Guest-Editorial

The INABIO Symposia aim to provide wide opportunities of exchanges between researchers coming from very different but often scientifically and technically related domains and sharing one common goal; use or more modestly analyze and imitate some functions of the living world. So these Symposia emphasize a lot of various fields: from evidently biological and physical science to the early-stage engineering development as the bioinspired health monitoring devices for large technological structures.

The INABIO conferences are one of the activities of the 21st Century International COE of Flow Dynamics headed by the Institute of Fluid Science in Tohoku University of Sendai (Japan), in order to promote this interdisciplinary research field in the frame of international collaborations.

Ten research papers have been selected among 49 presentations made to the second INABIO symposium, organized in Lyon (France) by the National Institute of Applied Science (INSA) on January 27–28, 2005. After several times of peer-review and revision processes, we have chosen high quality papers covering various areas of Science and Technology with one evident and consistent interdisciplinary aspect.

They are included in this special Issue of the INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS and MECHANICS, but this contribution does not reflect all the aspects presented during this second INABIO Symposium. Nevertheless, we think that this special Issue points out the main essence of this new type of International Conferences.

We would like to add lastly that the financial and other forms of supports from the 21st Century International COE program and from the JSPS-CNRS Cooperative Program ‘Intelligent Materials Systems for Biomedical Applications and Structure Maintenance’ were gratefully appreciated.

The Guest-editors

Pierre-Francois Gobin, Institut National des Sciences Appliquées de Lyon
Jinhao Qiu, Institute of Fluid Science, Tohoku University
Toshiyuki Takagi, Institute of Fluid Science, Tohoku University
Kaori Yuse, Institut National des Sciences Appliquées de Lyon