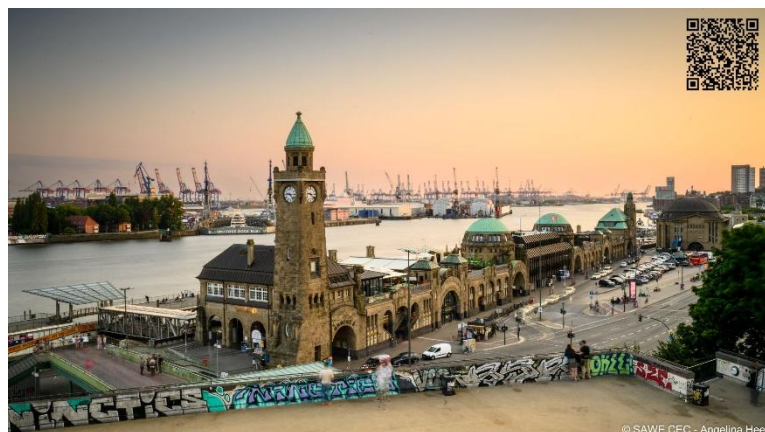




SAWE Central European Chapter



SAWE CEC Newsletter Summer 2026



**SAWE 2027
CONFERENCE**
Hamburg, Germany





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Editorial

Text by Miguel Mascaray, Jose-Maria Gutierrez-Zuazua, Werner Sellner, Kim Mittler, Robert Zimmerman, Runar Aasen, Hans-Pter Dahm and Dirk Petersen.

Images by Kim Mittler, Runar Aasen and 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.



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Membership Meeting March 2026

Miguel Mascaray

I have to say that I was extremely pleased with the March members' meeting. It may not have been the best attended one we've ever had, but it was perhaps one of the most interesting. Why? It's very simple: having sessions with active participation (presentations) from senior engineers is genuinely interesting. Learning about their contributions to our discipline, being able to ask them questions about it, and seeing that, at the end of a career dedicated to these fields, they were able to share the knowledge they've acquired with colleagues is, for me, very important, significant and interesting. But that wasn't the case in our March session. This time we didn't have presentations from experienced colleagues with over 25 years under their belts; instead, we had young engineers brimming with expertise and full of fresh ideas to support our discipline... the other side of the coin... always necessary. New blood shows an interest in developing, improving and adapting to new times and technologies. Well done to them! Marvin Siewert gave us an excellent presentation on a new method/process for determining the properties of the fuel in the wing tank at different aircraft attitudes. And that is what, as I said at the start, makes me say that the session was very interesting. On the other side other young participants (Sarah, Rene, Evert) expressed their commitment to support the Conference in 2027 and to be an active member of our organization, thank you to them and welcome!

The next CEC Membership Meeting is scheduled for 22.10.2026 at 18:00 CET.

Microsoft Teams meeting
Join:

<https://teams.microsoft.com/meet/299150002958655?p=SZTR99zecxzyOJdiPD>

Meeting ID: 299 150 002 958 655
Passcode: Sb7G2xT9

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. We continue the activities in this way.

Once this year's Conference is over, we are focusing on organizing for the forthcoming Conference in Hamburg. Regarding WG1-Corporations, José María Gutiérrez (CEC Ex. Committee) and Niklas Kuchenbaecker (Airbus-Mass Properties in Hamburg) have been appointed as Local Vendor Relations. Both will collaborate with Clint Stephenson-SAWE VP Vendor Relations- to define our strategy.

After summer break we will give a push to those activities.

WG3 Universities

Miguel Mascaray

Establish a strong and firm collaboration with the European Universities in order to

promote our discipline.

Miguel Mascaray will support Donna Gerren (SAWE VP Academics) for preparing the 2027 Conference in Hamburg, contacting with local Universities in Europe and looking for Students willing to present a paper in our conference. We already started to get in contact with some of our focal points in the Universities, after the summer break we will ramp-up with those activities. Miguel will contact Donna to define our strategy to achieve a significant number of students present in Hamburg.

WG4 Knowledge Sharing

Dirk Petersen

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



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The SAWE offers a wide range of knowledge sharing opportunities, its content is updated to the need of the membership.

