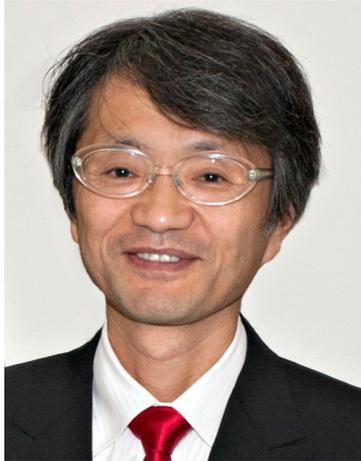


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Abstract:

Computer simulation of the human wholebody neuromuscular system is a grand challenge of supercomputing.

The system includes the central and peripheral nerve systems, and the wholebody musculoskeletal system. As a member of the team in K-Computer project for predictive medicine, we have worked on the modeling of neuron pools of motor neurons in the spine and sensory neurons in the spinal nerves as well as of the wholebody skeletal muscles. The neurons were modeled by spiking neurons model using the leaky integral-and-fire circuit. The muscles were modeled by viscoelastic continuum bodies using the FEM. This talk will introduce the hypotheses and algorithms we have based on and a very preliminary result of computation.