

BIOLOGICAL CELLS AND CAPSULES

ISHIKAWA T.¹, BARTHES-BIESEL D.²,
VLAHOVSKA P. M.³. AND YAMAGUCHI T.¹

¹ Dept. of Bioengineering and Robotics, Tohoku University
6-6-01, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

² Bioengineering Department, UMR CNRS 6600, Universite de Technologie de Compiegne
B.P. 20529, F60206 Compiegne, FRANCE

³ Thayer School of Engineering, Dartmouth College
8000 Cummings Hall, Hanover, NH 03755, USA

Key words: Biomechanics, Bio-Fluid Dynamics, Biological Cells, Capsules, Blood Flow

ABSTRACT

In this minisymposium, we will bring together researchers in computational studies with a specific focus on, but not limited to, biological cells and capsules covering a wide range of topics from locomotion of bacteria to deformation of artificial capsules. Our goal is to provide a forum for discussion and exchange of ideas that will lead to the development of more realistic physical, mechanical and physiological models, and their future applications in computational mechanics.

Topics include computational methods, models and analysis for

- cell biomechanics
- transport phenomena in biological cells
- adhesion and aggregation of cells
- physiology and pathology of blood cells
- locomotion and collective motion of micro-organisms
- mechanics of flagella
- mechanics of artificial capsules and drops
- medical application of micro- or nano-particles

For any further request, please contact

Takuji Ishikawa : ishikawa@pfs1.mech.tohoku.ac.jp