



**AGH**

# **AGH University of Science and Technology**

*100 years  
of activity in research and education*

**UNIVERSEH 2020**

# Krakow – city of history, science and culture

- Krakow historical and cultural capital of Poland
- Theatres, galleries, museums – Krakow's charm and magic are captivating
- Kraków academic center – 8 public and 12 private universities, the oldest Jagiellonian University erected in 1364
- Unique atmosphere for over 200,000 students



## 100 years of AGH UST history



In **1913**, Austrian-Hungary Emperor Francis Joseph approved the establishment of academic school of mining in Krakow.

In **1919**, **inauguration of the Academy of Mining**, Marshal Józef Piłsudski, the Head of the State, signed the erection act of Academy of Mining

In **1947** change the name to the Academy of Mining and Metallurgy – Akademia Górniczo-Hutnicza im. St. Staszica -AGH

**AGH University of Science and Technology**  
**AGH UST** - our actual official English name



# AGH UST traditions



Mining festival (Miner's Day)



Inauguration of new academic year



Metallurgy festival (Metallurgist's Day)



## Facts and figures – AGH UST in 2020



- the **biggest technical university in Poland**
- **public university of science and technology**
- **16 faculties + three research centres**
- **62** teaching programs with **220** specializations
- **total number of students: 25,193**
  - full-time students: 18,841
  - part-time students: 3,252
  - doctoral students: 779
  - postgraduate students: 2,321
- over **200,000** graduates in history
- over **2,000** teaching and research staff, **1,800** administrative and techniques
- **650** professors

# AGH-UST structure

## Geo-Sciences

Mining and Geoengineering

Geology, Geophysics

Drilling, Oil, Gas

Energy and Fuels

Mining Surveying and  
Environmental Engineering

## Technologies

Metals Engineering and  
Industrial Computer Science

Materials and Ceramics Science

Non-Ferrous Metals

Foundry Engineering

Mechanical Engineering and  
Robotics

Centre of Nanotechnooogy and  
New Materials

## Basic computer, management & humanistic sciences

Applied Mathematics

Physics and Applied Computer  
Science

Electrical Engineering,  
Automatics, Computer Science  
and Medical Engineering

Management

Electronics, Computer Science  
and Telecommunication

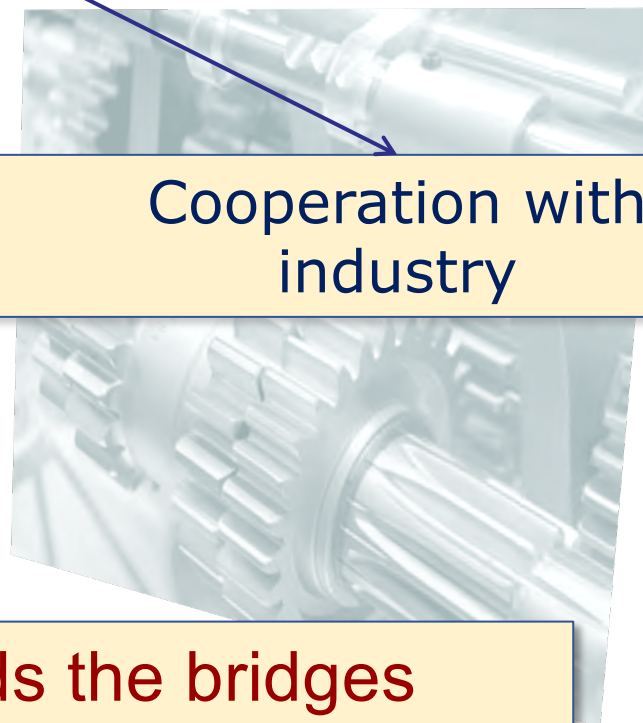
Humanistic Sciences

# Engineers education at AGH UST

**MILESTONES**  
in high quality education of  
engineers  
from AGH UST perspective



Research  
motivated/guided  
education



Cooperation with  
industry

**AGH UST builds the bridges  
between science and industry**



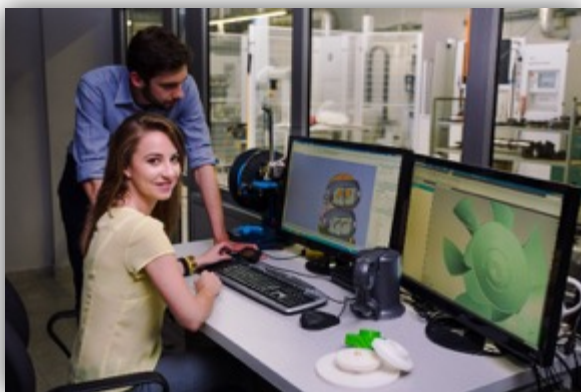
# EDUCATION STRUCTURE

The following courses are available at AGH-UST:

