Interview with Paul Spirakis
President of the EATCS

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During its annual meeting at ICALP 2016 in Rome, the Council of the EATCS elected Paul Spirakis (University of Liverpool, UK, and University of Patras, Greece) as its new president. Paul is a well-known figure in the theoretical-computer-science community and truly needs no introduction. However, I felt that it might be a good idea to interview him briefly in order to give him the opportunity to present himself to the community and to discuss briefly some of his plans for his mandate as president of the EATCS.

I interviewed Paul Spirakis (abbreviated to PS in what follows) via email and present his answers to my questions in what follows. In order to preserve the style of Paul's answers, I did not edit them. I hope that the readers of the Bulletin of the EATCS will enjoy reading the text of the interview and will find it as interesting as I did.

The interview

LA: Paul, first of all, congratulations for your election to the presidentship of the EATCS. Could you introduce yourself and your work in a few sentences to the EATCS Community?

PS: My name is Paul G. Spirakis. I was born on August 29, 1955. I got my first degree (Electrical Eng.) from NTUA Athens, Greece, in 1978. I got my MSc and PhD from Harvard in Applied Math/Computer Science (1979 and 1982 respectively). I am a Theorist working in Algorithms and Complexity. I have contributed to the fields of Distributed Computing and Parallel Computing foundations, to the field of Random Graphs and to the subject of average case analysis and probabilistic analysis of algorithms. Also to the field of Algorithmic Game Theory.

LA: Which of your many results are you most fond of?

PS: A hard question to answer because I love many results of mine and co-authors. If I have to point out one, I would point out my result (obtained together with Charalampos Tsaknakis) on polynomial time approximations to Nash Equilibria. The approximation obtained is still unbeatable (till now) but most important is the method (classic optimization but a bit unusual to CS people) and the fact that my co-author (and fellow student in Lyceum) has as his official work the directing of the contracts office of CTI (but he is also a bright Mathematician in his free time).

LA: What changes have you seen in the TCS community since you finished your PhD?

PS: Well, many changes! First of all, the TCS community is now much broader and more dynamic. There are many more Conferences around, due to explosion of some sub-fields! One can see the dramatic effect coming from the intersection of Algorithms, Complexity and Game Theory! This new field (which takes selfishness of players into account) touches important questions in Economics. The Web, and efforts to understand it, is also an evolving field! Many other things have happened (among them the increasing interest of statistical Physics scientists to TCS and in particular in the subjects of Complex Nets but also SAT, the rise and fall (and maybe rise again) of Shared Memory Parallel Algorithms, the appearance and promising future of Quantum Computing, the strong position of Distributed Computing Foundations in many Research Fora etc). Also the new rise (again) of AI and algorithmic Learning! Indeed, while in the past a Theorist believed that he/she knows all CS Foundations, this is not the case now. TCS is expanding rapidly and is affecting many other Sciences. Needless to say that the P versus NP question is now recognized as one of the big unsolved questions in Mathematics, Engineering and many other Sciences.

LA: What do you think are the main challenges for the EATCS right now? What do you plan to focus on during your term as president of EATCS?

PS: A big challenge for EATCS is to become more attractive for all Theorists in Europe and the world. Another big challenge for EATCS is to be able to use its excellent human potential towards offering strong quality scientific advice to the decision makers in Europe. I shall focus on increasing the strength and open character of EATCS. A hard task, given the high level reached by previous leaderships! But I feel that we have a great Council and great Vice Presidents and all together we can advance EATCS. Also a great and trusted Treasurer and also a great and very efficient Secretarial Office Also our Bulletin Editor and column editors! Many of our excellent Members serve in very important Committees! It is not a one man's job.

LA: In your opinion, what role can the EATCS play for TCS in the coming years? In general, do you think that professional societies are still important in our age?

PS: I shall answer via a paradigm from game theory: Consider a set of selfish individuals (selfish here means that each individual just tries to maximize his/her expected utility) in interaction. Game Theory shows that such situations result in some equilibrium (out of many possible in general), not always good for all participants (and also not always good for the whole set — the Price of Anarchy notion). In order for a desirable equilibrium to be obtained, the Theory of Mechanisms Design indicates that some rules have to be set for all (without restricting each one's freedom of choice of course). EATCS, and any good professional society, is somehow a Mechanism for the collective action of many Scientists, trying to improve the framework under which all Theorists (in the case of EATCS) can benefit, without restricting in any way the advance and creativity of each one. Thus, professional societies are very important in our age. Especially Societies that unite Scientists from many countries! After all, Science is universal and maintaining communication among all of them is very crucial. Especially in our days, but also in the not so far past, where Europe and the world was (and might again become) divided or fragmented. Let me also state the obvious facts: that such Societies try to protect and advance our Profession, help to recognize young talents, raise examples of good scientists that can inspire all of us. . .

LA: What is your view on the funding scenario for TCS research in Europe right now, both at national level and at European level? What can the EATCS do to help ensure that TCS continue to receive appropriate funding?

PS: Different European countries have different levels of funding of Theory. In many examples, austerity measures (perhaps rational for general reasons) result in severely cutting national funds for Research. It is easy to see that public opinion and politicians would prefer to fund "practical" research with short term goals. Of course EU has some nice mechanisms for funding long term research (like the FET scheme and also the most recent and very successful ERC scheme). What EATCS can do (and should do) is to explain in simple language, to all, the importance of Foundations and Theory towards radical (and some times unexpected) future technologies and applications! EATCS can select and speak about important very successful examples (e.g. how some basic algorithms have improved the search for information, or the effectiveness of many industrial processes, how verification of correctness is very important for any new hardware and software design, especially for critical applications — just to mention some big examples). I must also mention the many important achievements of AI and the big fight to cope with Complexity! In this respect, cooperation among several TCS and CS Societies (all over the world) is very important because of the positive synergy towards such a goal.

LA: Increasingly many funding agencies across the globe mandate that the results and data of the research they support be available in open access form. What is your opinion on open access to research results and data?

PS: Let me first note some remarkable exceptions: For example military funding of research (in the most advanced countries) and also competitive industrial research are examples that are done in complete secrecy. In the past, cryptography has suffered from such examples. Also in many situations in industry, crucial data are not so open to access. This is of course due to competition in markets and profit. This being said, it is very positive that funding agencies insist on the availability of results and data in open access. I am definitely in favour, as most of us. The more open Theory is, the best is achieved for our research and education.

But the issue has some sides which complicate it. Research results and data, in some cases, may have a big financial value. Then the rules of Economy apply and the issue is who gets most of this value! Also, the maintenance of open publishing and access has costs and this implies that somebody has to pay for the costs. Many creators of original thought are in the same or similar position with us (for example journalists, authors of books on any subject, film makers etc). Intellectual property rights are important to be fair to the creators. Whole industries exist whose business is to advance (and profit from) intellectual products. Many people work in such industries and such industries are some times a big part of national economies. Tax paying citizens are affected if the society decides to somehow replace all this by a new model. I believe that we are in a transient period. Fortunately things are simpler for Theory! TCS is in the most innocent side of all this and thus it is easier for Theory to achieve Open Access. In any case we need to closely follow and understand the dynamic sides of the issue and its economics.

LA: Do you have any specific message you'd like to send to the TCS community?

PS: Yes, join the EATCS and be active in it! Its long history itself votes for the value of its existence! And there are so many benefits! Awards, discounts in Conferences, the Bulletin, our Web site, and most importantly a polite and high level collective forum that aims to help Theory to advance further.

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