- Publications (journals, paper, standards, recommended practices).
- Training (in-person, virtual, online).
- Mentoring.
- Certification.
- Virtual Forums.
- Conferences.
- Chapter Meetings.

The exams performed in Certification indicate a knowledge gap in Mass Properties Analysis and Uncertainties. Support in developing dedicated training is welcome.

Visit <https://www.sawe.org/resources/>.

SAWE Forum #17 “Mysteries of Target Weight Setting

Dirk Petersen

This forum was facilitated by Heather Tomazek, Doug Fisher, Robert Hundl and Dirk Petersen. They introduced the three sub-topics, after which the audience shared their knowledge and experience. Below find a AI-generated (ChatGPT) summary.

Target weights are a fundamental project management tool used to balance performance, cost, manufacturability, and risk throughout the product development process. They establish a common objective for customers, suppliers, and engineering teams while ensuring that overall system requirements can be achieved.

1. Preparation

Target weights should be established as early as possible during the conceptual design phase. Both the overall system weight and subsystem weight allocations must be defined based on mission requirements and expected performance. Key considerations include:

- Mission and performance requirements.
- Center of gravity (CG) and system balance.

- Weight growth potential and design margins.
- Manufacturability and lifecycle considerations.

Early collaboration between customers, suppliers, engineering, manufacturing, and program management is essential to establish realistic and achievable targets.

2. Determining Target Weights

Target weights are developed using system requirements, historical data, engineering estimates, logistics constraints, and previous project experience. Different weight definitions may be used depending on the industry, including target weight, not-to-exceed (NTE) weight, net weight, gross weight, and transport weight.

Weight budgets are typically allocated from the overall system down to major assemblies and key components while maintaining appropriate growth allowances and management reserves.

3. Weight Management During Development

Weight management is a continuous process throughout the development program. Progress against target weights should be monitored regularly, with particular attention given to:

- New or immature technologies.
- Aggressive development schedules.
- Supplier performance.
- Configuration and requirement changes.

When weight exceeds the target, customer and supplier should jointly identify root causes, evaluate design alternatives, and develop recovery plans. If components remain below target weight, the available margin may be redistributed to other systems or used to improve overall product performance.

Key Lessons Learned

- Collaboration is the most important success factor. Effective communication between customers, suppliers, and engineering teams is essential.
- Weight is a system-level property. Optimizing individual components must not compromise overall system performance.



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- Targets must be realistic and physics-based. Ambitious goals should remain technically achievable.
- Weight management is continuous. Target weights must be monitored, reviewed, and adjusted as designs mature and project requirements evolve.

Cross-Industry Perspectives

Although the specific constraints differ, the underlying principles are consistent across industries:

- Space: Weight directly limits payload capability.
- Aerospace: Weight affects aircraft performance, range, and efficiency.
- Marine: Weight influences stability, buoyancy, trim, and survivability.
- Offshore: Weight governs transportation, lifting, and installation operations.

Conclusion

Target weight setting is far more than assigning numerical weight limits. It is a collaborative systems engineering and project management process that aligns technical performance, cost, schedule, and risk. Successful weight management requires early planning, realistic targets, continuous monitoring, and strong cooperation between all stakeholders throughout the product lifecycle.

The transcript will appear in one of the next SAWE Journals, the recording can be found in the SAWE Shop.

The series of virtual forums will continue. Do not miss:

- “What Is Needed for a Successful Collaboration between Customer and Supplier”, moderated Dirk Petersen, Doug Fisher and Rod van Dyk, early November 2026.

Additional topics will be announced on the [SAWE-webpage](#).

Support Needed!

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

- WG1: Corporations: 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.



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Who is Runar?

Runar Aasen



Runar Aasen is the co-founder and manager of BA Software AS, the company behind ShipWeight and ExpressMarine software and has a Master's degree in Naval Architecture from the University of Trondheim in Norway. Runar has worked for more than 30 years in the mass properties engineering and software business with major shipbuilders and ship designers all over the world as clients. He is an Honorary Fellow of the Society of Allied Weight Engineers (SAWE), and has authored and co-authored several technical papers on the subject of weight engineering for the ship and offshore industry. In his spare time, he will be sailing and traveling.

