

EEDA



**EXPLORE ENERGY
DIGITAL ACADEMY**



APRIL 2025

[CLICK HERE TO UNSUBSCRIBE](#)

NEWSLETTER

IN THIS EDITION

ARTICLE BY DR. ALEX VILLAZÓN

AEROLASTICITY BY ARIAS

LEARNIFY HINTS

MSC PROGRAM IN SRI LANKA

PROGRAMS BY EEDA

FOLLOW US ON LINKEDIN

Photo © Manuel Aldana

FROM THE EDITOR

In a world where both energy systems and education models are being reimagined, the Explore Energy Digital Academy (EEDA) offers a timely and necessary response. Rather than simply digitizing content, EEDA fosters a living, collaborative environment—where knowledge is shaped, improved, and shared by a global network of professionals committed to relevance and quality.

What sets EEDA apart is its peer-reviewed foundation. Each module published on the platform is a product of collective scrutiny and refinement. This process not only elevates the credibility of the content, but also reinforces the idea that learning in the energy transition must be rooted in real-world experience.

Educators from different regions—facing different challenges, operating under different regulations—come together here to create something more coherent and more impactful than isolated efforts could ever achieve. This isn't just about teaching energy; it's about shaping a common language for sustainability, inclusion.

As this edition illustrates, EEDA continues to demonstrate how digital collaboration can drive systemic change. We move forward with a strong belief: that modernizing education isn't about replacing tradition—it's about opening new pathways for access, excellence, and long-term impact.

COVER PAGE: WHERE ART MEETS ENERGY

In this edition, we are proud to feature a captivating image by **Manuel Aldana**, an emerging visual storyteller and soon-to-be graduate of **Universidad San Pablo de Guatemala** (USPG – partner of the EU-BEGP Project). Internationally awarded for his work in wedding photography, Manuel continues to impress with his ability to frame powerful stories within a single image.

This photograph, captured in the heart of Guatemala's banana region, offers more than just an arresting composition. A lone **yellow school bus** drives down a road bordered by endless banana plantations—simple at first glance, but deeply symbolic. The road represents **education**—the journey, the commitment, the forward motion. The vast banana fields, meanwhile, hint at an important reality: the **organic waste** from these plantations is being used to **generate energy**, embodying a circular model of sustainability rooted in local innovation.

At **EEDA**, we believe the future of energy lies not only in high-end labs or massive turbines—but also in everyday transitions. A school bus on a rural road. A plantation turned power source. A photographer who sees beyond the obvious.

We salute Manuel Aldana (IG @camanuelaldana) for capturing this moment and reminding us that the energy transition is a shared story—written across landscapes, told through lenses, and driven by the will to connect people, purpose, and progress.

IMPORTANCE OF EEDA AT UPB, BOLIVIA



Dr. Alex Villazón,
National Dean,
Technological Development
and Innovation;
Project Coordinator EU-BEGP;
Universidad Privada Boliviana
(UPB), Bolivia

Over the past few years, the participation of Universidad Privada Boliviana (UPB), Bolivia, in two Erasmus+ CBHE projects—EUBBC-Digital and EU-BEGP—has marked a significant milestone for the institution. These were the first internationally funded projects in the field of engineering at UPB and opened up a broad collaboration network through the EEDA initiative.

In addition to capacity building—which included teacher training, student engagement, development of remote laboratories, and the introduction of active learning methodologies such as flipped classroom and challenge-based learning—UPB's involvement in EEDA enabled various research activities. These efforts led to the

publication of more than 10 papers in international conferences, covering topics such as remote labs, gender, education, and credit systems for Latin America.

Notably, UPB received a Best Paper Award at the STE 2024 conference (focused on remote labs), and the international GOLC Award in 2024 for its PV Solar Remote Lab (https://online-engineering.org/GOLC_online-lab-award.php).

Furthermore, UPB contributed to the development of open-source software systems now used by several members of the EEDA network, including the Remote Lab Booking System, the BridgeServer, and the Ultraconcurrent Remote Lab Builder.

