



C3M

Centre for Computational Continuum Mechanics

Ljubljana, Slovenia

dr. Tomaž Šuštar

C3M specialised FE software development

Mechanical engineering

- Material forming technologies
- Tooling systems & machines

Pharmaceutics, chemical, food ind.

- Particles and deagglomeration
- Stirred media mills

Geomechanics

- Underground constructions
- Mining, oil drilling and gas industry

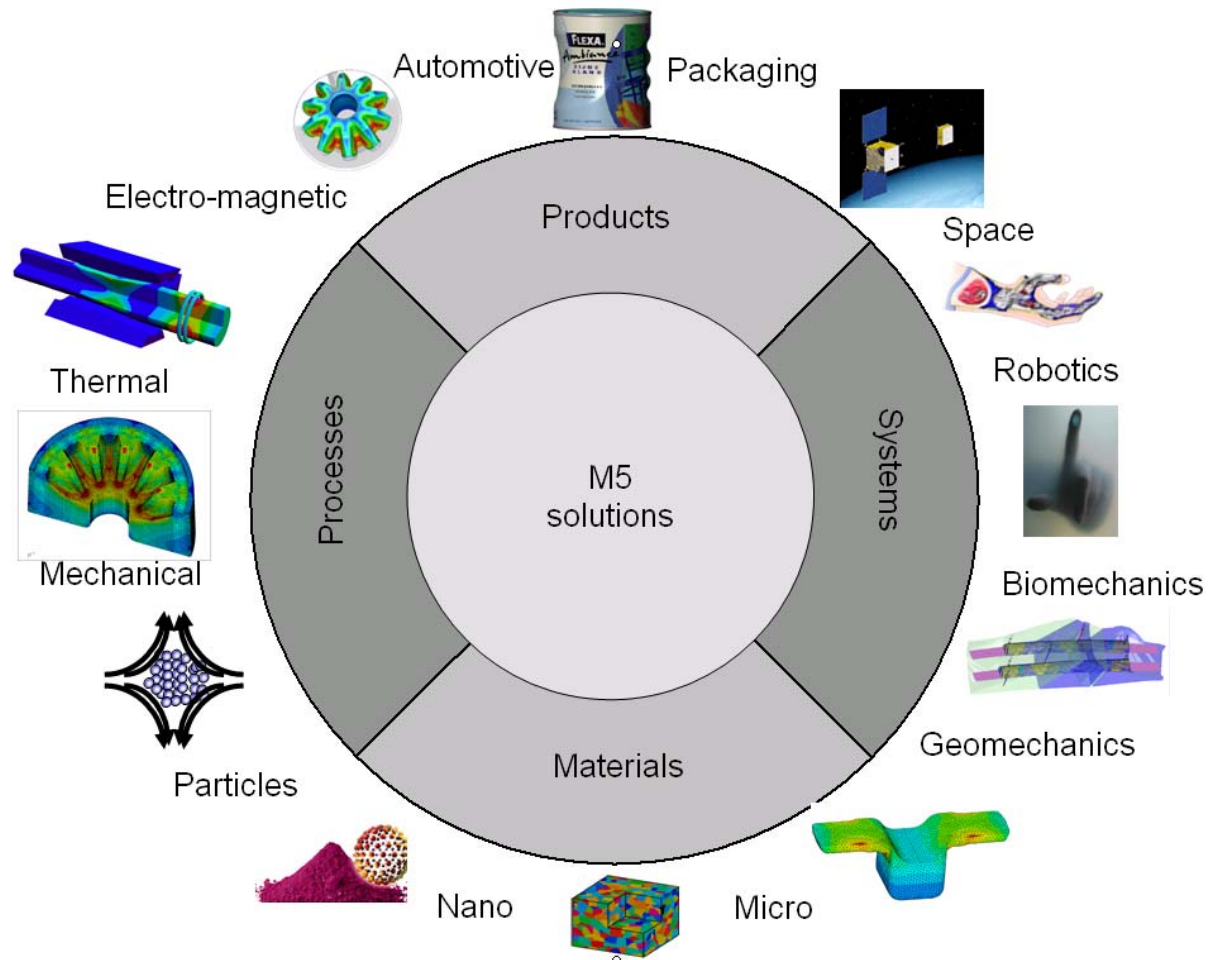
Biomechanics

