



ADVANCED THERMAL CONTROL CONSORTIUM

Tier 3 Membership Flier July 2016

In the development of precision systems and machines, thermal effects can play a dominant role. As accuracy, productivity and optimisation demands increase, the challenge to further improve performance from the perspective of improved thermal control is of growing importance to various markets, including inkjet printing, medical systems, automotive and lithography systems.

A consortium has been formed to advance the theoretical and applied approaches to design, simulation, measurement and compensation techniques essential for the development of precision modules/systems subject to internal or external thermal loads. The focus is on technical strategies and solutions to enable the next generation of industry capability.

The consortium will deliver a step change for products within multiple markets, including life sciences & health, semicon and automotive. And it is open to new industrial members.

[The Consortium](#)

At the core of the consortium is a group of leading industry from the High Tech Sector. It is a unique cross-sectorial partnership; addressing a sweep of key end markets and the value chain from SME through to OEM.

For the first time a leading group of industrial partners working in the field (ASML, FEI Electron Optics, Philips Electronics Nederland, IBS Precision Engineering, Segula Technologies Nederland and VDL Enabling Technologies) have come together to conduct shared development in a new innovation forum. The partnership has been formed to drive a common research agenda; driven by the diverse markets served but where common challenges are emerging.

[Consortium Implementation](#)

The consortium has been brought together to cover the common needs of the High Tech Industry, addressed by leading research institutes. Within the project a new infrastructure has been set up to enhance innovation and increase the level of penetration of scientific knowledge into practice. The consortium of industrial partners is supporting a research program which addresses both fundamental research, through PhDs, plus application research through MSc students placed at the companies. The research activities are being led by leading university departments TU Eindhoven

(Departments of Electrical Engineering and Mechanical Engineering) and TU Delft (Department of Precision and Microsystems Engineering).

This cooperation between the entire High Tech chain and the scientific partners will:

1. Strongly decrease time to market of new innovations;
2. Enhance innovation level across the entire chain.

Following the official kick off in February 2016, two students have now begun their PhD work within the consortium:

- Daming Lou – Next Generation Model Reduction Techniques for Complex Systems
- Max van der Kolk – Thermal Design & Optimisation

Visits have been undertaken by the students to the sponsoring companies and project planning commenced. Recruitment of a third student is now underway.

Tier 3 Membership Option

Membership of the Consortium at Tier 3 level is €5k per annum¹ and includes the following benefits:

- The opportunity to be part of a unique network setting the standard for developments in this field and supporting the development of the next generation of leading engineers.
- The opportunity to promote your activities in the field at a high level.
- Within your chosen project:
 - The right to approve the initial project plan (each Partner needs to agree).
 - Six-monthly Research Project Reports on the progress of the Project.
 - Participation in the six-monthly research progress review sessions for the Project.
 - Participation in the annual workshop where a general overview of the results of all projects and their status is provided.
 - A Tier 3 Partner can actively 'participate' in the Project, having the right to suggest changes, discuss the results with the other participating parties including the Academic Partner and/or contributing their own research.
 - While IP ownership is not offered at this level, the option to license IP arising for use in the partners field of use (and excluding those of the other members) may be negotiated.

New Members

In April 2016 we were pleased to welcome CCM (www.ccm.nl) as our first Tier 3 member.

Contact

If Tier 3 membership is of interest, further details on the Consortium technical agenda, legal structure and the accession process can be provided by contacting: Dr Theresa Spaan-Burke burke@ibspe Tel: +31 (0) 40 2901270.

¹ Subject to inflation.