

## **Preface**

For the "Biomechanics of Human Movement for Medical and Welfare Applications"

It is our great honor to present the special issue for the biomechanics of human movement for medical and welfare applications of the Journal of Biomechanical Science and Engineering. This special anniversary publication commemorates the 22nd Biofrontier Conference held on October 7-8, 2011 at Ust Plaza, Tsu. The conference is organized by the Bioengineering Division of the Japan Society of Mechanical Engineers.

To develop medical and welfare devices, it is important to measure and analyze the precise human movement from a perspective of mechanics. For example, the measurement and analysis of the spinal deformation is necessary for the design of spinal instrumentation with a suitable fixation. Alternatively, to develop the assist system of creative activities such as painting and playing instruments for individuals with disabilities, we need to analyze the characteristic motion like involuntary movements in detail.

This special issue is a collection of articles on the biomechanics of human movement to explore applications to medical treatment and welfare, in relation to the motion measurement and analysis of the spine, limb, full body, etc. I hope that this special issue will stimulate to researches with expertise in various engineering fields, and encourage them to apply their skills to the field of the biomechanics of human movement for medical and welfare applications.

Finally, as a guest editor, I would like to express my sincere appreciation to the members of the editorial committee and the advisory board of the journal for giving me an opportunity to edit this issue. I am especially grateful to the authors and reviewers for their variable contributions.

### **Guest Editor**

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