- Modelling of soft tissues
- Tactile sensation

Aerospace

- Structural sensitivity analyses
- Inverse modelling & optimisation





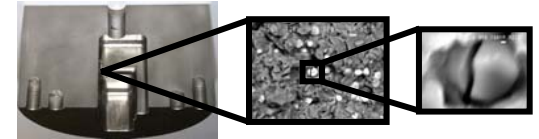
M5 solutions

M5

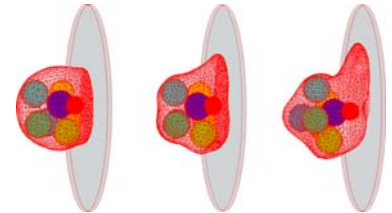
Multi-field



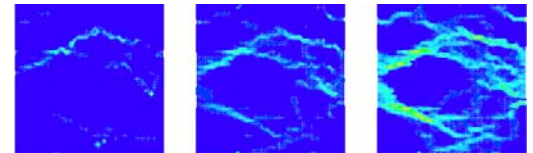
Multi-scale



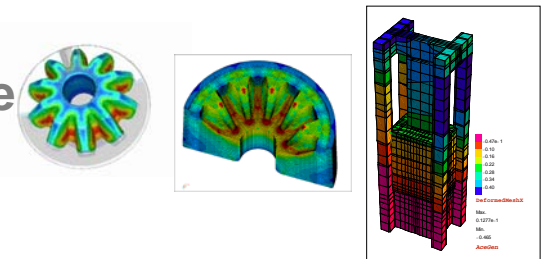
Multi-body



Multi-phase



Multi-objective





Examples



Customised system for radial forging



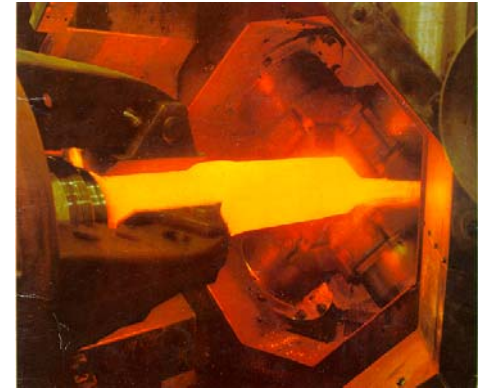
