Record Nr. UNINA9910375688003321

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Titolo Proceedings of the 5th ACM International Conference on Nanoscale

Computing and Communication / / Jon Atli Benediktsson

Pubbl/distr/stampa New York NY:,: ACM,, 2018

Descrizione fisica 1 online resource (310 pages)

Disciplina 620.5

Soggetti Nanotechnology

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Sommario/riassunto

The conference is the fifth of a series that is held annually in order to develop and foster a new communication and computing paradigm based on the nanoscale. Continuing advancements in nanotechnology have led to developments of novel materials and components that can be assembled into nanomachines. These low-cost and low-power nanomachines from man-made components, integrate basic sensing, actuating and computing capabilities. However, natural cells artificially programmed through synthetic biology encompass the same capabilities in order to perform certain functionalities. While all these innovative results provide new opportunities, the miniature size of nanomachines also implies that they have limited functionalities. Integrating computing, communication as well as networking capabilities in these nanomachines can further expand their functionalities and lead to novel applications. However, traditional computing and communication paradigms are not applicable due to the challenges posed by the physical laws governing the nanoscale regime, and novel methods are required to realize nano networks. The corresponding scientific and technological advances will lead to enabling technologies supporting a more reliable and robust design of nanomachines and their integration as functional components into networks and systems. The resulting improvements in our ability to transmit information to and from nanomachines, and implement control within themselves, will open new opportunities in the field of

medicine, biotechnology, pharmaceuticals, industrial applications, as well as defense and security. Therefore, the aim of ACM NanoCom is to bring together researchers with diverse background including communication engineering and networking, computer science, information theory, synthetic biology, physics, mathematics, materials science, nanotechnology, as well as nanobioscience, in order to realize this vision and further advance the field.

Record Nr. UNINA9910696817703321

Autore Krstolic Jennifer L (Jennifer Lynn), <1975->

Titolo Physical habitat classification and instream flow modeling to determine

habitat availability during low-flow periods, North Fork Shenandoah River, Virginia / / by Jennifer L. Krstolic, Donald C. Hayes, and Peter M. Ruhl; prepared in cooperation with the Northern Shenandoah Valley

**Regional Commission** 

Pubbl/distr/stampa Reston, Va.:,: U.S. Dept. of the Interior, U.S. Geological Survey,, 2006

Descrizione fisica viii, 55 pages : digital, PDF file

Collana Scientific investigations report;; 2006-5025

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Soggetti Habitat (Ecology) - Virginia - Shenandoah River, North Fork

Stream measurements - Virginia - Shenandoah River, North Fork

Streamflow - Virginia - Shenandoah River, North Fork

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Title from PDF t.p. (viewed on July 29, 2008).