

**Agricultural University of Georgia (AUG)**

**School of Engineering and Technology**

**Zaza Metreveli**

**GGSB – Consortium of the Georgian Universities**

**AUG**

September 12<sup>th</sup>, 2022

# Outline

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- Agricultural University of Georgia (AUG) and Free University of Tbilisi (FUT)
- School of Engineering at AUG
- Engineering Departments
- Research Interests
- Existing and expected cooperation of AUG with German research institutions



Educational consortium  
of two private universities:

- **Agricultural University of Georgia**
- **Free University of Tbilisi**



All three levels of university

Education:

- Bachelors
- Masters
- PhD

# About US

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Educational consortium of two private universities;

Modeled on universities in the USA and Europe;

- Agricultural University of Georgia (AUG)
  - Founded in 1929, brought into consortium in 2011;
  - *Engineering, Chemistry, Biology, Agrosciences, Business, Liberal Arts*
    - 3 schools
    - 18 programs
    - 17 research institutes/centers
    - 40 laboratories
    - 1950 under graduate students
    - 200 graduate students
    - 35 PhD students
    - 8:1 student-faculty ratio

- Free University of Tbilisi (FUT)
  - Founded in 2007;
  - *Math, Physics, Computer Science, Electrical & Computer Eng., Law, Business, International Relations, Social Science, Visual arts & Design, Architecture.*
    - 8 schools
    - 16 programs
    - 6 research institutes/centers
    - 2315 graduate students
    - 328 graduate students
    - 12 PhD students
    - 9:1 student-faculty ratio

# School of Engineering at AUG

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- Starting in 2011, the department began offering new engineering programs:
- **Bachelor and Master's Programs in the Departments of Engineering:**
  - **Electrical Engineering and Automation systems** (since 2011) expanding to include **Computer Engineering** starting in 2013;
  - **Mechanical Engineering and Technologies** (since 2012);
  - **Construction Engineering** (since 2012);
- Number of faculty and staff: 40
- Number of students: 300 (bachelors), 50 (masters), 6 (PhD)
- Curricula are similar to those of US and European universities

## Electrical and Computer Engineering (ECE):

<http://agruni.edu.ge/en/bachelors-in-Electrical-and-Computer-Engineering>

(program description, curriculum and course descriptions are at the bottom)

Curriculum (bachelors)	<u>ECTS</u>	
- University general education	50	Math. 22
- ECE general education	43	Phys. 15
- Core specialisation education	132	Chemistr. 7
- Practical education	8	
- Elective subjects	7	total: <b>240</b>

## Mechanical Engineering (ME):

<http://agruni.edu.ge/en/bachelors-in-mechanical-engineering-and-technology>

(program description, curriculum and course descriptions are at the bottom)

Curriculum (bachelors)	<u>ECTS</u>	
- University general education	50	Math. 22
- ME general education	43	Phys. 15
- Core specialisation education	129	Chemistr. 7
- Practical education	8	
- Elective subjects	10	total: <b>240</b>

## Construction Engineering (CE):

<http://agruni.edu.ge/en/bachelors-in-construction-engineering>

(program description, curriculum and course descriptions are at the bottom)

Curriculum (bachelors)	<u>ECTS</u>	
- University general education	50	Math. 22
- CE general education	43	Phys. 15
- Core specialisation education	130	. Chemistr. 7
- Practical education	8	
- Elective subjects	9	total: <b>240</b>

# Research Interests

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## Department of Electrical and Computer Engineering (ECE)

In the fall of **2015** Department of Engineering (AUG) signed the Memorandum of Understanding with

- Forschungszentrum Julich GmbH (JULICH) / **IKP**

and joined the consortium of other three Georgian Universities: TSU, GTU, ISU.

In **2017** Department of ECE became the member of the **International JEDI Collaboration**

