

## **R. L. d. M. – Scholar, Engineer, Leader, Advisor, Artist, and Friend**

by Christian Freksa

### **Acquaintance**

Ramon and I got connected through the unparalleled scientific networking abilities and hospitality of Professor Lotfi Zadeh at the University of California in Berkeley. I met Ramon in 1978, when he came together with Joëlle Rey from Toulouse and joined Zadeh's expert systems research group in Berkeley to work for a Master of Science degree. I also was a graduate student in Zadeh's group at the time. Ramon had interests in pattern classification and learning while my research was in pattern characterization using fuzzy sets and relational approaches. This was close enough for us to collaborate and to learn from each other through discussions, writing papers together, and jointly participating in workshops and conferences. Already at that time, Ramon was well organized and clearly structured whereas I was probably a bit more chaotic. When we met privately, Ramon often played the guitar, sang wonderful songs, or put on a record by the Catalan musician Lluís Llach.

Ramon returned to Europe in 1979 to join the IKERLAN Research Center in Mondragón, Spain, where he developed an expert system for designing electrical power transformers. Ramon arranged for me a three-month teaching appointment at IKERLAN which left me with sufficient time and lots of inspiration to write a full draft of my doctoral thesis.

A few months later (in 1980) Ramon and I attended the International Congress of Psychology which was held behind the 'Iron Curtain' in Leipzig / East Germany. We took the opportunity of our presence in the German Democratic Republic to visit an Artificial Intelligence colleague in the nearby city of Dresden. Herbert Stoyan was a political dissident who had officially requested release from East German citizenship – an illegal act in that country. His private telephone line had been disconnected by the authorities, and he and his family waited for agents to pick them up and throw them in jail – as this was the regular punishment for this illegal act. As the Stoyans did not have a telephone (and email did not exist in Europe at that time!), Ramon and I could not announce our visit. We searched for their house and rang the bell. Two 3- and 5-year old boys opened the door, saw two strangers dressed with coats, and shouted to their mother, 'mom, they are coming'. Fortunately, neither Ramon nor I spoke in the local Saxon language, and we were easily identified as foreigners and potential friends rather than as the STASI agents they had been waiting for. They called Herbert home from work and arranged a spontaneous feast, 'the last celebration before they will pick us up'. Herbert gave us the first copy of his LISP book that had just come off the printing press plus some highly delicate personal documents that we were asked to bring to the West. [A few weeks later the Stoyans actually were thrown in jail.]

After completing my thesis in Berkeley, I moved to Munich to take up a postdoc fellowship at the Max Planck Institute for Psychiatry. Ramon joined me a bit later in Munich for an extended research visit and we wrote a paper on *An adaptive computer system for linguistic categorization of "soft" observations in expert systems and in the social sciences*. Over the following years we discussed on topics of fuzzy representation and reasoning, qualitative reasoning, human-computer systems, spatial competence in robotics, machine learning, case-based reasoning, and musical composition and style. We also collaborated in various committees of universities and scientific societies.

### **Career**

For more than thirty years, Ramon has pursued an internationally highly visible scientific career in the area of Artificial Intelligence. He is a very active, imaginative, and successful scientist who gives important impulses to the international AI community. Ramon received his academic education and training program at universities and research institutions of highest international standing. He obtained an electronics degree in Mondragon (1973), an automatic control degree in Toulouse (1974), a doctoral engineering degree in Toulouse (1977), a Master of Science degree from UC Berkeley (1979), and a doctoral degree from Universitat Politècnica de Catalunya (1981). Consequently, he has

been able to participate in establishing L'Institut d'Investigació en Intel·ligència Artificial (IIIA), a research institute that has gained high international reputation. Not only is Ramon a successful director of this institute, but he also made sure that new leader personalities emerge under his guidance.

Ramon has been a scientific mastermind both in developing new research paradigms in AI and in building up this new research field in Spain 'from scratch'. From the beginning, he applied the highest international standards to his research group and thus enabled his students and researchers to be visible and to participate on the international level of competition early on. Ramon carried out remarkable pioneering work in a number of different research areas including technical and medical expert systems, formal validation systems, and cognitive robotics. His creative imagination and his multi-talented personality led him to successfully apply his technological expertise to a completely new domain, the domain of musical composition and to achieve wonderful results: he demonstrated impressive automated conversion from inexpressive to expressive music.

Ramon's contributions range from fundamental theoretical contributions to applications in domains like medicine, technical diagnosis, and musical performance. He published well above two hundred scientific articles, for the most part in highly competitive international journals and conferences, and he received numerous awards for his scientific contributions. Through his visions, through hard work, through his success in his research field, and through his ability to convey the fascination of the field to other people, Ramon has been able to attract and train highly qualified students and researchers. Meanwhile, several of his students have successfully built up new research areas themselves and also have become internationally recognized scientists.

The IIIA at Barcelona has become an internationally renowned research center for Artificial Intelligence of the highest quality; it is known as *the* AI center of Spain. Ramon is largely responsible for its success. Thus it came to no surprise, that the International Joint Committee on Artificial Intelligence selected Barcelona as the site for the world conference IJCAI 2011, relying on the proven abilities of Ramon and his highly competent team.

Ramon also is a much sought-after advisor inside and outside of Spain. This is reflected in numerous invitations and honors he has received over the years. Among them are international prizes for his pioneering work and honors in recognition of his dedicated service to the international AI community. In his way of conducting research, to advise students and colleagues, to lead his institute, to serve the scientific community, to take position on societal issues, to participate in cultural affairs, and as an upright human being, Ramon is a role model for young intellectuals who will be the scientific leaders of tomorrow.

## **Epilogue**

It is difficult for me to imagine what Spain would be like without Ramon, as I connect many pleasant and important personal and professional experiences in the Basque country and in Catalonia with Ramon and Joëlle. His advice in scientific, strategic, and ethical issues of contemporary information science and technology have been very important for me and his way of doing research and leading his institute are admirable. Ramon's judgment and opinion have influenced our research field and the attitudes of researchers in the field on an international level in a very positive and human way.

Dear Ramon, continue to progress as you have in the past, continue to enjoy research, music, poetry, skating, skiing, wine, your family, life in general for many years to come – and continue to fight for your values of humanity!