Presentation Paper 3842 “Modernizing SumMassProps”

Robert Zimmerman

Robert Zimmerman retired as a Senior Staff Engineer from Lockheed Martin Space Systems Company in Denver, Colorado. He has held SAWE International Office as Executive Vice President, President, and Vice President - Technical Director. He currently chairs the Mentoring Committee for the SAWE. Robert is the author of 6 previous papers, two of which were awarded the Mike Hackney Best Paper Award for the conference they were presented at. He is a Honorary Fellow of the Society and is one

of 9 people honored with the Society's Richard Boynton Lifetime Achievement Award.

He will repeat his award winning presentation given at the 85th SAWE International Conference during our next SAWE CEC-Membership Meeting.



Abstract:

In 2003 I created the initial version of SumMassProps, an Excel Add-In that created a macro-based Excel solution for correctly summing the 10 basic mass properties (Mass, 3-axis Centers of Gravity, 3-axis Moments of Inertia, and 3-axis Products of Inertia). This was released as SAWE Paper 3310. This solution had a bare-bones Graphical User Interface (GUI) that only created the necessary header lines required to run the Add-In, all the “guts” of the solution were accessed using Excel's built-in Paste Function) to access each of the Add-In's summing functions.

This was not ideal. Although the original 2003 version of SumMassProps did ensure that the



consistent equations were used to sum mass properties, in 2012 a major update was issued as SAWE paper 3574. This update included a full GUI utilizing menus to access the various functions, as well as adding additional functionality to the Add-In. This version also included corrections to the summing of mass properties uncertainties as covered in SAWE paper 3360 “Are You Sure?”. In 2009 Microsoft created a different way to access functions and macros, calling this new method the Ribbon. Later, access to functions and macros using menus was discontinued within Visual Basic for Applications, the language used to create the SumMassProps Add-In, and the Add-In would fail to load. This forced either a return to the 2003 method or a re-write of the program to encompass the new Ribbon paradigm versus a menu driven paradigm.

This paper describes the necessary steps to implement a Ribbon-based Add-In, and will also be a release for SumMassProps Version 10 (2026) that utilizes a Ribbon-based paradigm, which necessitates a re-write of the Tutorial and the User Guide to walk the user through the Add-In.

Resurrecting the SAWE Industrial Committee “Ground Vehicle”

Hans-Peter Dahm

SAWE is reactivating the Ground-Vehicle Industry Committee to strengthen the role of Mass Properties Engineering in the development, production, and operation of ground vehicle systems.

Ground vehicles are facing increasing demands for performance, efficiency, payload, safety, range, sustainability, cost control, and regulatory

compliance. These requirements affect passenger cars, super sports cars, commercial vehicles, rail vehicles, off-highway machinery, defense vehicles, and special-purpose platforms. In all of these applications, mass properties are key engineering parameters influencing vehicle architecture, axle and wheel loads, center of gravity, stability, energy consumption, durability, logistics, and life-cycle cost.

The committee will build on SAWE’s existing technical foundation, including SAWE RP G-1, *Mass Properties Control for Wheeled and Tracked Vehicles*. Its purpose is to provide a renewed cross-industry forum for the exchange of practical methods, lessons learned, and future needs in ground vehicle mass properties control.

Initial focus areas include weight target setting, weight forecasting, mass maturity assessment, supplier weight reporting, risk and opportunity tracking, benchmarking, center-of-gravity management, moment-of-inertia prediction, axle-load analysis, homologation effects, lightweight technology assessment, and digital weight management tools.

The committee will invite participation from automotive, rail, commercial vehicle, off-highway, defense, and allied industries. A key objective is to connect experienced specialists, suppliers, researchers, and young engineers, and to turn practical industry challenges into useful SAWE papers, workshops, Recommended Practice updates, and technical exchanges.

