workshop was held in Buffalo from the 25th to 27th of May 1993 and was organized by Sargur N.Srihari, with 30 oral presentations and 25 posters for a total of 55 presentations. Also for the third workshop the proceedings containing the lectures were published, with the support of the United States Postal Service and the Centre of Excellence for Document Analysis and Recognition (CEDAR). An important step was that some standard databases were distributed to all participants^[17].

The fourth Workshop was held from the 7th to the 9th of December 1994 in Taipei and was organized by Jhing-Fa Wang. Again there were 30 oral presentations and 28 posters and the papers were collected in a proceedings book^[18]. Eleven Companies sponsored the event.

The fifth Workshop was held from the 2nd to the 5th of September 1996 at Colchester University in England and was organized by myself together with Andy Corin Downton, who later became Vice Chancellor of Essex University and who is now the Vice Chancellor of De Montfort University. We had more than 150 papers submitted that generated 30 oral

presentations and 55 posters. Three invited talks were presented respectively by Sargur Srihari, Josef Kittler and Nicolas Bartneck of the Daimler Benz Research Centre in Germany, whose Head at that time was Professor Joseph Schurmann, as president of the Daimler Benz. During his career Schurmann educated several very important scientists active in our field. Again twelve important industrial companies sponsored the event. Also on this occasion a book containing the scientific contributions was published by World Scientific in 1996^[19].

The sixth IWFHR was held from August 12th-14th, 1998 in KAIST, South Korea and was organized by Jin Hyung Kim. 34 oral presentations were held and 29 posters were exhibited. All the papers were collected in a proceedings book published by the Centre for Artificial Intelligence Research KAIST, Korea Information Science and IAPR.^[20]

The seventh Workshop was held in the Netherlands in Amsterdam from 11th to the 13th of September 2000. It was organized by Lambert Schomaker and myself, but unfortunately I contributed very little to the organization of the Netherlands Workshop. In any case, thanks to Lambert for having given me the possibility to remember my friend Jean Claude with the Memorial lecture in his honour. We had 45 presentations and 25 posters. Several companies sponsored the event and the proceedings were published by the Nijmegen Institute for Cognition and Information (NICI) and by the IAPR.^[21]

The eighth Workshop was held from 6th to 8th of August 2002 in Niagara on the Lake and was organized by Sargur Srihari and Mohamed Cheriet. 51 oral presentations were made and 36 posters were exhibited. Six sponsors financed the workshop. Also on this occasion the proceedings were published by the CEDAR of Buffalo University and the IAPR. An important fact was that new approaches were introduced in handwriting recognition, inherited from the speech recognition field.^[22]

The ninth Workshop was held at Hitachi Central Research Laboratory in Tokyo from 26th to 29th of October 2004 and was organized by H. Fujisawa and G. Lorette. 49 lectures and 53 posters were presented. Six sponsors financed the workshop.^[23]

Finally, the tenth Workshop was held in La Baule France from 23rd to 26th of October 2006 and was organized by Guy Lorette, Horst Bunke and Lambert Schomaker. 37 oral presentations were held and 60 posters were exhibited. Eleven companies sponsored the event.^[24]

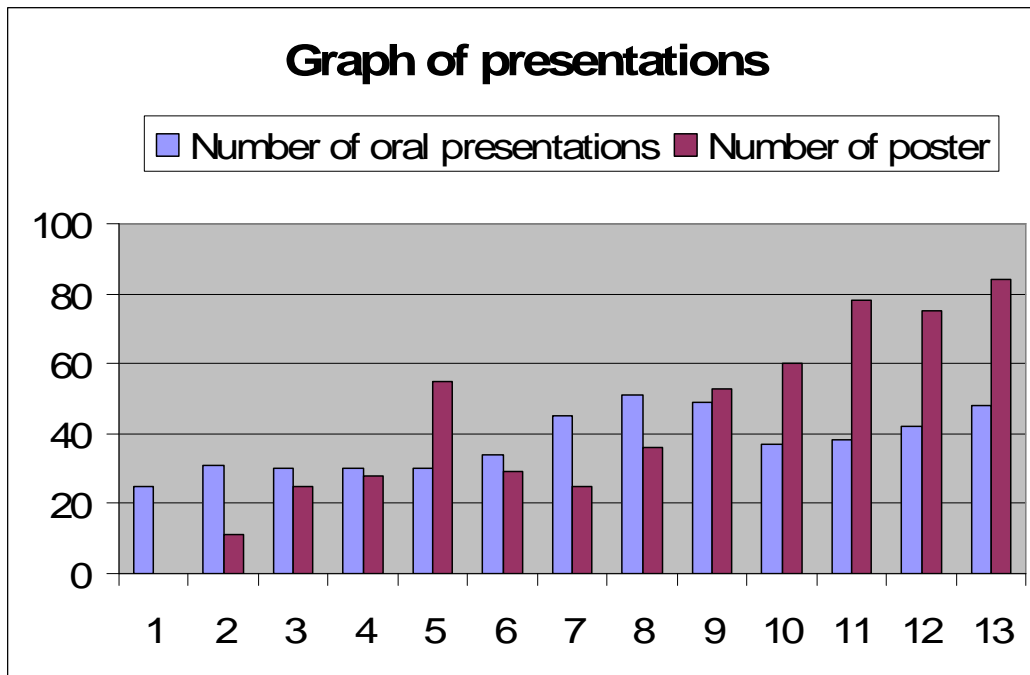
In 2008, on the basis of the successful organization of the IWFHR, the Workshop series was changed into a series of International Conferences on Frontiers in Handwriting Recognition. After Canada, France, Taiwan, the United Kingdom, Korea, the Netherlands, the United States, Canada, Japan and France the meetings re-commenced in Montreal with the first ICFHR.

In the eleventh Conference, held in Montreal from August 19th to 21st, 2008, 38 oral presentations were made and 78 posters were exhibited under the chairing of Prof. Ching Yee Suen and Mohamed Cheriet.^[25]

The twelfth ICFHR was held from 16th to 18th of November in Kolkata, organized by the Statistical Institute, where the famous P. C. Mahalanobis originated. The conference was

organized by B.B. Chaudhuri, S. N. Srihari, and L. Schomaker. 42 oral presentations were held and 75 posters were exhibited. Eleven sponsors financed the Indian conference.^[26]

As matter of fact, the trend of the ICFHR over these 22 years has grown continuously.



Now it is my pleasure to declare the 13th ICFHR open.

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