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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, and the modeling of biochemical systems. Furthermore, reversible logic provides a basis for quantum computation with its applications, for example, in cryptography and in the development of more efficient algorithms. 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 in LNCS format) as well as surveys or tutorials (16 pages maximum in LNCS format). All accepted papers will be published at the conference in an official publication venue (probably LNCS).

The 7th Conference on Reversible Computation will take place on July 16th and 17th, 2015 in Grenoble, France and is organized by INRIA, Grenoble. 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) and Kyoto (2014).

Important Dates (tentative):

- Abstract Submission: Sun February 8th, 2015
- Submission Deadline: Sun February 15th, 2015
- Notification to Authors: Tue March 31st, 2015
- Final Version: Sun April 21st, 2015
- Conference: Thu-Fri, July 16th and 17th, 2015

Further information about the conference:

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