Hans-Peter Dahm, the SAWE Ground Vehicle Industry Chair, will coordinate the restart of the committee. He is a Diplom-Ingenieur in mechanical engineering design with more than three decades of experience in weight management, lightweight engineering, and mass properties control across railway, automotive, aerospace, and cross-industry vehicle programs. He founded TGM Lightweight Solutions GmbH in 1997 and has developed software-supported



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methods for vehicle weight tracking, forecasting, and risk-and-opportunity evaluation.

The reactivation of the Ground-Vehicle Industry Committee is an opportunity to strengthen SAWE's presence in a rapidly changing vehicle sector and to advance practical, standardized, and future-oriented Mass Properties Engineering methods for the ground vehicle community.

SAWE 85th International Conference 2026

Dirk Petersen



Participation

- 104 registered for Technical Tracks.
 - 5 Europe.
 - Runar Aasen, B&A Software.
 - Alejandro Fiestras Corcho, Airbus Commercial, presenter.
 - Yahi Abdeldjalil, ATR.
 - Jonathan Thomson, Jet Aviation.
 - Dirk Petersen, SAWE, presenter.

- 2 Brazil, 2 South Korea, 2 Japan, 2 Canada, remainder US.

- 45 trainees, mainly AWBS and Aircraft Weighing.
- No students.
- 7 Vendor booths.
- 2 SAWE booths.
 - SAWE Career Development.
 - 86th International Conference 2027 in Hamburg.
- 13 Guests.

Training

- Vendor Weight Control, in person.
- Aircraft Fuel System Calibration, in person.
- Inertia Fundamentals, in person, new offer.
- Developing Basic Parametric Methods, in person, instructor connected virtually.
- Aircraft Weight and Balance, in person, half day practical exercise at a nearby airfield, transport partially provided by SAWE.
- Automated Weight and Balance System (AWBS) Software, in person.
- ShipWeight/Mass Track session run by Runar Aasen.

A second trainer located in Europe is requested for Hamburg. Dirk volunteered for Vendor Weight Control.

7 Guest Events, highlight: Jet Propulsion Laboratory in Pasadena.

Technical Days

- Keynote Speaker (X59).
- 15 papers and presentations.
- 7 vendor presentation.
- Technical Forum - Mass Properties and Performance of Electrical Vertical Take-Off and Landing (eVTOL) Aircraft Vehicles.



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Standard and Practice Day

- Career Development Presentation.
- Certification Workshop.
- Industrial Breakout sessions.



Video-session with incoming Ground Vehicle Committee Chair (Hans-Peter Dahm).

Silent Auction raised 3500\$ for the scholarship fund.

Awards Banquet

- Best paper - 3842: Modernizing SumMassProps by Robert Zimmerman.
- Nominations:
 - Jorge Bes (Airbus Commercial) and others -Fellow.
 - Greg Ray - Honorary Fellow.
 - Bill Boze - Lifetime Achievement Award.
- Elected officers:
 - Jason Booth, president (2nd year).
 - Runar Aasen, Executive VP.
 - Karla Gregg, Senior VP (2nd year).

Conclusion

A very successful and well-organized event.

SAWE 86th International Conference 2027

Kim Mittler

We are proud to announce that the **86th International Conference on Mass Properties** will be held in Hamburg, Germany, from **June 6th to 11th, 2027**. Hosted by the Airbus Mass Properties Department in partnership with the SAWE Central European Chapter, this landmark event marks the conference's return to Europe after 15 years.

Why Attend?

This conference is the premier platform for professional development, technical benchmarking, and cross-industry innovation.

- **Marketplace for Weight Estimation:** A dedicated forum focusing on state-of-the-art methods for overall aircraft and major component weight estimation. This marketplace allows you to benchmark your internal processes against current industry standards and explore next-generation digital solutions.
- **Airline Operations Forum:** A strategic assembly connecting aircraft manufacturers with airline operators to foster mutual understanding of requirements, improve operational efficiency, and establish collaborative standards.
- **Cross-Industry Exchange:** Beyond aerospace, we are integrating insights from the **Space, Automotive, and Marine** sectors. This cross-industry approach delivers high ROI, allowing specialists to adapt proven weight management and optimization technologies from diverse fields to core operations.
- **Digitalisation:** Elaborate opportunities for AI and digital way of working



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Experience Hamburg

The conference will be hosted at the **ZAL (Center for Applied Aeronautical Research)**, located in the heart of one of the world's most innovative aeronautical hubs.

