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# Privacy Enhancing Technologies

12th International Symposium, PETS 2012 Vigo, Spain, July 11-13, 2012 Proceedings



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# Preface

Privacy and anonymity are increasingly important in the online world. Corporations, governments, and other organizations are realizing and exploiting their power to track users and their behavior. Approaches to protecting individuals, groups, but also companies and governments from profiling and censorship include decentralization, encryption, distributed trust, and automated policy disclosure.

The 2012 Privacy Enhancing Technologies Symposium (PETS 2012) addressed the design and realization of such privacy services for the Internet and other data systems and communication networks by bringing together privacy and anonymity experts from around the world to discuss recent advances and new perspectives.

PETS 2012 was held in Vigo, Spain, during July 11–13, 2012. It was the 12th in the series of events, and the fifth after the transition from workshop to symposium. The PETS symposium remains a premier scientific international event for publishing on both the theory and practice of privacy-enhancing technologies, and it has a broad scope that includes all facets of the field.

PETS 2012 received 72 submissions, which were all reviewed by at least three members of the international Program Committee (PC). Based on an intensive discussion among the reviewers and other PC members, 16 papers were finally accepted for presentation at the PETS symposium. Topics addressed by the accepted papers published in the proceedings include anonymization of statistics, content, and traffic, network traffic analysis, censorship-resistant systems, user profiling, training users in privacy risk management, and privacy for Internet and cloud-based services.

A further highlight of PETS 2012 was the popular HotPETs session, designed as a venue to present exciting but still preliminary and evolving ideas, rather than formal and rigorous completed research results. HotPETs included an invited keynote talk by Moez Chakchouk, the head of the Tunisian Internet Agency. As with the previous four HotPETs in the past, there were no published proceedings for HotPETs. PETS also included a panel on "The impact of upcoming privacy legislation for PETs" organized and moderated by Marit Hansen and a rump session with brief presentations on a variety of topics. Additionally, a workshop on Provable Privacy was held in conjunction with PETS 2012.

We would like to thank all PETS and HotPETs authors, especially those who presented their work selected for the program, as well as all rump session presenters. Moreover, we are very grateful to all PC members and additional reviewers, who contributed with thorough reviews and actively participated in the PC discussions, ensuring a high quality of all accepted papers. We owe special thanks to the following PC members and reviewers, who volunteered to shepherd some of the accepted papers: Emiliano De Cristofaro, Erman Ayday, Roger Dingledine, Thomas S. Benjamin, Nicholas Hopper, Aaron Johnson, Damon McCoy, and Arvind Narayanan.

We gratefully acknowledge the outstanding contributions of the PETS 2012 General Chair, Carmela Troncoso, the Local Arrangements Chair, Fernando Pérez-González, and of our webmaster since 2007, Jeremy Clark. Moreover, our gratitude goes to the HotPETs 2012 Chairs, Emiliano De Cristofaro and Julien Freudiger, who reviewed all HotPETs submissions and put together an excellent program. Last but not least, we would like to thank all sponsors of PETS 2012, including Ministerio de Economía y Cooperación (Spanish Ministry of Economy), Gradiant (Galician Research and Development Center in Advanced Telecommunications), and Ayuntamiento de Vigo (Vigo City Hall) for their generous support as well as Microsoft for its continued sponsorship.

May 2012

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