



CEC Newsletter Winter 2025





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Editorial

Text by Miguel Mascaray, Jose-Maria Gutierrez-Zuazua and Dirk Petersen
Images by Dirk Petersen

This newsletter is distributed to the current membership of the SAWE Central European Chapter.
Feel free to distribute to interested parties.

For comments and contribution contact:
cec.chapter@sawe.org.



SAWE Central European Chapter

Membership Meeting April 2024

Miguel Mascaray

On October 2nd we had our semi-annual virtual session. The number of participants, although lower than expected, increased compared to the April session. My personal impression is that the content of the agenda was quite interesting: we had a presentation of the activities that the SAWE vice presidents (belonging to our chapter) carry out on a daily basis, we had an excellent presentation by Manuela Bucci, we reported on the progress of the Chapter working groups, the initiative to invite members of our chapter to the executive committee sessions was explained, we reported on the upcoming activities of SAWE, and we enjoy being together (even if it was virtually ..).

Without any doubt, a content full of interest for our members. However, I am not happy, I will be happy when at least 75% of our membership attends and actively participates in these sessions. To achieve this, the Executive Committee will spare no effort so that all of us, the members and supporters of the European Chapter, have these sessions as a must in our personal schedules. For this we are already working on the next session in March of the new year 2025.

You can download the file with the agenda and MoM of the October session following this link : [SAWE Central European Chapter – Rich in diversity of cultures, Great in technical content](#)
For those of you who could not attend the meeting, take a look at it...

To all of you: see you in March!!!!

The next CEC Membership Meeting is scheduled for 20.03.2025 at 18:00 CET.

Working Groups

WG1 Corporations

Jose-Maria Gutierrez-Zuazua

Its purpose is to make our Society known to companies and built a network of collaborating corporations.

During this year we continue a plan of contacts with Corporations to raise awareness of the Society in Europe. It is planned to add Rheinmetall to our potential partners.

Effective collaboration will focus on when our CEC organises an International or Regional Conference.

WG3 Universities

Miguel Mascaray

The aim of this group is to establish a strong and firm collaboration with the European Universities in order to promote our discipline. For that we establish regular meetings with our Universities Network, identify common projects and lectures with the Universities as well as foster the publication of Student Papers.

We are in continuous contact with the Universities Politecnica and Carlos III in Madrid as well as with Airbus in Getafe to collaborate in the future through the existing Airbus Classroom in both universities. The two sessions of mass properties discipline divulgation scheduled for the month of October 2024 were postponed due to lack of audience and other priorities at that time. Two members of the mass properties department of Airbus D&S in Getafe have joined WG3 to collaborate in these presentations.

We are working to coordinate a possible joint meeting between the focal points of the universities that we have contacted recently (Genova, Madrid, Hamburg, UK...).



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WG4 Knowledge Sharing

Dirk Petersen

The aim of this group is to facilitate the knowledge transfer between the members of the SAWE CEC.

The first mentee finished the SAWE Mentoring program. If you want to take advantage of the wide knowledge of the available mentors apply at <https://www.sawe.org/resources/mentoring-resources/>. The mentors will guide you to solve your issues and enhance your knowledge. New knowledge guaranteed, for free.

I am looking for Co-facilitators supporting the next SAWE International Forum. The aim is a fruitful discussion on the subject “Ask the right questions”. If you are interested, contact dirk.petersen@sawe.org.

We are in contact with Daniel Raymer for a presentation at our next membership meeting (20.03.2025). Daniel P. Raymer is an aerospace design engineer widely recognized as an expert in the fields of aircraft conceptual design, design engineering, aircraft configuration, and layout. He was also head of Air Vehicle Design in the early stages of the design of the [Rockwell-MBB X-31](#).

Support Needed!

Influence the future of our profession and be part of our working groups. Working groups and their interim coordinators are:

- WG1: Corporations: Ruben Gonzalez-Gonzalez & Jose-Maria Gutierrez-Zuazua
- WG2: Technical Involvement: NN
- WG3: Universities: Miguel Mascaray
- WG4: Knowledge Transfer: Dirk Petersen



We Need Your Support ...

Please [contact us](#).

Subpages for each working group are or will be available.

Who is Who?