Beyond the professional program, Hamburg itself offers a unique environment for international delegates:

- **Global Innovation Hub:** ZAL provides direct access to cutting-edge aeronautical research and industry partners.
- **World-Class Location:** Regularly ranked as one of the world's most livable cities, Hamburg features a rich history, Europe's third-largest harbor, and a vibrant cultural landscape, making it an ideal setting for networking.

Your Voice Matters: Shape the Agenda

We believe the most valuable technical exchanges happen when the community is actively involved. The Host Committee invites you to contribute ideas, demands, or requirements to the agenda.

- **Do you have a topic?** We welcome submissions from startups, researchers, students, and industry experts. Whether you wish to present a paper, lead a discussion, or share a current project journey, we are here to support your contribution.
- **Submit Your Topics:** Please help us define an agenda that is truly worthwhile by submitting your proposals or sponsorship inquiries via the [official conference website](#) or by contacting the Host Committee directly.

Take Action Today: Shape the future of the Mass Properties discipline. We invite management and technical experts to maximize this opportunity through active participation, paper contributions, or sponsorship.



LTH 155

Werner Sellner

Report of the Working Group "Mass Analysis" at the MTU Aero Engines in Munich.

The meeting was conducted by our chairman Werner Sellner assisted by the host team, lead by Thomas Weltrowski.

There was a large attendance of members (total 21) representing various companies such as:

- Airbus Aerostructures GmbH.
- Airbus Commercial.
- Airbus Defense and Space.
- Airbus Helicopter Germany.
- Airbus Operations GmbH.
- Airbus Protect GmbH.
- Bauhaus Luftfahrt.
- Deutsche Aircraft.
- DLR.
- IABG.
- MTU Aero Engines.
- Rolls-Royce Dahlewitz.
- RWTH-University Aachen.
- SAWE Organization.



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- Sellner Aerostructures.
- Technical University Berlin.
- TGM Lightweight Solutions GmbH.

The chairman, Werner Sellner, and the host, Thomas Weltrowski, welcomed the participants to the meeting. The following documents were presented:

- Introduction of MTU Aero Engines.
- An overview of MTU Aero Engines programs, organization and worldwide activities was given by Frank Rick, Head of Design.
- The Status Report of the LTH Coordination Office was presented by Dr. Patrick Reidelstürz, IABG.
- The presentation „ATLAS – Air Transport Analysis and Technology Synergy Study” was given by Andreas Gobbin, TU Berlin and Florian Schültke, DLR.
- Visit MTU Museum and Guided Tour to the production plant and PW1100 assembly line
- Academic Paper „Weight to Cost” presented by Hans-Peter Dahm, TGM.
- SAWE-News: Dirk Petersen, the SAWE VP Certification, gave us an interesting overview about the present SAWE-activities.
- On the second day we started with the „Status of the 86th SAWE-International Conference on Mass Property Engineering 2027 in June in Hamburg, Germany”. The detailed presentation from Kim Mittler, Chairman of the Conference, was discussed intensively.
- Presentation from Robert Klöppner, MTU, with the title „PMI Model Based Product Definition” Transformation to a Model-Based Value Chain at MTU Aero Engines.

- Visit Flying Fuel Cell (FFC) Test Bench by Daniel Hertel, MTU.
 - H2 distribution.
 - Stack test bench.
 - Power train test bench incl. electric engine and break.
- Presentation of „Thermoplastic Composites in Structural Load Bearing Structures” by Hans-Peter Dahm, TGM.
- Assessment of a dual fuel aircraft employing SAF and hydrogen by Barlas Türkyilmaz, Bauhaus Luftfahrt.
- Report of the LTH Working Group „Mass Standard” by Dirk Petersen, SAWE.
- General LTH by Johann Wenzl.

The meeting ended with a request to all participants to review and prepare relevant documents for the next LTH-Meeting, as well as a commitment to further cooperation.

What's next?

