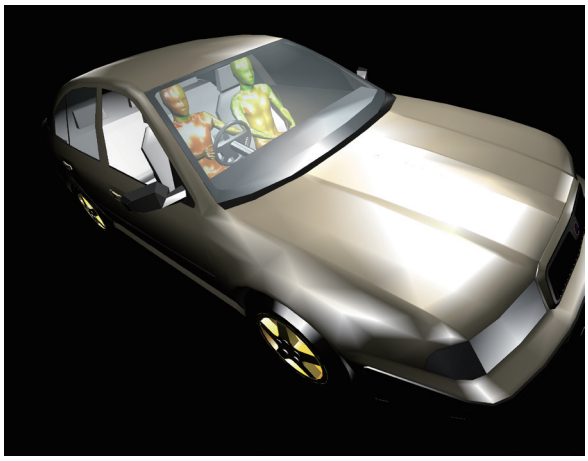
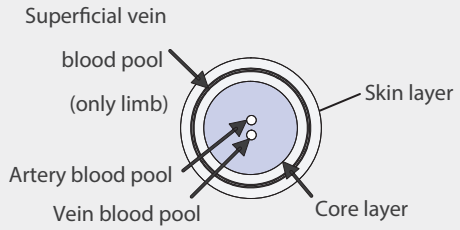
Human Body Thermoregulation Model - "JOS"

SC/Tetra Function

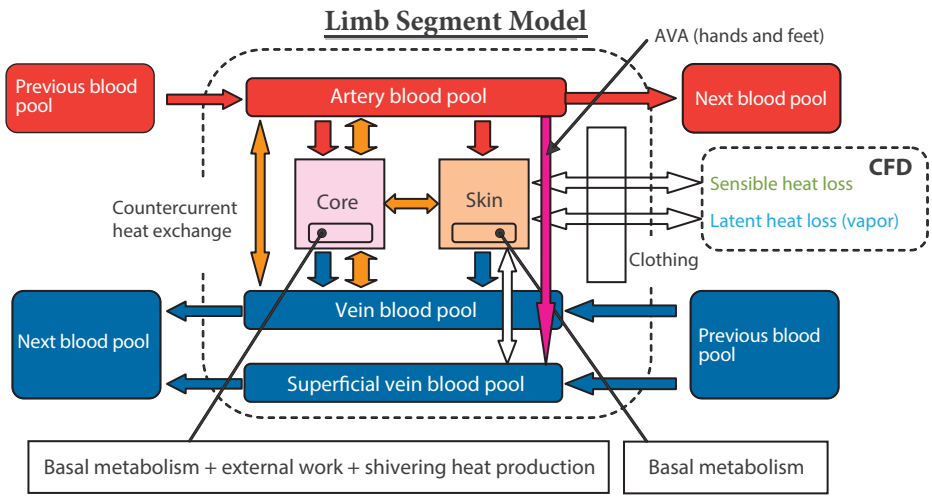
JOS (Joint System Thermoregulation Model) Developed by Professor Shin-ichi Tanabe, Waseda University, Japan

JOS computes the temperature of a human body. JOS models a human body by dividing it into seventeen body segments. Each individual body segment consist of a core layer and a skin layer. In the center of the core layer are both an artery blood pool and a vein blood pool used for modeling the vascular system.
In addition, a superficial vein blood pool is modeled in the skin layer of limb segments.

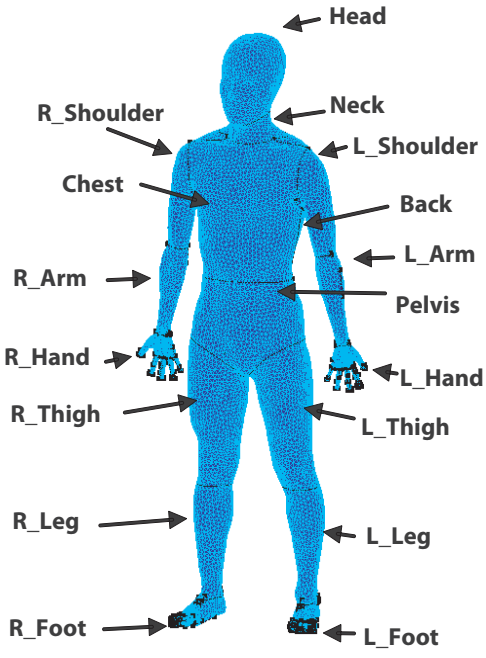


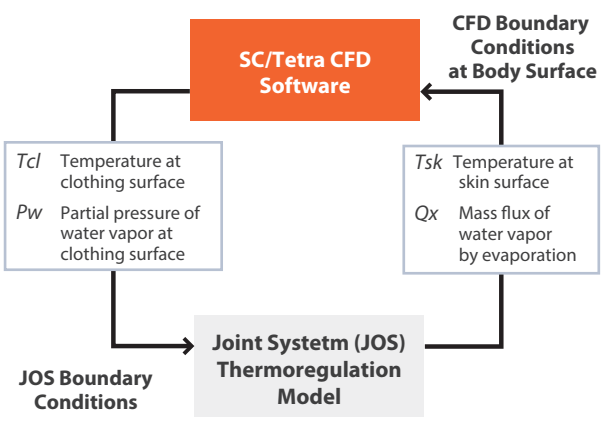


Cross section of a body segment



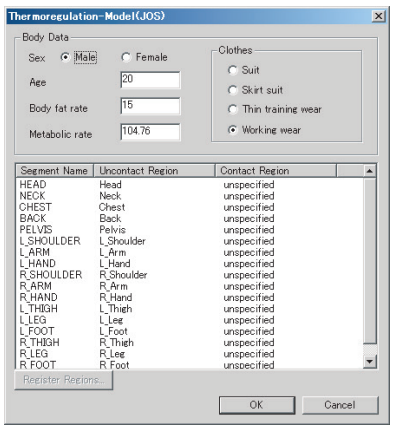
Heat Exchange within a Body Segment





Flowchart of JOS-CFD calculation

1) Body 17 segments
2) Age
3) Sex
4) Body fat proportion
5) Metabolic rate
6) Type of clothes
7) Contact surface B.C.



SC/Tetra-JOS User-Friendly Interface