The EEDA initiative has had a meaningful impact on UPB, particularly in the potential adoption of new credit systems, improvements in the quality assurance process, and the integration of remote labs in both undergraduate and graduate programs. It has also led to the implementation of a Joint Program with other EEDA member institutions.

UPB is grateful to be part of the EEDA family and looks forward to continued collaboration within the network!

QUICK STATS: EEDA IN NUMBERS

**24**

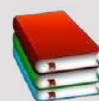
Countries
involved

**50+**

Contributing
institutions

**160+**

Educators
trained

**600+**

Modules
created

**120+**

Peer-reviewed
modules

PROGRAMS POWERED BY EEDA IN CONJUNCTION WITH STAKEHOLDERS



Aeroelasticity is a very important topic in turbomachines and jet engines. A lot of research funding has over the years gone into the area. "ARIAS" is one of the latest EU sponsored projects on the topic.

This covered three areas: **Forced Response Analysis of Blade Rows**; **Non-Linear Aeroelastic Interactions in Turbine Blade Rows**; and **Flutter in Labyrinth Seals**, and was performed by nine engine manufacturers (GKN Aerospace, Rolls-Royce plc, SAFRAN Aircraft Engines, SAFRAN Helicopter Engines, SAFRAN Aero Boosters, Siemens Energy, GE Avio srl., ITP, MTU), 3 research institutes (CERFACS, CENAERO, CTA), and 7 universities (KTH, Universidad Politécnica de Madrid, Università degli studi di Firenze, Technische Universität Darmstadt, Imperial College London, École Centrale de Lyon, University of Stuttgart) in Europe, with Nenad Glodic at KTH as Project Coordinator. For reporting and results please visit: <https://cordis.europa.eu/project/id/769346/reporting>.

The consortium decided to create a set of learning material related to their research results and include this into the Learnify platform for the benefit of students and professionals interested in the turbomachinery aeromechanical field.

Material is accessible here: [SA0202-T31: ARIAS Learning Modules - Learnify](#).

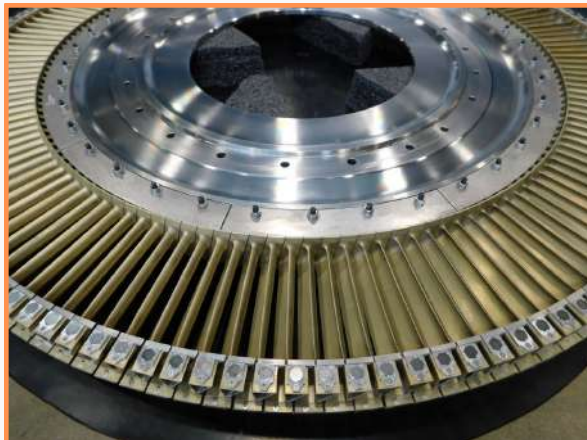


Fig. 1 - New bladed-disk used in Avio's spin rig and CTA's cold flow testing.

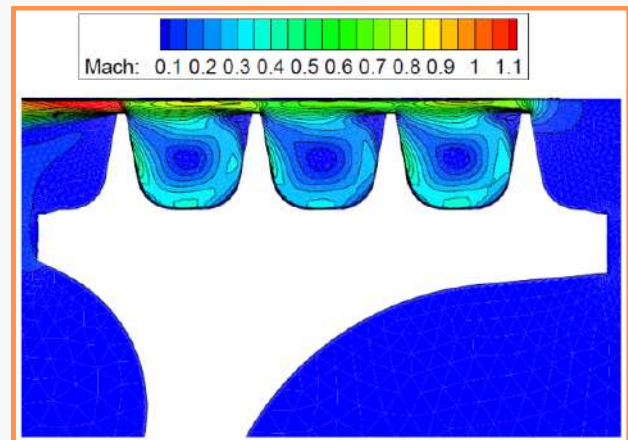


Fig. 2 - Mach number contour could be seen.

