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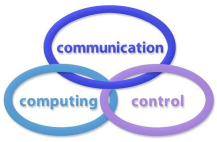

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What does P Mean in Natural Computing?

G. Ciobanu

Abstract

Celebrating the 70th birthday of Gheorghe Păun.

Acad. Gheorghe Păun (b. 1950, December 6)

Natural computing investigates computational techniques and models inspired by nature. In natural computing, the established area of computing with membranes is known as the theory of P systems. Well, P stands for Păun, the scientist who pioneered this new area of research. The worldwide success

[1]Gabriel Ciobanu, Romanian Academy ICS and A.I. Cuza University, Iaşi, Romania, gabriel@info.uaic.ro

of P systems is given by several publications, research groups and conferences on membrane computing, including an impressive handbook of membrane computing published in 2010 by Oxford University Press. In addition, Gheorghe Păun is an important scientist in the theory of formal languages, being co-author of the handbook of formal languages (3 volumes) published in 1997 by Springer.

Gheorghe Păun has a worldwide scientific reputation, being regularly invited to give talks at international conferences and universities. He is a member of the Romanian Academy (from 2012), and member of Academia Europaea (from 2006). All these accomplishments make Gheorghe Păun widely famous and appreciated. According to Semantic Scholar, he has more than 500 scientific papers and over 18000 citations (just wondering how many scientists have such a score).

These are important reasons to express gratitude and respect
to this top class scientist by acknowledging his 70th birthday!

However, knowledge is difficult to be measured. And for sure it is not enough to be measured in number of papers, h-index, etc. As soon as measuring knowledge is attempted, researchers will try to improve their score, and often the result is given by uninspired and uninspiring incremental research (of little value). It is important to mention that Gheorghe Păun is from a different category; the category in which the main drive of scientific research is curiosity (not the career progress) and genuine commitment to scientific discovery. That curiosity which great scientists, thinkers and artists have in common; without it, there would be no much progress in our world. I have learned that there are two types of curiosity. The first one is diversive curiosity; it is essential to an exploring mind, opening our eyes to the new and undiscovered issues. Diversive curiosity is what sparks our interest in learning something new. The other one is epistemic curiosity; it is what happens when diversive curiosity grows up. Thus, epistemic curiosity is going deeper to build understanding. Shortly, diversive curiosity helps to come up with ideas, and epistemic curiosity enables you to bring them to life. Gheorghe Păun handles cleverly both kinds of curiosity as a magic compass for navigating in a creative world, prefiguring both systematic investigation and discovery.

When discussing with Gheorghe Păun, really impressive is the speed of his mind; you just express a viewpoint, and he would quickly say something (possibly a joke) that connects to an idea you had not thought of. Thinking fast, thinking smart! This makes Gheorghe Păun also charismatic and high-spirited. He is inspiring and fun, naturally providing a mental playfulness.

In addition to his scientific publications, Gheorghe Păun wrote several others novels, poetry, popular scientific books, books on GO and other games. Currently, he is strongly involved in a cultural magazine in his home city Curtea de Argeş. This not only shows his hardworking nature, but also his deep commitment to knowledge and understanding how things work. It is a lot of enthusiastic commitment and energy involved in his writings; writing is about learning to expect the unexpected, is a constant back and forth between what is planned and what is not planned, how much old parts to preserve, how much new parts to let in. Adventure, inspiration, creative joy, fun and success!

Writing demands reflection and imagination. Scientists are people who present an extraordinary world in a way able to transform the real world. Attracted always by the adventure and challenges of the next writing, Gheorghe Păun avoided a teaching position in university, remaining entirely devoted to his written ideas. These ideas are combined with appropriate metaphors and analogies which help to distribute widely his knowledge. The high number of collaborators and followers (many of them considering Gheorghe Păun a mentor indicates the power of such an approach, together with his contagious (even pandemic) enthusiasm in describing his ideas and open problems.

I had the privilege of working with Gheorghe Păun. I was impressed by his wide-ranging curiosity and fast intelligence, rich imagination and remarkable sharpness of mind, brilliance and empathy. I am grateful to the scientist P for many exciting ideas and several inspiring discussions on various topics. Looking over the shoulder and celebrating his 70th birthday, I like to express many thanks for his human and scientific generosity, wishing him good health, long life and new stimulating achievements!

Gheorghe Păun and IJCCC

Gheorghe Păun is a section editor of the International Journal of Computers Communications & Control (IJCCC) since 2006. The contribution of Gheorghe Păun to the prestige of IJCCC is great. His paper [3] is the most cited article of IJCCC (over 110 citations in Web of Science) and [5] is in the Top 4 of IJCCC (over 75 citations in Web of Science). Moreover, in 2015 Gheorghe Păun publish an interesting paper in IJCCC about Membrane Computing and Economics [4] with a good impact in ISI Web of Science. The contribution of Gheorghe Păun in the field of P systems has been presented in IJCCC at 60th anniversary by G. Ciobanu [1] and at 65th anniversary by I. Dzitac [2].

Acad. Gheorghe Păun, Doctor Honoris Causa of Agora University (2015)

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