

Call for Contributions

Submission:

1. Inform the Chair: with the Title of your Contribution

2. Submission URL:

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICQNM+2017+Special>

Please select Track Preference as **QUIPPI**

Special track

QUIPPI: Quantum Information Processing and Philosophical Implications

Chair and Coordinator

Hossein Aghababa, Assistant Professor, University of Tehran, Iran

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along with

ICQNM 2017, September 10 - 14, 2017 - Rome, Italy

The Eleventh International Conference on Quantum, Nano/Bio, and Micro Technologies

<http://www.iaria.org/conferences2017/ICQNM17.html>

With the end of Moore's law predictions on the density of transistors on the chip area, the modern computation is faced a serious challenge. While one possible solution is finding alternative hardware, the other solution is the shift of paradigm in computing. One potential paradigm shifting solution is quantum computation and information which have attracted attention and investment in the past years. We can decompose composite numbers into their prime factors by quantum computers much faster than the best classically known methods. We can bi-directionally teleport data in a more secure way through quantum channels without giving any chance to eavesdroppers illegally receiving our information. We can search data much faster and more efficient compared to the past. We can perform image processing through quantum computers and so many other applications will be done by quantum computers much more efficient than before.

Although quantum mechanics and especially quantum information processing are proved to be promising solutions for the future generation of computers, we are dealing with fundamental questions. Are we about to send data faster than light? Does quantum entanglement impact our conception of causality? How the mind-body dualism is involved in our experience of quantum measurement? What does uncertainty really mean and how the probability is understood in quantum mechanics? Are we dealing with causes or reasons in quantum mechanics? Probably in twentieth century nothing in science has challenged the philosophy as much as quantum mechanics. Consequently, while this workshop is aimed at studying and reviewing the newest trends and achievements in quantum information processing, the philosophical implications are also the other subjects of this meeting.

Topics include, but not limited to:

- Quantum Information Technology
- Quantum Circuits
- Quantum Entanglement and Causality
- Quantum Measurement and Consciousness
- Quantum Teleportation

- Quantum State Realism
- Ontological Category of Quantum States
- Philosophy of Quantum Mechanics

Important Datelines

- Inform the Chair: As soon as you decided to contribute
- Submission: August 2
- Notification: August 9
- Registration: August 16
- Camera ready: August 16

Note: These deadlines are somewhat flexible, providing arrangements are made ahead of time with the chair.

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format

- See: <http://www.iaria.org/format.html>
- Before submission, please check and comply with the editorial rules: <http://www.iaria.org/editorialrules.html>

Publications

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iariajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the free access ThinkMind Digital Library: <http://www.thinkmind.org>

Paper Submission

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Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaria.org/registration.html>

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