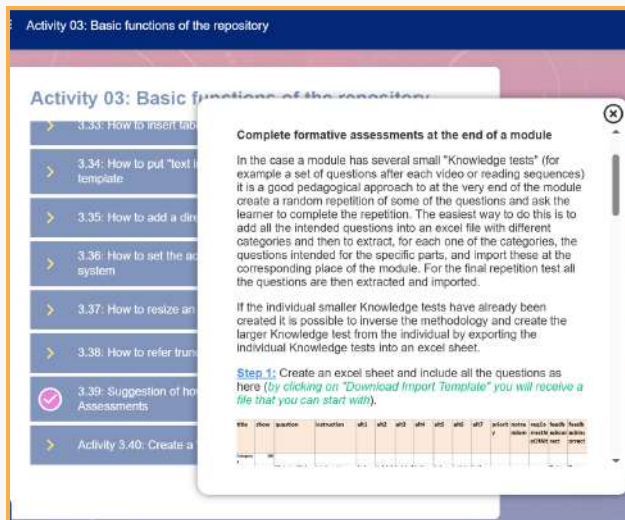
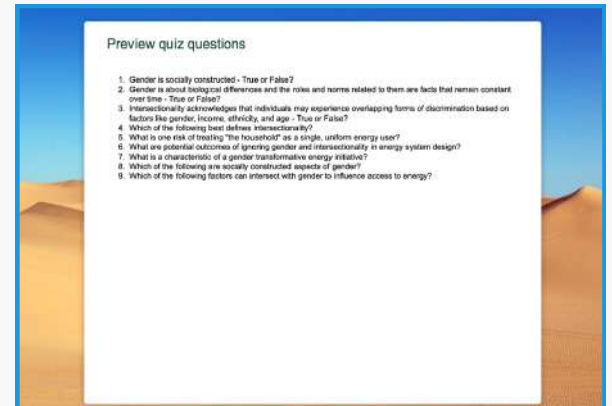
Micro-Term: What is Aeroelasticity?

A bite-sized explanation related to the main article.

Aeroelasticity is the study of how aerodynamic forces interact with structural flexibility. It's crucial in wind energy design, where turbine blades must adapt to changing wind loads without failure.

Create a “Preview List Of Quiz Questions”

The way to do this has been added to the "**Train-the-Trainers**" module [SA501-T02L04CM02](#) (EXPLORE Energy Development Hints), Activity 3.40.



It is possible to import a set of questions from an excel file into a "Knowledge test". This is significantly easier than to create the questions one by one directly into the "Knowledge Test" page.

The way to handle this is explained in the "Train-the-Trainers" module [SA501-T02L04CM02](#) (EXPLORE Energy Development Hints), Activity 3.39.

In Learnify there is a very convenient way of collaboration in the development, and initial review, phase. Using this system it is possible to exchange, page by page, comments and improvements.

A screenshot of a web interface for an LTI tool. At the top, it says "Copy link". Below this are four icons in a row: a play button labeled "View", a pencil labeled "Edit", an eye labeled "Review" (which is highlighted with a blue underline), and a link icon labeled "LTI". Below the icons is a text input field containing the URL "https://time.learnify.se/l/show.html#att/XDkPo?review=true". At the bottom right, there is a blue button labeled "Copy".

REFLECTIONS ON COORDINATING THE MSC PROGRAM IN ENERGY FOR CIRCULAR ECONOMY AT THE UNIVERSITY OF MORATUWA (SRI LANKA)



Duleeka Gunarathne
Coordinator
Outgoing Program
University of Moratuwa
(April 2023–April 2025)

When I look back at the past two years, I feel truly honored to be a part of an initiative that will shape the future of energy education in Sri Lanka. My term as Program Coordinator for the MSc in Energy for Circular Economy at the University of Moratuwa was filled with memorable milestones, some of which I'd like to briefly reflect on here.