In this space members of the SAWE Central European Chapter will have the opportunity to present themselves.

Volunteers are welcome to write a short article about their life inside and outside of Mass Properties.

Who is Dirk?

Dirk Petersen

Like Miguel Mascaray I grew up looking at the sky. The house of my parents lay below the approach path of three military airfields, the sky was filled with noisy F104s, F4s and G91s.



Dirk Petersen

Finishing school, I was extremely lucky to be accepted for an apprenticeship at Lufthansa's engine shop in Hamburg. Three years later I became a certified aeroengine mechanic and decided that I did not want to spend my working life on the shop floor. Instead, I went back to school for one year, followed by four years study at what is today the Hamburg University of



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Applied Sciences. In between I did the mandatory military service, maintaining the engines of Germany's last F104s.

My internship during the study was done in Lufthansa's Mass Properties department. This gave me an advantage when my future boss saw my application for a job.

For the next 34 years I worked in the Mass Properties department of Airbus and its various predecessors. And I was lucky again, I was able to work on many programs, and on an even larger number of projects. Programs range in size from the A318 to the A380, although my favorite was, and still is, the A340.

I realized that Mass Properties is one of the few disciplines in which you are able to discover the whole aircraft in detail and get into contact with a lot of people in your company, with your suppliers and your customers. This never made my job boring.

During the final years of my working time I also learned that it is fun and rewarding to pass my knowledge to the next generation.

This is why I decided to get actively involved in the Society of Allied Weight Engineers (SAWE) after my retirement in 2021. Developing and operating SAWE's Certification Program gives me the chance to continue to pass my knowledge and to learn more about Mass Properties in addition to other new things I never thought I would like to do. Today I hold the position of Vice President Certification, in addition I am the acting Secretary of the Central European Chapter.

But the SAWE is only one part of my present activities. I continue to travel through the big, wide world, and I am still restless after not being able to pilot a small aircraft through the sky for a month.

Otherwise, I do a lot of cycling, this year's resolution is to go swimming regularly. Gardening is another big topic nowadays.

Like many years ago, I still look up to the sky when an aircraft passes overhead. Some things never change.

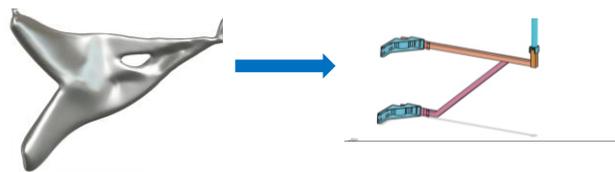
Presentation “Combined approach to the application of topological optimization for design & weight reduction”

Dirk Petersen

Yuri Mirshavka delivered this interesting presentation at last year's SAWE 83rd International Conference and will repeat it at our next SAWE CEC-Membership Meeting on 20.03.2025.

Summary:

Topology optimization is a mathematical method that optimizes material layout within a given design space, for a given set of loads, boundary conditions and constraints with the goal of maximizing the performance of the system. Utilizing topology optimization significantly complicates and increases the cost of manufacturing. In most cases the outcomes can be produced only with 3-D printing. The presentation identifies an approach to reduce the mass by up to 60% while still using classical manufacturing methods.



Do not miss this presentation, it will provide you with ideas for your issues.



SAWE Central European Chapter

SAWE International 84th Conference – Call for Papers

Dirk Petersen

Are you interested in contributing to the conference by delivering a presentation or a paper? There is still the opportunity.

Get in contact with the CEC's Director Werner Sellner (werner.sellner@web.de).

LTH 151

Jose-Maria Gutierrez-Zuazua

The 151st meeting of the LTH (Luftfahrt-technisches Handbuch) – Mass Analysis Panel – took place on 26th and 27th November 2024 at Airbus facilities in Getafe (Madrid).

For those who are not familiar with the LTH, it is recommended read SAWE Paper No. 3554 – “Mass Analysis – An Important Discipline of the "Luftfahrttechnisches Handbuch" (Aeronautical Engineering Handbook) by Dr. Stephan G. Scheidler for presentation at the 71st Annual Conference of Society of Allied Weight Engineers IN Bad Goetting and Manching – Bavaria, Germany – 05.-10. May 2012.

