



University POLITEHNICA of Bucharest
Faculty of Automatic Control and Computers

Splaiul Independenței nr.313, sector 6, cod 060042,
Bucharest, ROMANIA



Prof. Dr. Eng. Pantelimon George POPESCU

PhD coordination in *Computers and Information Technology*
Doctoral School of Automatic Control and Computers,
University POLITEHNICA of Bucharest

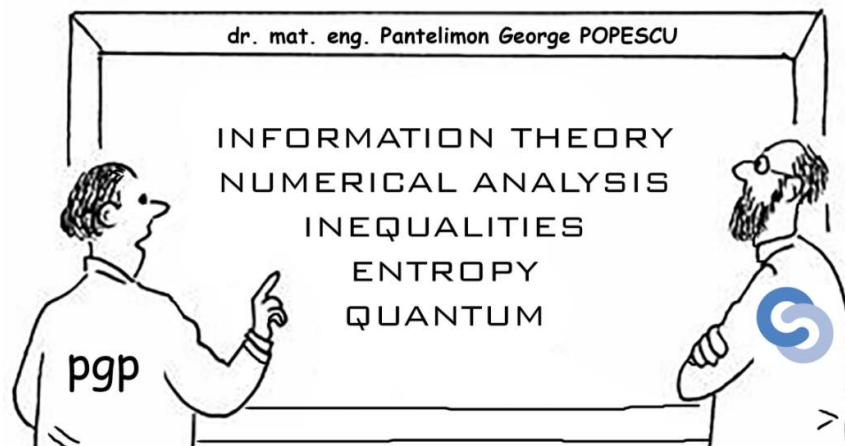
Contact: EF108

Computer Science and Engineering Department
Faculty of Automatic Control and Computers
Politehnica University of Bucharest
Spl. Independentei 313, room ED402, sector 6, 060042, București,
Romania

email: george.popescu@cs.pub.ro

<https://cs.pub.ro/index.php/people/userprofile/pgpopescu>

Research profile:



PhD coordinator since 2017.

Scientific publications: 7 books, over 20 papers in ISI indexed journals (more than 10 Q1/Q2 papers), 1 A* conference paper and over 35 journal and conference papers indexed in other international data bases.

Research Projects: director of one international project, director of one national project and member of more than 10 national and international project teams.

Proposed research topics:

Bounds: interdisciplinary research topic with a solid foundation on applied mathematics, especially in the field of inequalities, applied to Computer Science. There are countless examples of specific

measures that are difficult to compute because of their mathematical expression, or because of the multitude of parameters involved. In a world where Big Data has taken charge, these measures, that are vital for some applications, become impossible to compute and hence they have to be approximated, but if the system scales, then the entire algorithm has to be rewritten. Another common solution to this complex problem is replacing the measure with a similar one, that is easier to compute, but it's only a similarity, not an identity, and on some intervals the error becomes significant. We suggest an original approach based on inequalities, where we provide tight inferior and superior bounds for that measure, bounds that are easy to compute, ensuring the system scalability. This has very interesting applications in System, Networks, Cryptography, etc.

Numerical Algorithms: Research topics in the field of numerical analysis where we aim to obtain competitive numerical algorithms.

Quantum Fundamentals: Purely theoretical research topics on Quantum Computing, based on the Quantum Circuit model, where solid knowledge in Applied Mathematics is required, especially in Linear Algebra. We propose variations of the teleportation protocols, super dense code, etc. but also new protocols that are tightly related with the entanglement property.