This unique MSc program is the main outcome of the EUSL-Energy project, co-funded by the Erasmus+ program of the European Union. It is jointly offered by four Sri Lankan universities; University of Moratuwa, University of Peradeniya, University of Ruhuna, and the Open University of Sri Lanka in collaboration with three leading European partners; KTH Royal Institute of Technology (Sweden), CentraleSupélec (France), and the University of Twente (Netherlands). Each Sri Lankan university offers a different specialization; at the University of Moratuwa, we offer the Renewable Energy Systems track.

What makes this program stand out is how it blends cutting-edge technological knowledge with remote labs, challenge-based learning, and real-world innovation all within one flexible online degree. The program is designed to equip students with creativity, critical thinking, business sense, and 21st-century skills needed to lead the energy transition.

When I look back at the past two years, I feel truly honored to be a part of an initiative that will shape the future of energy education in Sri Lanka. My term as Program Coordinator for the MSc in Energy for Circular Economy at the University of Moratuwa was filled with memorable milestones, some of which I'd like to briefly reflect on here.

This unique MSc program is the main outcome of the EUSL-Energy project, co-funded by the Erasmus+ program of the European Union. It is jointly offered by four Sri Lankan universities; University of Moratuwa, University of Peradeniya, University of Ruhuna, and the Open University of Sri Lanka in collaboration with three leading European partners; KTH Royal Institute of Technology (Sweden), CentraleSupélec (France), and the University of Twente (Netherlands). Each Sri Lankan university offers a different specialization; at the University of Moratuwa, we offer the Renewable Energy Systems track.

What makes this program stand out is how it blends cutting-edge technological knowledge with remote labs, challenge-based learning, and real-world innovation all within one flexible online degree. The program is designed to equip students with creativity, critical thinking, business sense, and 21st-century skills needed to lead the energy transition.

PROGRAMS POWERED BY EEDA

MSc MECE: Master in Science in Energy for Circular Economy

Open University of Sri Lanka (OUSL), University of Moratuwa, University of Ruhuna and University of Peradeniya

This 2-year master program in English helps students develop practical skills and knowledge required to critically evaluate alternative energy sources, and provide feasible solutions.

Please visit: <https://eusl.edu.lk>

Diplomado in Renewable Energy Systems Technology and Management

Double certification Diplomado with Universidad Mayor de San Simón and Universidad Privada Boliviana.

The 5 months diplomado emphasizes on Energy Efficiency, Photovoltaic Systems, Wind, Biomass and Energy Storage

For more information visit: <https://umsa.bo>

Universidad Mayor de San Simón (UMSS), through its University Center for Energy Research (Centro Universitario de Investigaciones en Energías) and the postgraduate program of the Faculty of Science and Technology, has launched a new academic initiative under the umbrella of the EUBBC-Digital project.

As part of its commitment to promote advanced education in the energy sector, UMSS is offering the **Master of Science in Energy Systems Modeling (MCMSE)**—a fully online program designed in collaboration with European and Latin American universities. This innovative master's program leverages globally available digital learning modules hosted on the Learnify platform, enabling a collaborative and flexible learning experience.

The MCMSE program aims to equip young professionals with high-level technical knowledge and practical skills in energy systems modeling. Through advanced mathematical modeling and simulation techniques, students will learn to analyze and predict the behavior of complex energy systems composed of multiple technologies, addressing diverse energy demands. Please visit: <https://posgrado.fcyt.umss.edu.bo>

Let's Stay Connected—EEDA Is Now on LinkedIn!



Discover new modules, share insights, and connect with educators and energy experts from around the world. EEDA's official LinkedIn profile is more than a newsfeed—it's your access point to a global learning network that evolves with the energy transition.

Follow us @eeda-academy to be informed about:

- ✓ Program updates
- ✓ Peer-reviewed content launches
- ✓ Highlights from contributors and institutions
- ✓ Calls for collaboration and events



Follow us:



 **Your voice matters. Let's build the future of energy education—together.**