

# COLLABORATION PROPOSAL H-BRIDGES TEAM 2025



 UNIVERSITY OF BELGRADE  
SCHOOL OF ELECTRICAL  
ENGINEERING



*"Save on iron and copper by smart use of silicon and software"*

# ABOUT THE TEAM



H-Bridges is a team from the Faculty of Electrical Engineering, University of Belgrade, within the Laboratory of Digital Drive and Control.

The team introduces a new dimension to higher education by preparing students for a successful start to their careers.

*H-Bridges* develops software and hardware solutions in areas such as electric vehicles, renewable energy sources, and smart grid/home systems.

The team presents its achievements at international and national competitions, as well as scientific conferences.

The main competition in which the team participates is *IEEE IFEC*.



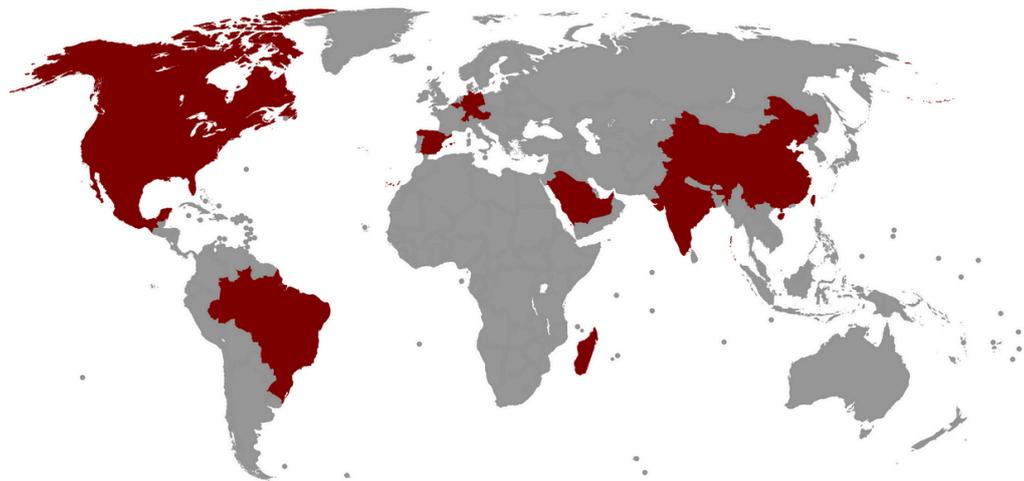
## ***International Future Energy Challenge (IFEC)***

is the biggest international university competition in the field of innovative and energy efficient solutions.

The competition is held by

***Institute of Electrical and Electronics Engineers (IEEE)***,  
the world's biggest organization of electrical engineers.

**Our rivals come from industrially developed nations  
such as:**



The jury comprised of industry and academic experts assesses the final prototypes based on testings under real ambient and laboratory conditions

**FINALS**

Presenting initial experimental results during Applied Power Electronics Conference (APEC) in USA