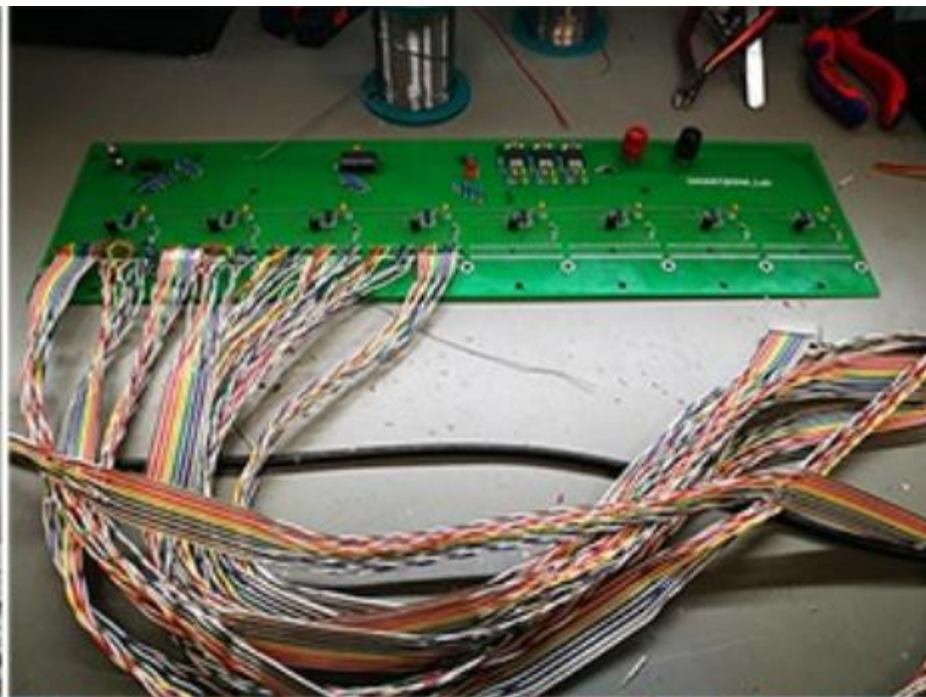
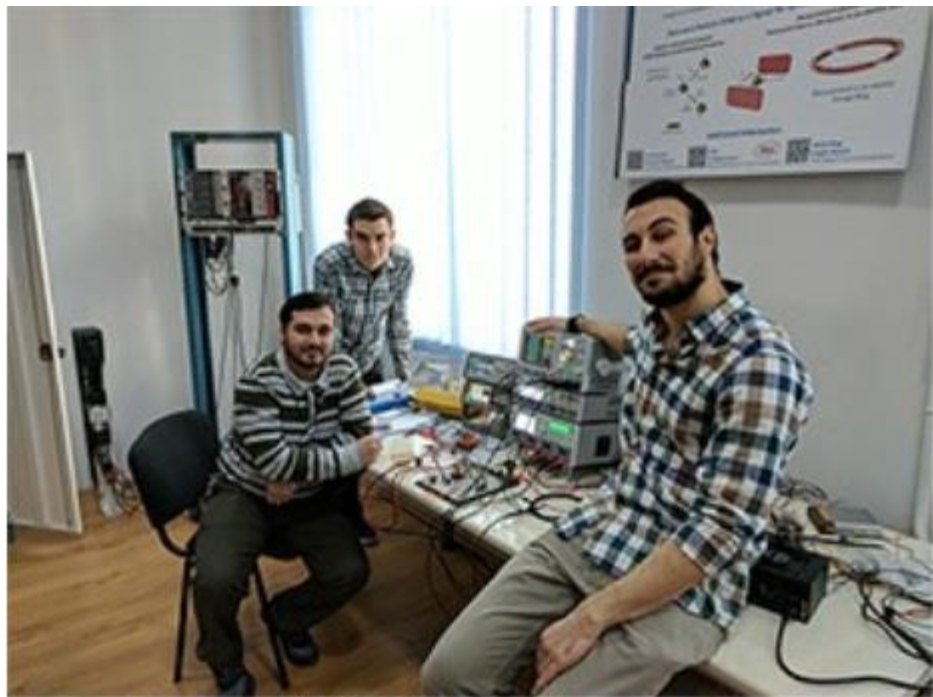
- One PhD student of AUG completed his work at **IKP** on the topics of the JEDI Collaboration. Thesis defense is expected within one month.
- Several Master's students of AUG worked for master's thesis during 6 months at **IKP** and **ZEA-2**
- Several bachelor's and master's students of AUG were invited for internship at **IKP, ZEA-2, INM-5**



Block/dedicated lecture courses at AUG by Prof. **Stefan van Waasen** (electrical engineering) in 2017 and 2018.



Next courses are expected in the spring of 2023 by Prof. Waasen and the professors of ZEA-1 (mechanical engineering).



## Department of Mechanical Engineering

In August of **2018** Department of Engineering (AUG) signed the Agreement/Declaration with the

Central Institute of Engineering, Electronics and Analytics (**ZEA**)  
- **Engineering and Technology (ZEA-1)** and  
- **Electronics Systems (ZEA-2)** of the FZJ Jülich GmbH

- Three bachelor's students of AUG (Mechanical Engineering) were invited for the internship at the **ZEA-1**

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## Department of Construction Engineering

- We are looking for International cooperations

# Existing and Expected Cooperation of AUG with German Research Institutions

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- **Forschungszentrum Jülich**
  - members of the international JEDI Collaboration
  - cooperation with
    - IKP
    - ZEA1 (PhD thesis – 1, master theses – 5, internships – many)
    - ZEA2
    - INM5
- **GSI Darmstadt, Detector Laboratory, CBM experiment**
  - (internships – 1)
- **PH Aachen, University of Applied Sciences**
  - Erasmus + Programme, Inter-institutional Agreement
  - (signed on 1<sup>st</sup> of September 2022)
- **Expected**
  - SMART|Digital\_development\_Lab (with ZEA-2)
  - SMART|Tech\_Lab (with ZEA-1)