The 10th Workshop on the Economics of Networks, Systems and Computation (NetEcon 2015)

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Today's communication networks and networked systems are highly complex and heterogeneous, and are often owned by multiple profit-making entities. For new technologies or infrastructure designs to be adopted, they must not be only based on sound engineering performance considerations but also present the right economic incentives. Recent changes in regulations of the telecommunication industry make such economic considerations even more urgent. For instance, concerns such as network neutrality have a significant impact on the evolution of communication networks.

At the same time, communication networks and networked systems support increasing economic activity based on applications and services such as cloud computing, social networks, and peer-to-peer networks. These applications pose new challenges such as the development of good pricing and incentive mechanisms to promote effective system-wide behavior. In relation to these applications, security and privacy also require consideration of economic aspects to be fully understood.

The aim of NetEcon is to foster discussions on the application of economic and game-theoretic models and principles to address challenges in the development of networks and network-based applications and services. NetEcon was established in 2006 (succeeding to the P2PECON, IBC and PINS workshops) and merged with the W-PIN workshop in 2013. In 2015, NetEcon took place at FCRC in conjunction with both ACM SIGMETRICS and ACM EC. We received 40 submissions. Each submission was reviewed by three or four members of the program committee, and then discussed online by all PC members. Based on the reviews and discussions, we selected 8 papers for long talks (20 minutes) and 7 papers for short talks (5 minutes). All accepted papers were also invited to present a poster during the poster session and during all breaks throughout the day. The papers presentations were organized in multiple sessions.

The first session featured three long talks followed by three short talks. In the long talks, *Maillé and Tuffin* presented their work on "Impact of Content Delivery Networks on service and content innovation;" *Ahuja, Zhang and van der Schaar* presented their paper on "The population dynamics of websites;" and *Luo, Shah, Huang and Walrand* presented their work on "Parametric Prediction from Parametric Agents." In the short talks, *Acemoglu, Makhdoumi, Malekian and Ozdaglar* presented their paper on "Privacy-Constrained Network Formation;" *Ramachandran and Chainteau* presented their work on "The Network Effect of Privacy Choices;" and *Afrasiabi and Guerin* presented their paper on "Choice-based Pricing for User-Provided Connectivity."

The second paper session featured two long talks and one short talk. In the long talks, *Meir and Parkes* presented their paper on "Playing the Wrong Game: Smoothness Bounds for Congestion Games with Behavioral Biases;" and *Feldman and Friedler* presented their work on "Convergence to Strong Equilibrium in Network Congestion Games." In the short talk, *Touati, El-Azouzi, Coupechoux, Altman and Kelif* presented their paper on "Core stable algorithms for coalition games with complementarities and peer effects."

The third and last paper session featured three long talks and three short talks. In the long talks, *Kilcioglu and Maglaras* presented their work on "Revenue Maximization for Cloud Computing Services;" *Kulkarni and Mirrokni* presented their paper on "Dynamic Coordination Mechanisms;" and *Tavafoghi and Teneketzis* presented their work on "Sequential Contracts for Uncertain Electricity Resources." In the short talks, *Simhon and Starobinski* presented their paper on "On the Impact of Sharing Information in Advance Reservation Systems;" *Ceppi and Kash* presented their work on "Personalized Payments for Storage-as-a-Service;" and *Benjaafar, Kong, Li and Courcoubetis* presented their paper on "Modeling and Analysis of Collaborative Consumption in Peer to Peer Car Sharing."

In addition to the contributed sessions, the workshop had three keynotes by Rakesh Vohra, Éva Tardos and R. Srikant. Vohra presented a simple model of endogenous network formation where agents form links to balance the possibility of systemic risk and the benefits of trade in the network formed. He showed interesting qualitative results derived from this model, in particular that the structure of the network formed depends crucially on whether the shocks to the system are believed to be correlated or independent of each other. Tardos presented her work on learning in games where the population of players and the environment are dynamically changing, in which she shows that, in large classes of games (including congestion games), if players use a form of learning that helps them to adapt to the changing environment, this guarantees high social welfare, even under very frequent changes. Srikant presented his work on distributed resource allocation through potential games and generalized graph coloring where he designed distributed algorithms, based on both cooperative and non-cooperative game theory, that achieve a system-wide fairness objective for the channel selection and transmission probability prob-

lem.

We thank all the PC members for their great help in writing thoughtful reviews and actively participating in the online discussions despite a very tight schedule: Matthew Andrews, Itai Ashlagi, Moshe Babaioff, Tamer Başar, Bobby Bhattarcharjee, Rainer Böhme, Kostas Bimpikis, Eilyan Bitar, Augustin Chaintreau, Michela Chessa, kc claffy, Costas Courcoubetis, Amogh Dhamdhere, Constantine Dovrolis, Rachid Elazouzi, Sergey Gorinsky, Jens Grossklags, Roch Guerin, Nidhi Hegde, Ekram Hossain, Stratis Ioannidis, Krisnamurthy Iyer, Rahul Jain, Ian Kash, David Kempe, Peter Key, Nikolaos Laoutaris, Dave Levin, Brendan Lucier, John C. S. Lui, Patrick Maill, Jason Marden, Ravi Mazumdar, Jeonghoon Mo, John Musacchio, Andrew Odlyzko, Galina Schwartz, Paul G. Spirakis, Nicols Stier Moses, Vijay Subramanian, John N. Tsitsiklis, Bruno Tuffin, Adrian Vetta, Steven Weber. We also thank the organizing committees of ACM SIGMETRICS 2015 and ACM EC 2015 for their support with the local organization, in particular the general chairs Bill Lin, Jun (Jim) Xu and Tim Roughgarden and the workshop chairs Florin Ciucu and Arpita Ghosh. Thanks also to the ACM PER editor Nidhi Hegde for her help with the proceedings.