



Call For Papers

4th ACM International Conference on Nanoscale Computing and Communication 2017



September 27-29, 2017
Washington DC, USA

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Communication technologies at micro and nanoscale are essential for tackling numerous challenges in many fields, such as medicine, pharmacology, synthetic biology, and materials science. The interdisciplinary nature of nano communications has prompted the creation of heterogeneous working groups that brings together researchers from the fields of computer science, electrical and electronic engineering, nanotechnology, materials science, physics, chemistry, biology and biotechnology.

The 4th ACM International Conference on Nanoscale Computing and Communication (ACM NanoCom 2017) aims at fostering and reinforcing the research community contributing to new nano communications and computing paradigms. ACM NanoCom 2017 will highlight research potentials, stimulate novel and breakthrough ideas, and identify the short and medium term exploitation. Both novel research results and implementation-based solution are welcome. This conference will feature an open call for papers, as well as keynote addresses, poster sessions and tutorials in this emerging interdisciplinary field.

Topics of interests include (but are not limited to) the following categories:

- Electromagnetic communication
 - Plasmonic and nanophotonic devices for THz and optical communication based on nanomaterials (e.g., graphene) and metamaterials, including compact signal sources, modulators/demodulators, detectors and antennas
 - Channel modeling for THz and optical communication, including free-space propagation and intra-chip/intra-body propagation
- Molecular communication
 - Molecular communication components in the biological, chemical, or mechanical environments, including molecular signal sources and encoders/decoders
 - Channel modeling for molecular communication, including free diffusion, guided transport, microfluidic, in-vivo and in-vitro biological channels
- Bridging molecular and electromagnetic nanoscale communications.
- Networking protocols for nanoscale communication networks, including nanosensor networks and biological networks
- Simulation tools and experimental testbeds for nanonetworks
 - Design and formal methods for specifying components and parameters.
 - Experimental big data management and analysis for nanonetworks
- Interworking with different communication systems and networks.
- Nano-computing paradigms, including neuromorphic computing, DNA and molecular computing, membrane computing, quantum computing, and biological computing
- Applications, such as the Internet of nano(-bio)-things, nanosensor networks, systems on chip, nanomedicine, tissue engineering, future and emerging applications, nanonetworks in exotic materials such as functional metasurfaces and metamaterials.

Important Dates

~~March 15, 2017~~: **April 15, 2017** Full paper due
June 1, 2017: Notification of Acceptance
July 8, 2017: Camera ready paper due

Paper Submission

Papers submitted to ACM NanoCom 2017 must be original, not previously published or accepted for publication elsewhere, and they must not be submitted to any other event or publication during the entire review process. Paper submissions should follow the ACM double-column format for conferences. Regular papers (up to **6 pages**) should describe novel advances in topics within the scope of the conference. Short papers (up to 2 pages) provide an opportunity to present preliminary results and will be presented in a poster session. Submitted papers will undergo a peer review process, coordinated by the Technical Program Committee.