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Reversible computation has a growing number of promising application areas such as low power design, decoding, program debugging, testing, database recovery, discrete event simulation, reversible algorithms, reversible specification formalisms, reversible programming languages, process algebras, the modeling of biochemical systems, and quantum computation. First reversible circuits and quantum circuits have been implemented recently and are seen as promising alternatives to CMOS technology.

The conference will bring together researchers from computer science, mathematics, and physics to discuss new developments and directions for future research in Reversible Computation. This particularly includes applications of reversibility in quantum computation. Research papers, tutorials, tool demonstrations, and work-in-progress reports are within the scope of the conference. Invited talks by leading international experts will complete the program.

Contributions on the following topics in Reversible Computation are welcome:

- Architectures
- Algorithms
- Circuit Design
- Debugging
- Fault Tolerance and Error Correction
- Hardware
- Information Theory
- Physical Realizations
- Programming Languages
- Quantum Computation
- Software
- Synthesis
- Theoretical Results
- Testing
- Verification

Interested researchers are invited to submit full research papers (16 pages maximum), tutorials (16 pages maximum), as well as work-in-progress or tool demonstration papers (6 pages maximum). All accepted papers will be published at the conference in an official publication venue (probably LNCS).

The 8th Conference on Reversible Computation will take place on July 7th and 8th, 2016, in Bologna, Italy and is organized by the Department of Computer Science and Engineering - University of Bologna, Italy. Previous editions of this event took place as workshop in York (2009), Bremen (2010), Gent (2011), Copenhagen (2012) as well as conference in Victoria (2013), Kyoto (2014), and Grenoble (2015).

Important Dates:

- Abstract Submission: Sun February 7th, 2016
- Submission Deadline: Sun February 14th, 2016
- Notification to Authors: Mon March 21th, 2016
- Final Version: Sun April 10th, 2016
- Conference: Thu-Fri, July 7th and 8th, 2016

Further information about the conference:

<http://www.reversible-computation.org>
info@reversible-computation.org

