

Call for Papers: IET Systems Biology

SPECIAL ISSUE ON: Physiological Modelling of Human Bioenergetics

Bioenergetics is fundamental for life. In the molecular, cellular, organ and whole body levels, a large amount of knowledge about bioenergetics has been accumulated. The energy production by mitochondria is closely linked to overall energy balance of the human body and mitochondrial dysfunction is associated with a wide range of metabolic diseases. An integrative or systems biological approach is required to quantitatively delineate the interplay between cellular energetics and whole body energy balance. In this respect, physiological modelling can be a useful tool for investigating mechanisms underlying human bioenergetics.

IET Systems Biology provides a forum for researches in the interdisciplinary field of systems biology, computational physiology, system engineering, and computer science to communicate their work. In this special issue on physiological modelling of human bioenergetics, we continue this tradition, and aim to facilitate the communication between the theoretical modelling of microscopic metabolism and the whole body energy balance. We also take an interest in manuscripts about development of new computation methods, and their application to human bioenergetic systems.

Potential topics include but are not limited to:

- Modelling of homeostatic regulation of energetics and metabolism in molecular, cellular, organ and whole body levels.
- Modelling studies of animal subjects which will contribute to an understanding of human energetics
- Experimental studies and their interpretation with computational models on bioenergetics
- Computational modelling of body heat transfer
- Simulation of metabolic disease
- Development of new computational methods

All papers must be submitted through the journal's Manuscript Central system:
<http://mc.manuscriptcentral.com/iet-syb>

Proposed publication schedule:

Deadline for submission of papers:

1st October 2011

Authors to receive a 1st decision by:

13th January 2012

Final notification of acceptance:

30th March 2012

On-line and print publication:

Summer 2012

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