LTH offers an opportunity for attendees to share the work carried out by the Mass analysis panel as well as to see the studies and papers presented during the meeting and, in most cases, also an interesting visit to local installation facilities.

The meeting was conducted by our director Werner Sellner (Chairman) assisted by the Airbus-D&S host team, led by Cristina Verdegay Santana.

Status of the SAWE-International Conference on Mass Properties Engineering was outlined by Dirk Petersen with emphasis in the SAWE-CEC activities as Certification process, Universities relationship, etc.

There was a large attendance of people representing various companies such as:

- Airbus (Operations, D&S, Helicopters)
- Altair

- Rolls Royce
- TGM Lightweight Solutions GmbH
- Technische Universität -Berlin
- MTU
- IABG mbH
- Rolls Royce Company

Several interesting papers were presented, such as:

- Reports of the Working Groups:
 - Weighing
 - Value of the Pound
 - Mass Standards
- Presentations:
 - Weight Analytics
 - Management of weighed parts
 - Application possibilities of new developed high-performance non-alloy-material based on pure aluminum.
- Company Profiles
 - Airbus DS
 - IABG mbH
 - Rolls Royce Company

At the end of the first day, a social event was held, a dinner with mostly participants in attendance. It was an excellent opportunity to exchange conversations and relationships with colleagues in a good and relaxed atmosphere.

Also, an important part of this meeting was a set of visits to the Airbus-Getafe facilities conducted by responsible staff who explained in detail the main aspect of the guided tour. These were:

- MRTT Conversion FAL
- Eurofighter Wing FAL
- A400M MRO

Overall, it was an interesting and useful two days, with the opportunity to meet with colleagues and exchange technical knowledge and social encounters.

Our next, the 152nd LTH-Meeting would take place on the 25th and 26th of March 2025 at the Technical University of Berlin, Germany.

The meeting is organized by Andreas Gobbin.



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What's next?

Dirk Petersen

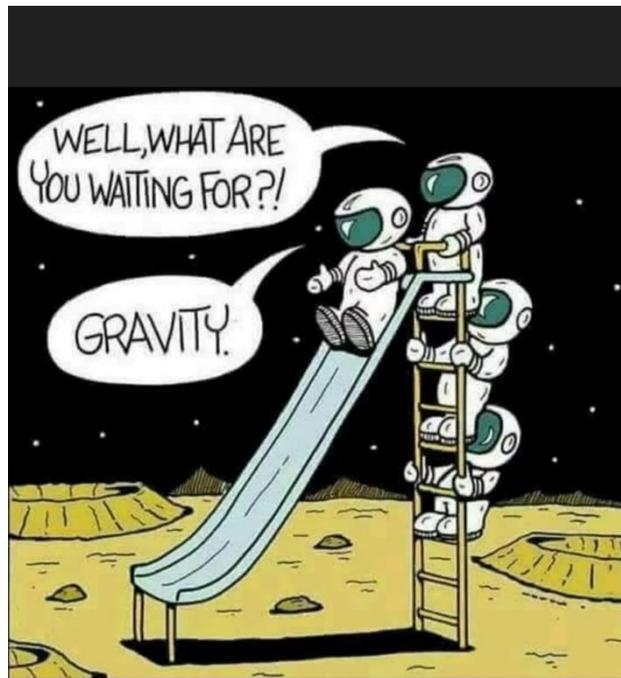
- CEC Membership Meeting – 20.03.2025
18:99-19:30 CET – non-members
welcome, no fee
- SAWE Forum: Ask the Right Question -
facilitated by Dirk Petersen - 28.03.2025
– non-members welcome
- SAWE 84th International Conference –
18. – 23.05.2025, Albuquerque, New
Mexico, USA

Incl. SAWE Forum: Artificial
Intelligence and Machine Learning
(AI/ML) with mass properties
applications: coordinated by Manuela
Bucci - 22.05.2025

- CEC Newsletter Summer 2025 – July
2025
- CEC Membership Meeting – October
2025 – non-members welcome, no fee
Monitor our [website](#) for updated
information on future events.

Seriously!

Dirk Petersen



We are looking for more comics, jokes and
stories for the next versions of the newsletter.
Do not hesitate to send them to “[contact us](#)”.