



C3M

Centre for Computtional Continuum Mechanics Ljubljana, Slovenia

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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



C3M d.o.o. Centre for Computational Continuum Mechanics Ljubljana, Slovenia





M5 solutions

M5



Multi-field **M**ulti-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



Radial Forging v.l.0 -> res_11 Project Tool Material Process Analysis Point post Line post Mesh post Report radial forging version 1.0 Image: Comparison of the second of the			
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PLANSEE		result ouptut frequency pass one	Ls3 Normal contact stress Normal gap Plast mult. Sliding distance Smax Smin SP3_MI SP3PEPOS Spring force X Spring force Y



C3M experiment on ISS



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**





S121E05215



Inverse modeling





MEMS micropropulsion for precise manoeuvring of satellites







Thank you for your attention

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