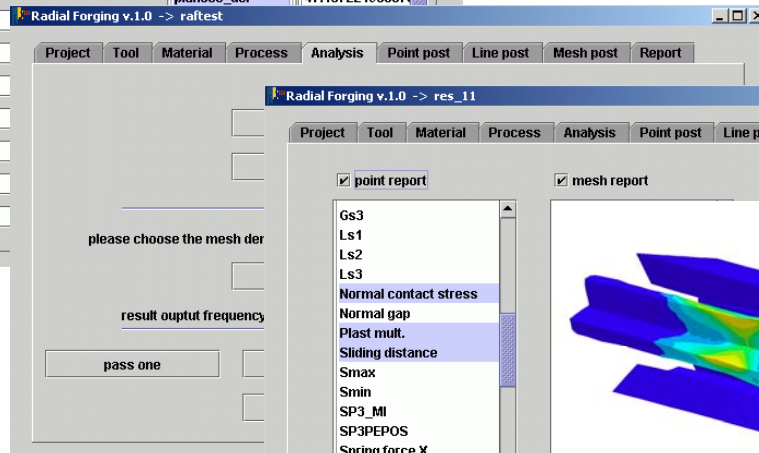
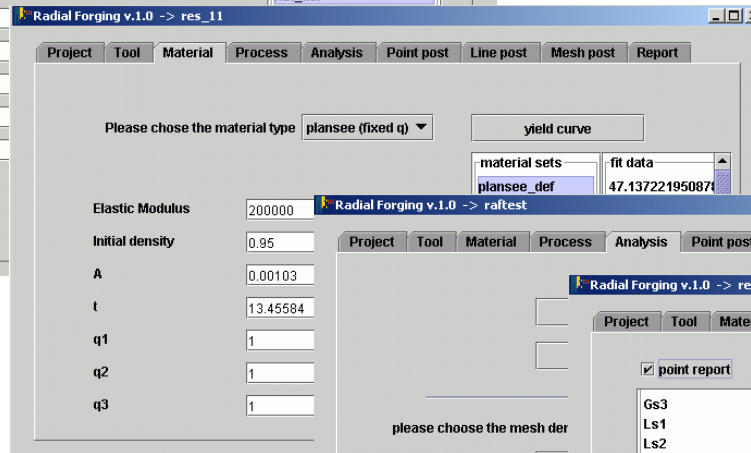
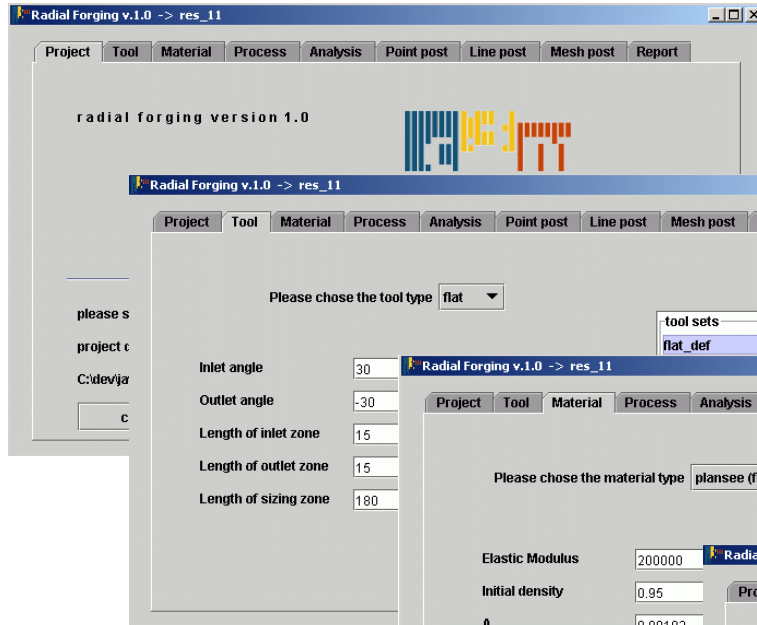
Biomechanical measurements of human skin during ISS mission



M5 modelling of micropropulsion system by NanoSpace



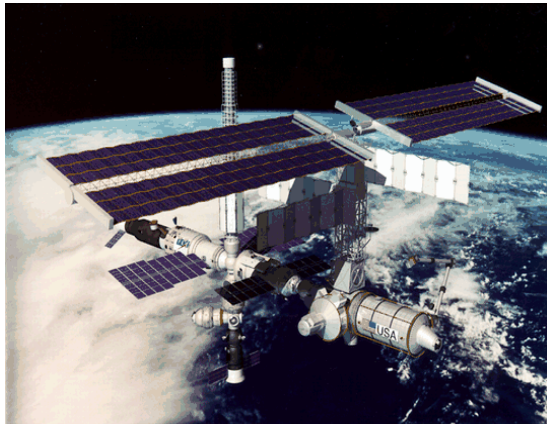
Radial forging



PLANSEE



SURE AO 021: In vivo biomechanical measurements of human skin properties under accelerated aging conditions during ISS mission