Dirk Petersen

- Virtual CEC Membership Meeting – 20.10.2026 18:00 CET – non-members welcome, no fee.

Microsoft Teams meeting

Join:

<https://teams.microsoft.com/meet/299150002958655?p=SZTR99zecxyzOJdiPD>

Meeting ID: 299 150 002 958 655

Passcode: Sb7G2xT9

- LTH 157 – October/November 2026
- SAWE Virtual Forum “What Is Needed for a Successful Collaboration between Customer and Supplier”, early November 2026, moderated by Dirk Petersen.
- CEC Newsletter Winter 2027 – January/February 2027
- LTH 158 – March 2027



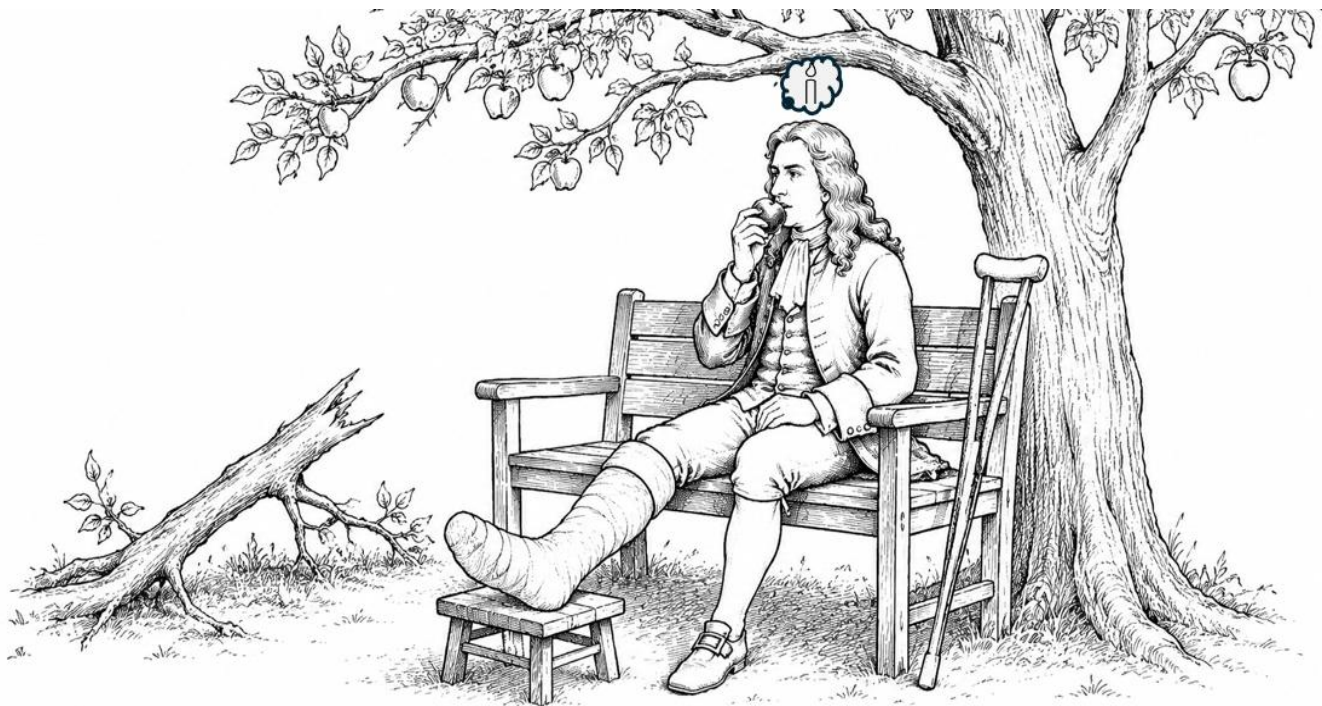
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- CEC Membership Meeting March 2027 – non-members welcome, no fee
- [SAWE 86th International Conference](#), 08.-10.06.2026, Hamburg.

Monitor our [website](#) for updated information on future events.

Seriously!

Dirk Petersen



What really happened in 1666.

drawing by ChatGPT

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](#)”.