1. Record Nr. UNINA9910299484303321

Titolo	Scheduling and congestion control for wireless internet / / Xin Wang
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-4614-8420-0
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (x, 53 pages) : illustrations (some color)
Collana	SpringerBriefs in Electrical and Computer Engineering, , 2191-8112
Altri autori (Persone)	WangXin
Disciplina	004.6 681/.2
Soggetti	Wireless Internet Telecommunication
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"ISSN: 2191-8112."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Joint Congestion Control and Link Scheduling for Internet with Cellular Wireless Links -- Joint Congestion Control and Link Scheduling for Internet with Ad-Hoc Wireless Links -- Generalizations and Interesting Directions -- Summary.
Sommario/riassunto	This brief proposes that the keys to internet cross-layer optimization are the development of non-standard implicit primal-dual solvers for underlying optimization problems, and design of jointly optimal network protocols as decomposition of such solvers. Relying on this novel design-space oriented approach, the author develops joint TCP congestion control and wireless-link scheduling schemes for wireless applications over Internet with centralized and distributed (multi-hop) wireless links. Different from the existing solutions, the proposed schemes can be asynchronously implemented without message passing among network nodes; thus they are readily deployed with current infrastructure. Moreover, global convergence/stability of the proposed schemes to optimal equilibrium is established using the Lyapunov method in the network fluid model. Simulation results are provided to evaluate the proposed schemes in practical networks.