

# European Space Thermal Engineering Workshop 2022

18-20 October 2022

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Harrie Rooijackers

## Mobile phones in silent mode please

### This morning

- Security Instructions Video
- Workshop Information – Harrie Rooijackers
- ESA Thermal Outlook – Stéphane Lapensée – Head of Thermal Control Section
- Coffee Break
- Presentations Starting at 11:30 in Newton
- Lunch Break 13:00 – 14:00

# ESA team and workshop organisation



- Workshop organised as a team by the Thermal Division  
Many colleagues contributed; reviewing, evaluating, chairing  
Thank you very much to all colleagues
- Local organisation and technical programme coordination  
Harrie Rooijackers with support of colleagues and ESA Conference Bureau



# ESA contacts for thermal technologies/products

THERMAL DIVISION – Olivier Pin



THERMAL CONTROL - Stéphane Lapensée, Head of Section



Cryogenics – Thierry Tirolien



(2-Phase) Heat Transport - Stéphane Lapensée & Emmanuel Caplanne



Heat storage & insulations – Romain Peyrou-Lauga



Heat rejection & coatings – Felix Beck



Electronic box, thermal heaters, thermostats, sensors – Philipp Hager



Thermal Protection – Heiko Ritter



THERMAL ANALYSIS AND VERIFICATION – James Etchells, Head of Section



Analysis methods and tools – James Etchells



Contact for the Mechanical systems Laboratory - Stéphane Roure



# Workshop objectives

- To provide a forum for the exchange of views, experiences, best practices and lessons learned for thermal engineers involved in space missions
- To promote and facilitate contacts between thermal engineers and thermal technologies and tool developers
- To present recent developments on all aspects of the thermal engineering domain and to solicit feedback
- To present new approaches and methodologies e.g. for thermal design, analysis and verification

# Topics

40+ very interesting presentations covering:

- Thermal design (platform, instruments)
- Thermal analysis tools and software
- Thermal testing
- Thermal control technologies
- Two-phase heat transport technologies
- Thermal aspects of thermo-elastic

Presentations cover:

- Enhancements
- Applications
- User experiences

## Parallel sessions on Wednesday



- All relevant information is on-line: <https://indico.esa.int/e/ESTEWS2022>
- Gives access to time table, abstracts on mobile and computer
- Downloadable calendar file with all abstracts and timetable  
Downloadable book of abstracts
- Feedback welcome

- 2.5 day programme
- Presentations of 30 min, including 5 minutes for questions and discussions
- Presenters:
  - If not done already please upload your presentation (PowerPoint or Impress and PDF file) to indico or email to [Harrie.Rooijackers@ext.esa.int](mailto:Harrie.Rooijackers@ext.esa.int) before the end of the workshop.
  - No usage restrictions, please!
  - Be available in time for your time slot.
- Workshop Proceedings will be supplied to participants afterwards, on the Web.



# Workshop conveners



Małgorzata Sołyga



Paula Prado Montes



Andreas Mussger



Giulio Tonello



Gunnar Sieber



James Etchells



Marc Broussely



Matthew Vaughan

# Workshop conveners



Paolo Ruzza



Philipp Hager



Romain Peyrou-Lauga



Stéphane Lapensée



Victor Cleren



Vito Laneve



Harrie Rooijackers

- session blocks with 3-4 presentations
- 30min breaks in between blocks
  
- Lunch: 1h from 13:00 – 14:00 in ESTEC Restaurant
- Presentation rooms will be locked by ESA Security during that time
  
- Check your details on the list of participants and inform the Conference Bureau of any modifications.  
Leave your email address!

- Masks available at ESTEC Reception
- Taxi service and Shuttle service to Schiphol Airport and hotels in Noordwijk contact ESTEC Reception ☎ ext. 54000, [ESTEC.Reception@esa.int](mailto:ESTEC.Reception@esa.int) or Taxi Brouwer ☎ +31(0)71 361 1000, [info@brouwers-tours.nl](mailto:info@brouwers-tours.nl)
- Schiphol Airport issues
  - + Often very long queues
  - + No access earlier than 4h before flight

- Today Welcome Reception at 18:00 in Foyer or Wintergarden  
Complimentary Bus service to major hotels in Noordwijk, one at 19:30 and one at 19:45  
Both departure from ESTEC Gatehouse / Main Reception
- Tomorrow evening dinner in ESTEC Restaurant from 18:30 to 21:00  
Buffet dinner with choice of fish, meat or vegetarian dishes  
+ Informal setting, have your dinner ticket at hand
- Complimentary Bus service to major hotels in Noordwijk, leaving at 21:15  
Both departure from ESTEC Gatehouse / Main Reception
- Bus route: ESTEC -> Beeklaan (walk to Hotel Royal) -> Hotel Alexander (walk to Hotel HogerHuys) -  
> Palace Hotel -> Huis ter Duin -> Golden Tulip  
For other hotels please consult map for nearest location

# Next year's workshop

In the week 9-13 October, most likely

Tuesday 10 – Thursday 12 October 2023

Abstracts and presentation materials to be provided early



## 2023 International Conference on Environmental Systems (ICES)

16-20 July 2023, Calgary, Canada.

- Deadline for submitting abstracts: 28 November 2022
- For details see: <https://www.ices.space>



# Listen, Ask, Discuss

*most of all: **Enjoy***