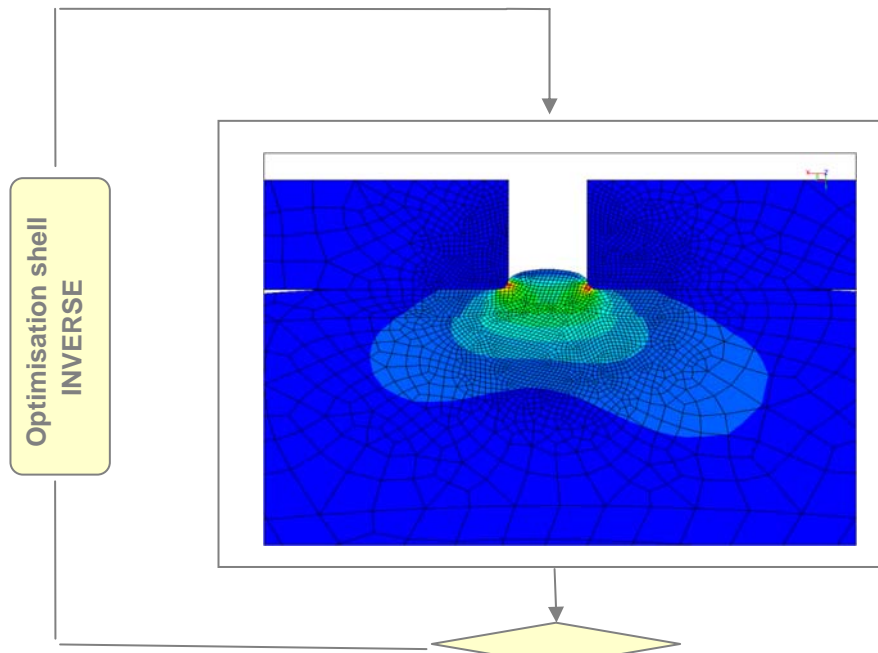


Dermatology Experiment Unit on ISS

- Skin Hydration grade (Corneometer®)
- Transepidermal waterloss (Tewameter®)
- Skin microstructure (VisioScan®)

