



WESSEL WITS

Faculty of Engineering Technology (CTW) University of Twente Department of Design, Production and Management

Strong focus on Physics in Design. From an engineering perspective, successful product development is constantly challenged by considering novel technologies. For design engineers this requires both a thorough understanding of the underlying physics and physical phenomena, and a systematic way to transfer this knowledge to the product level. To better facilitate this, design support tools are researched specifically for the early stages of Engineering Design, the concept development phase. Key areas of expertise are Two-phase (Phase-change) Heat Transfer Principles and Additive Manufacturing (3D Printing).

PUBLICATIONS:

Marijn P Zwier, Henk Jan Gerner and Wessel W Wits, Modelling and experimental investigation of a thermally driven self-oscillating pump, Applied Thermal Engineering, In press, February 2017.

Wessel W Wits and Gert Jan Riele, Modelling and performance of heat pipes with long evaporator sections, Heat and Mass Transfer In press:11, 2017.

Marijn P Zwier and Wessel W Wits, Physics in Design: Real-time numerical simulation integrated into the CAD environment, Procedia CIRP 60:98-103, 2017.

Marijn P Zwier and Wessel W Wits, Design for additive manufacturing: Automated build orientation selection and optimization, Procedia CIRP 55:128-133, 2016.

Wessel W Wits, Marc Smit, Ludmila Hoen, Simone Carmignato and Filippo Zanini, Non-destructive testing of metal manufactured parts using 3D X-ray tomography, In NATO Specialists Meeting Additive Manufacturing for Military Hardware AVT-258- RSM-042. 2016.

Wessel W Wits, Simone Carmignato, Filippo Zanini and Tom H J Vaneker, Porosity testing methods for the quality assessment of selective laser melted parts, CIRP Annals - Manufacturing Technology 65(1):201-204, 2016.

Wessel W Wits, Rutger Bruins, Lennard Terpstra, Rob A Huls and H J M Geijselaers, Single scan vector prediction in selective laser melting, Additive Manufacturing 9:1-6, January 2016.

Marc Schreiber, Wessel W Wits and Gert Jan Riele, Numerical and experimental investigation of a counter-current two-phase thermosyphon with cascading pools, Applied Thermal Engineering 99:133-146, 2016.