**SEMI-FINALS**

Evaluating the proposed concepts of the solution

**QUALIFICATIONS**

# PREVIOUS ACCOMPLISHMENTS

**2016. 3rd place**

*"The Best Education Impact Award"*

Taipei City, Taiwan

**2019. 1st place**

*"Grand Award"*

Madison, USA

**2022. 2nd place**

*"The Best Innovation Award"*

Knoxville, USA

**2024. 4th place**

*"The Best Sound Quality Award"*

Austin, USA

**2005. 1st place**

*"The Outstanding Technical Report Award & The Outstanding Presentation Award"*

Chicago, USA

**2018. 4th place**

*"The Best Education Impact Award"*

Beijing, China

**2020. 2nd place**

*"The Outstanding Performance Award"*

Aalborg, Denmark

**2023. 2nd place**

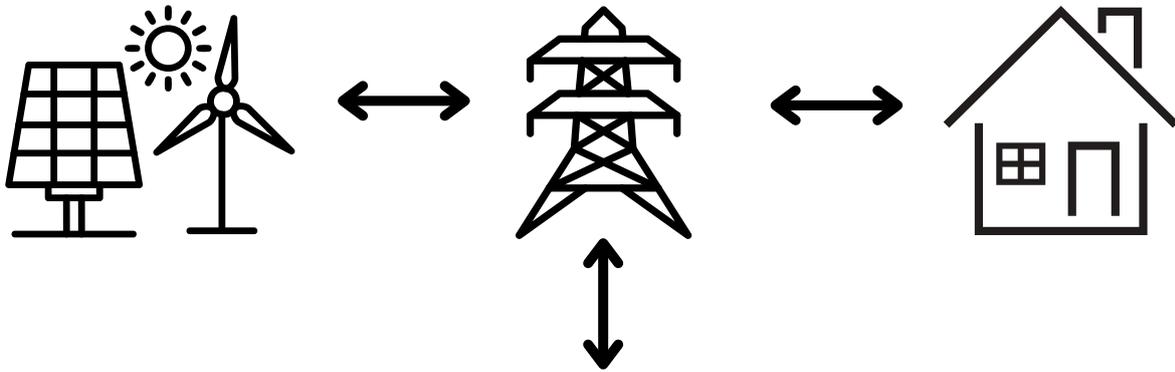
*"The Outstanding Performance Award"*

Hanover, Germany



# ONGOING PROJECT

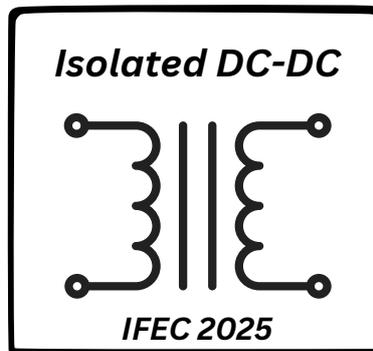
This year's task of the H-Bridges team is the development and design of a galvanically isolated DC-DC converter for energy storage – a solution for renewable energy sources, with the main requirements being efficiency, device size, and the need for output voltage regulation in terms of quality and response speed.