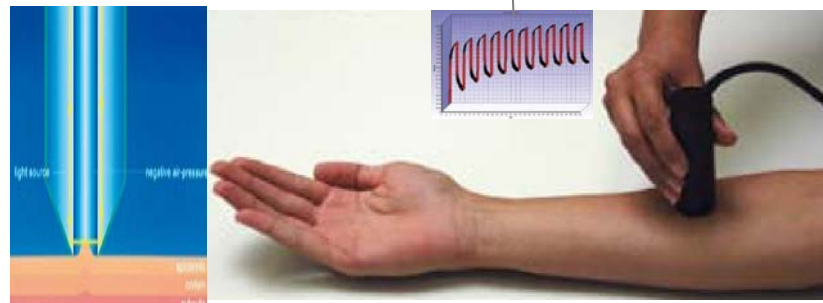
On-ground measurements by Cutometer



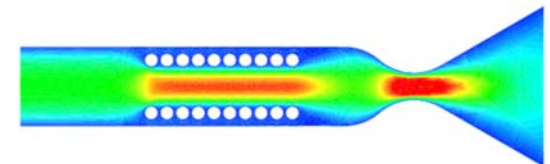
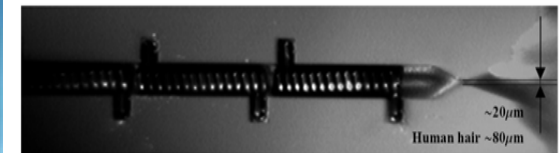
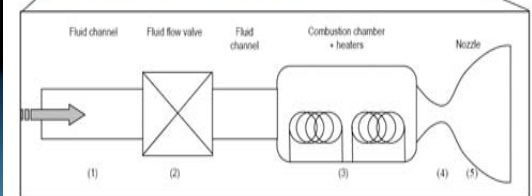
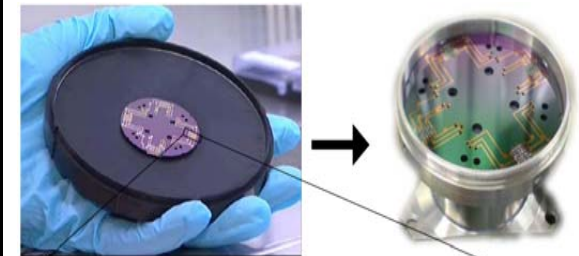
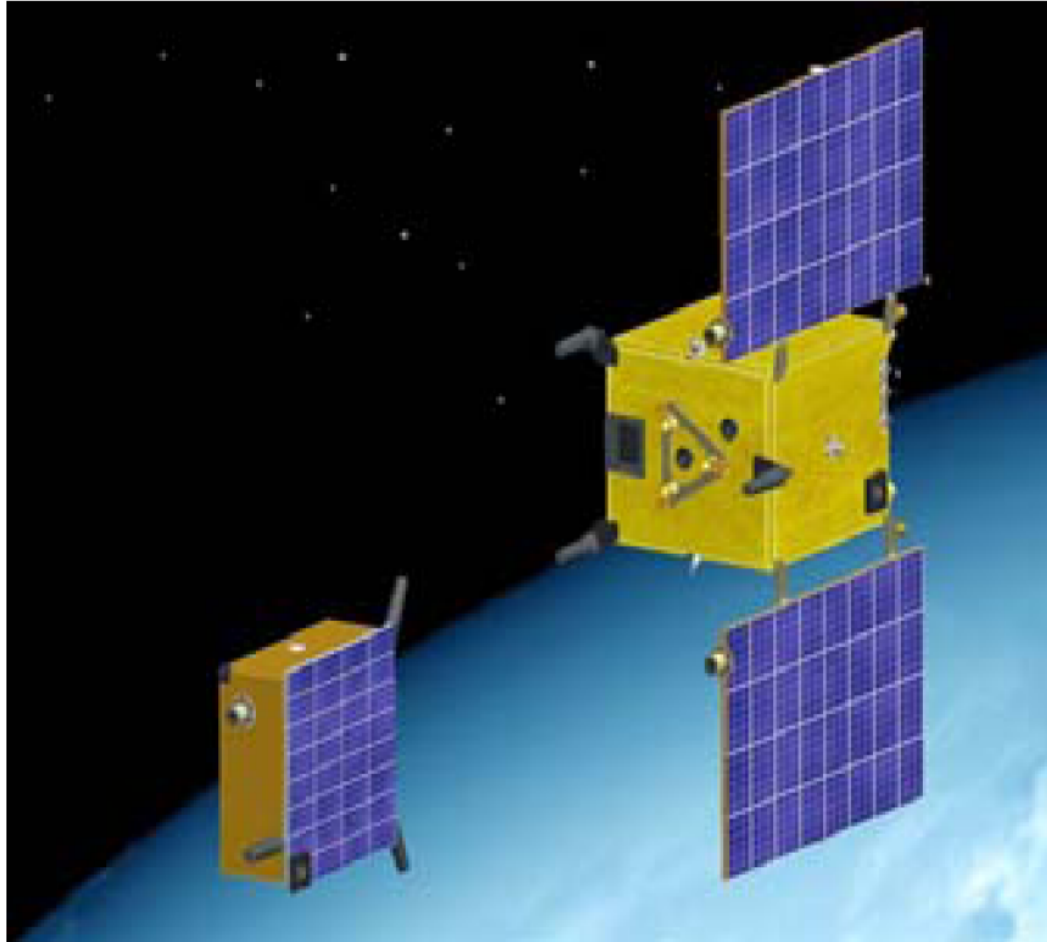


Numerical model

Experiment



MEMS micropropulsion for precise manoeuvring of satellites



Thank you for your attention

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