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Castelldefels, Spain.  
University of Pennsylvania, Philadelphia, USA

## **Joint Routing and Scheduling with the Backpressure Algorithm and Energy Harvesting Constraints**

In this paper, we study the problem of jointly routing and scheduling traffic in an energy harvesting network. To this end, we leverage stochastic dual descent methods to propose a generalization of the well-known backpressure algorithm to energy harvesting networks. We name this policy energy harvesting backpressure (EH-BP) and show that it satisfies the fundamental property of backpressure-type algorithms. Namely, if given data arrival rates can be supported by given energy arrival rates and some routing-scheduling policy, they can be supported by the EH-BP policy. Numerical results attest to the properties of the proposed policy.

Miguel Calvo-Fullana\*, Javier Mataroros\*, Carles Antón-Haro\*, Alejandro Ribeiro<sup>†</sup>.

\*Centre Tecnològic de Telecomunicacions de Catalunya (CTTC)  
Parc Mediterrani de la Tecnologia (PMT) – Building B6  
Carl Frierich Gauss, 7  
08860 Castelldefels (SPAIN)  
Phone: + 34-93-645.29.00  
Fax: + 34-93-645.29.01  
Email: {miguel.calvo,javier.matamoros,carles.anton}@cttc.es

<sup>†</sup>University of Pennsylvania  
Dept. of Electrical & Systems Engineering, University of Pennsylvania  
200 South 33rd Street  
Philadelphia, PA 19104  
Email: [aribeiro@seas.upenn.edu](mailto:aribeiro@seas.upenn.edu)