•Input voltage of the converter:  
400V DC

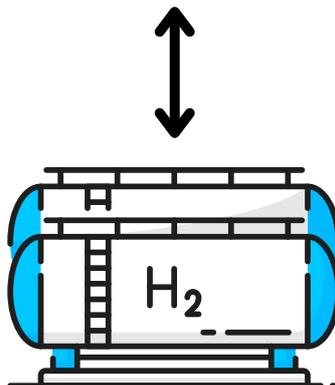
•Output power:  
1500W on 150V DC

•Efficiency: >96%



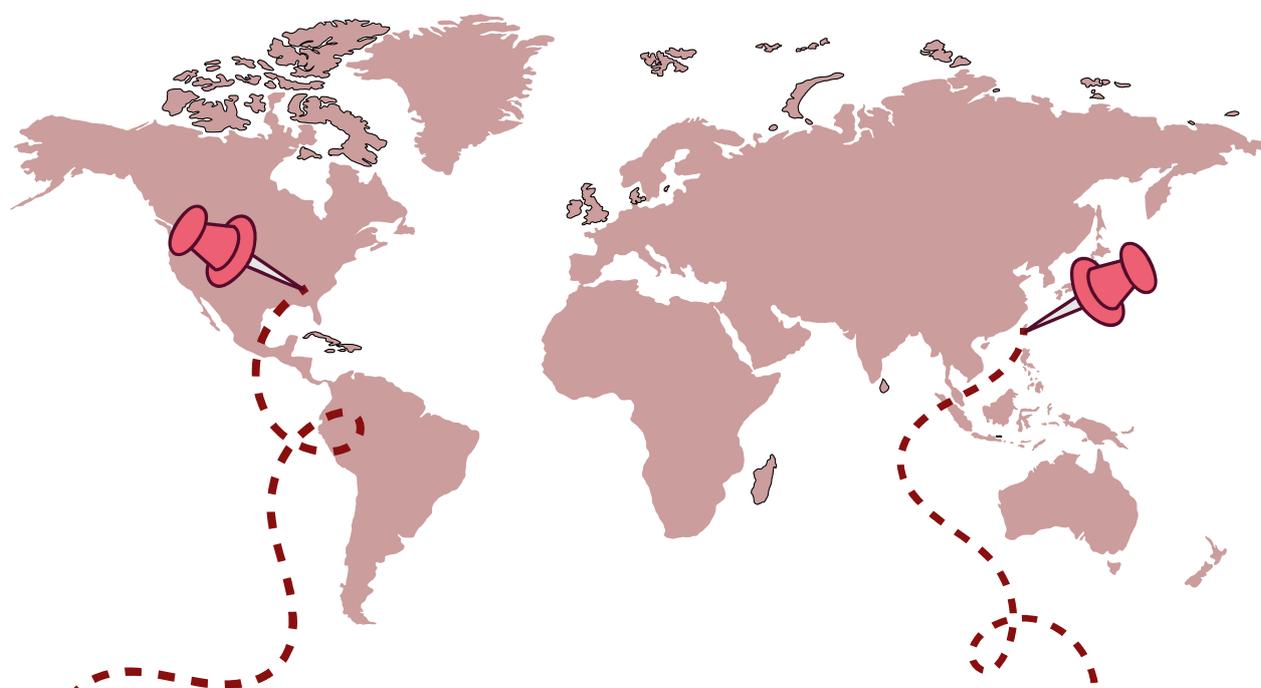
•Response to load change:  
<100ms

•Power density of the converter:  
<1.6W/cm<sup>3</sup>



The *IFEC* competition requires that contestants raise funds on their own for all necessary expenses regarding the electrical components, measuring equipment and travel costs.

The team's participation in the competition contributes to the reputation of the University of Belgrade and the Republic of Serbia, while also providing invaluable experiences and knowledge to the students, which can be significant and applied for the improvement of the domestic economy.



**SEMI-FINALS:**

**ATLANTA, GEORGIA - USA**  
**MARCH 2025.**

**FINALS:**

**TAIPEI - TAIWAN**  
**JULY 2025.**

*H-Bridges team represents the bridge between your company and students. The partnership packages of the H-Bridges team involve collaboration between your company and the School of Electrical Engineering.*

# PACKAGES

## BASIC

VALUE: 1. 000€

- *ETF advertising pack*
- *H-Bridges promo pack*

## BRONZE

VALUE: 3. 000€

- *“Partner ETF” pack*
- *H-Bridges promo plus pack*
- *“Career Bridge” event*
- *Panel discussion*

## SILVER

VALUE: 5. 000€

- *“Big Partner ETF” pack*
- *H-Bridges promo plus pack*
- *“Career Bridge” event*
- *Panel discussion*
- *Job interview simulation*

## GOLDEN

VALUE: 10. 000€

- *“Silver Partner ETF” pack*
- *H-Bridges promo plus pack*
- *“Career Bridge” event*
- *Panel discussion*
- *Job interview simulation*
- *Field trip*
- *Speech at the Ceremony*

# H-BRIDGES TEAM SERVICES

<b>PACK</b>	<b>BASIC</b> 1.000€	<b>BRONZE</b> 3.000€	<b>SILVER</b> 5.000€	<b>GOLDEN</b> 10.000€
<b>Address by the company representative at team events (speech)</b>				
<b>Field Trip (student visit to the company)</b>				
<b>Job interview simulation</b>				
<b>Possibility of advertising company's offers for internship and employment</b>				
<b>Company participation in the Career Bridge event</b>				
<b>Company participation in the Panel discussion</b>				
<b>Possibility of promoting events and competitions held by the company</b>				
<b>Company description and banner on the official team website</b>				
<b>Company logo on the team's publications</b>				
<b>Advertising on the team's social media</b>				
<b>Advertising at the team's social events</b>				

# ETF SERVICES

<b>PACK</b>	<b>BASIC</b> 1.000€	<b>BRONZE</b> 3.000€	<b>SILVER</b> 5.000€	<b>GOLDEN</b> 10.000€
Possibility of organizing specialized lectures for company representatives				
Short description of the company on "Partners" page of the School's website			up to 50 words 	up to 100 words 
Possibility of cooperation on academic curriculum improvement				
Support in candidate selection for internships and employment				
Cooperation in choosing project topics, graduate and master theses				
Possibility of promoting events and competitions held by the company				
Company logo on School's official yearly presentation				
Company banner on "Partners" page of the School's official website				
Company logo on School's promotional billboard				
Company logo on the official "School Day" leaflet				
Possibility of presenting the company to students				
Possibility of advertising company's offers for internship and employment				

# CONTACT

If you are interested in cooperation or have any additional questions, feel free to contact us:

**[h-bridges@student.etf.bg.ac.rs](mailto:h-bridges@student.etf.bg.ac.rs)**



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You can also follow the Team's activities on social media and official website:

