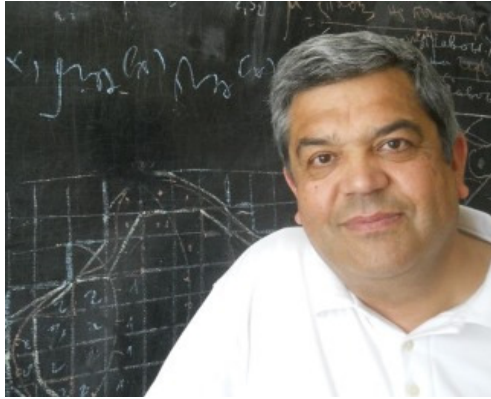


An Unusual Commemoration for an Unusual Man



The present Supplementary Issue of the *International Journal Bioautomation* is a humble commemoration of the 60th Anniversary of one of the topic editors, Prof. Krassimir Atanassov, D.Sc. (mathematical) D.Sc. (technical) (born 1954, Burgas, Bulgaria).

As a tribute to a leading researcher's anniversary, this issue is rather unusual, since it does not aim to collect new original results of invited Atanassov's colleagues, students and friends, as is the usual practice.

Contrary to any tradition, our intention for this special issue was to collect some of the earliest publications of Atanassov, only available as rare bibliophilistic preprints from the 1980s, when he was still a young researcher in the former Centre of Automation and Scientific Instrumentation at the Bulgarian Academy of Sciences, and in the former Institute of Microsystems. These early papers served as the trampoline for Atanassov's future international success, gained after several publications in reputed international journals in the end of 1980s and mid 1990s, as well as his later Springer monograph "*Intuitionistic Fuzzy Sets: Theory and Applications*" from 1999.

What is probably most peculiar about these publications, is that during their 30 years of physical existence, they have been mostly unavailable to other authors, being publicly deposited under No. 1697/84 only in the Central Science and Technical Library, Bulgarian Academy of Sciences in Sofia, and – privately – in the personal scientific archives of Atanassov. That being said, they have gained unusual coverage and more than 300 citations in the works of multiple unrelated foreign authors, who have by all means never hold them in their own hands and never seen them with their own eyes!

The lack of direct access to these papers has brought many researchers in the area of fuzzy mathematics to the belief that the concept of intuitionistic fuzzy sets, contributed by Atanassov, has been first introduced in 1986 in the paper "*Intuitionistic Fuzzy Sets*" in the renowned Elsevier journal *Fuzzy Sets and Systems*. Citing this paper as the founding work of this now approved and time-tested subfield of Zadeh's fuzzy set theory is quite understandable, given the international reputation and visibility of "*Fuzzy Sets and Systems*". However, this mis-citation incorrectly postpones the launching year for the concept with 3 full years, as it was originally invented in 1983 in a publication written in Bulgarian – a mistake that is constantly occurring and constantly addressed by Atanassov and his collaborators in their reviews of papers, PhD dissertations and monographs. Now, this publication is finally "re-discovered" here as the opening paper of this special issue, and presented in its English translation, with original facsimiles.

The rest of the re-printed preprints in the issue are later, but still fundamental results of Atanassov, some of which have also gained extensive international citations, despite being

almost inaccessible by now. They introduce important aspects of the theory of intuitionistic fuzzy sets, which in various forms have been collected in later monographs, yet here they are presented in their original form. Thus, they can be considered a priceless original source for any historian of fuzzy and intuitionistic fuzzy mathematics.

This said, it is also worth noting the context in which these publications originally appeared. They were written when Atanassov was in his late 20s and early 30s, in the turbulent years around the Fall of the Iron Curtain. The reader can only imagine how difficult it was for a young researcher from a country behind the Curtain to have his results published in Western journals, not to mention developing a brand new branch of mathematics. The unstable political and economic times that preceded and followed the Fall of the Curtain have further significantly resulted in the delayed international publicity of Atanassov's early results, many of which were published in Bulgaria.

These hardships have passed now, and intuitionistic fuzzy sets now occupy the rightful place of one of the most viable and well researched extensions of the fuzzy sets, with a global community of scientists who contribute to both theory and their application. However, from the distance of time, it has become even more important to return back to the basics, and rediscover them for the present and future researchers in the area.

Having Prof. Krassimir Atanassov as a valuable member of the Editorial Board of the *International Journal Bioautomation*, this is our unusual way to honor the accomplishments of this unusual man, and pay him tribute for his 60th Anniversary.

**Int J Bioautomation Editorial Board
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