



COLLOQUES

## Challenges for science and technology in the post-COVID period

**9–10 septembre 2021**

Centre Scientifique de l'Académie Polonaise des Sciences à Paris  
(hybride)

In addition to its impact on our health and well-being, the Covid 19 epidemic has had a variety of significant societal, scientific and technological impacts, on top of its obvious adverse impact on the world economy.

A major transformation that we have experienced is in the way we communicate and interact for every-day life, but also for science and business. In this period, the scientific community, as well as business, have learned to communicate via conference calls, and a variety of specific network platforms for video-conferencing have had great success.

On the other hand, some of the promises offered by Information Technology have not been met, such as accurate epidemic modelling to aid in policy choices, or contact tracing to aid in epidemic prediction and control. At the same time, we have witnessed a surge in unreliable “publications”, including with regard to Covid 19 itself, so that the importance of open and free – access to reliable scientific information has once again shown its great importance.

While we have substantially saved on the CO<sub>2</sub> impact and economic cost of travel for scientific dissemination, commuting for work and education, and tourism, the energy consumption hence CO<sub>2</sub> impact of ICT has also increased, together with the increased need for ICT equipment which itself has an environmental impact in both energy for manufacturing and rare metals and materials, etc.

The economic relaunch after Covid 19, also poses problems related to negotiating a path that has the best possible impact with regard

to Climate Change, including in the choice of the most judicious investments for the very future of Climate Change.

All of the above issues raise fundamental scientific and technological questions which were debated at this conference. The conference allowed to review and summarize these questions which are all important to our future plans for science, technology, scientific and technological dissemination education, and for human as well as social development in the coming decades.

 PROGRAMME

9<sup>th</sup> September 2021

*Seminar on Modelling of Computer Systems and Networks*

- 11.30 Erol Gelenbe, Institute of Theoretical and Applied Informatics, Polish Academy of Sciences (IITIS-PAN) & I3S, University of Cote d'Azur  
*Welcome Coffee and Introduction*
- 11.40 Jean-Marc Vincent (IMAG, Univ. de Grenoble)  
*Les agrégation et CAPES d'informatique et leurs conséquences pour l'enseignement de l'informatique*
- 12:30 Gerardo Rubino, IRISA, University of Rennes
- 13.00 Francois Baccelli, INRIA & ENS
- 13:30 T. Atmaca, Telecom Paris-Sud, A. Kamli, Telecom Paris-Sud, G. Kuaban, IITIS-PAN, T. Czachórski, IITIS-PAN  
*Performance Evaluation of the Packet Aggregation Mechanism of an N-GREEN Metro Network Node*
- 14:00 Cuong Tienphi and Patricia Reynaud-Bouret, Laboratoire Dieudonne, University of Cote d'Azur  
*Quasi-perfect simulation of Poisson processes*
- 14:30 K. Filus, IITIS-PAN, P. Boryszko, IITIS-PAN, J. Domanska, IITIS-PAN, M. Siavvas, ITI, E. Gelenbe, IITIS-PAN and Univ. Cote d'Azur  
*Efficient Feature Selection for Static Analysis Vulnerability Prediction*
- 15:00 Jean-Michel Fourneau, Delta, Univ. of Versailles Saint-Quentin
- 15:30 Philippe Jacquet, INRIA and Ecole Polytechnique
- 16:00 Erol Gelenbe and Mert Nakip, IITIS-PAN  
*Adversarial Random Neural Networks and Botnet Attack Detection*

- 16:30 P. Fröhlich, E. Gelenbe, M. Nowak, IITIS-PAN  
*RNN based Management of the Fog*
- 17:00 Mert Nakip and Erol Gelenbe, ITIS-PA  
*Randomization of transmission times improves the performance of heavily loaded IoT networks (reserve talk)*

### 10<sup>th</sup> September 2021

*From Research to Innovation: A Challenge for Europe 2021*

*Euro-Case Workshop*

- 9.00 – 9.30 *Morning Coffee and Informal Introductions*
- 9.30 *Welcome and Introductory Remarks by Euro-Case Chair and Secretary General*
- 9.40 Erol Gelenbe (NATF RoyAcBe HAS PAS TAS)  
*Presentation of the Working Group and Introduction*
- 10.00 *Session 1 – Foundations of European Research and Innovation (R & I)*
- 10.00 Luc Chefneux (RoyAcBe)  
*An Ishikawa Diagram for Innovation in Europe*
- 10.20 Erol Gelenbe  
*Funding of University Research in Europe and the USA*
- 10.50 Jose Ignacio Perez-Arriaga (RoyAcEngSpain)  
*Role of US Universities in Research & Innovation*
- 11.10 Veronique Halloin (President ESF)  
*European Basic Research and its Impact*
- 11.30 Veronique Dehant (RoyAcBe, Council Member of ERC)  
*The European Research Council and its Impact*
- 13.00 Olivier Appert (NATF)  
*Session 2 – European and World Trends in Research and Innovation Chair*

- 13.00 Guy Brasseur (RoyAcBe, NorwegianAcSci)  
*The US & Chinese Programs in R & I*
- 13.30 Michel Judkiewicz (RoyAcBe)  
*EU's programs that Support Applied Research  
and Innovation*
- 14:00 Francois Mudry (NATF)  
*Role of the IRTs in France*
- 14.30 Prof Tadeusz Czachorski (IITiS PAN)  
*Session 3 – Examples of some more Recent EU Member  
States Chair*
- 14.30 Vladimir Mrsa (Croatian AcadEng)  
*Organization of R & I and Higher Education in Croatia*
- 14.50 Anna Fabijanska (PAN Young Academy)  
*Organization of R & I and Higher Education in Poland*
- 15.10 – 17.00 Discussion and Conclusions