- » **level I degree courses** (vocational studies)  
last 6 or 7 terms
- » **level II degree courses** (courses leading to a Master's degree)  
last 3 to 4 terms
- » **level III degree courses**  
AGH Doctoral School
- » **postgraduate courses**



## Other forms of study



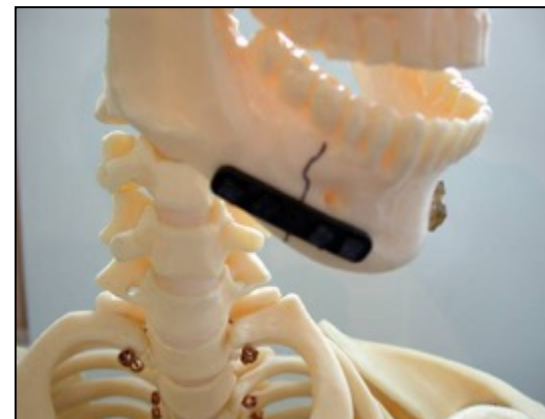
- E-learning
- Studies in English  
(BSc, MSc, PhD, MBA, postgraduate courses)
- Open University
- AGH UST Junior
- Foundation Year Programmes
- Preparatory courses
- Compensatory education programmes
- Summer courses for foreigner
- Courses and training workshops



# Education curricula 2020

62 programmes in 220 specialisations:

Automatics and robotics  
Civil engineering  
Ceramics  
Computer and technical education  
Electronics and telecommunication  
Electrical engineering  
Energetics  
Technical physics  
Mining surviving and cartography  
Mining and geoengineering  
IT  
Applying IT  
Biomedical engineering  
Materials Science  
Environmental Engineering  
Mathematics  
Mechatronics  
Mechanical engineering  
Metallurgy  
Environmental Protection  
Sociology  
Chemical Engineering  
Management  
Production engineering





## Education 2020

### Unique specialisations:

- Geophysics
- Engineering Oil and Gas
- Medical Engineering
- Ceramics

### New fields of study:

- Acoustic Engineer
- Mechanical Engineering and Materials
- Tourism and Recreation
- Ceramic Design
- Computational Engineering
- Management and Production Engineering
- Geomatics
- Revitalisation of natural environment
- .....



- about 4000 graduated per year
- ~ 85% of students get a position after 3 months from graduation
- ~ 20 % work abroad

# Doctoral Programmes /AGH Doctoral School



## PhD degree in 24 disciplines:

- automatics and robotics
- biocybernetics and biomedical engineering
- chemical technology
- chemistry
- civil engineering
- computer science
- electronics
- electrotechnics
- environmental engineering
- geodesy and cartography
- geology
- geophysics
- machinery construction and exploitation
- materials engineering
- mechanics
- metallurgy
- management science
- mining and geoengineering geology
- production engineering
- physics
- telecommunications



# Research Subject Areas at AGH UST



Information  
Technologies



New Materials  
and Technologies



Environment and  
Climatic Changes



Energy and  
its Resources



Mining



Electrical and  
Mechanical  
Engineering



Exact and Earth  
Sciences



Social-Economic  
Sciences and  
Humanities



## Research activity

**Prestigious title of „Polish Research University” by the Polish Ministry of Science and Higher Education**

- 3rd position among Polish Universities (also in ARWU ranking)
- 5 faculties with the higher Polish research category A+
- high students research achievements



## Space Technology Centre AGH

AGH UST has launched a new research and educational unit – **Space Technology Centre**, whose role will be to promote, among other things, research and education in the area of space engineering. The Director of the Centre will be Professor Tadeusz Uhl.

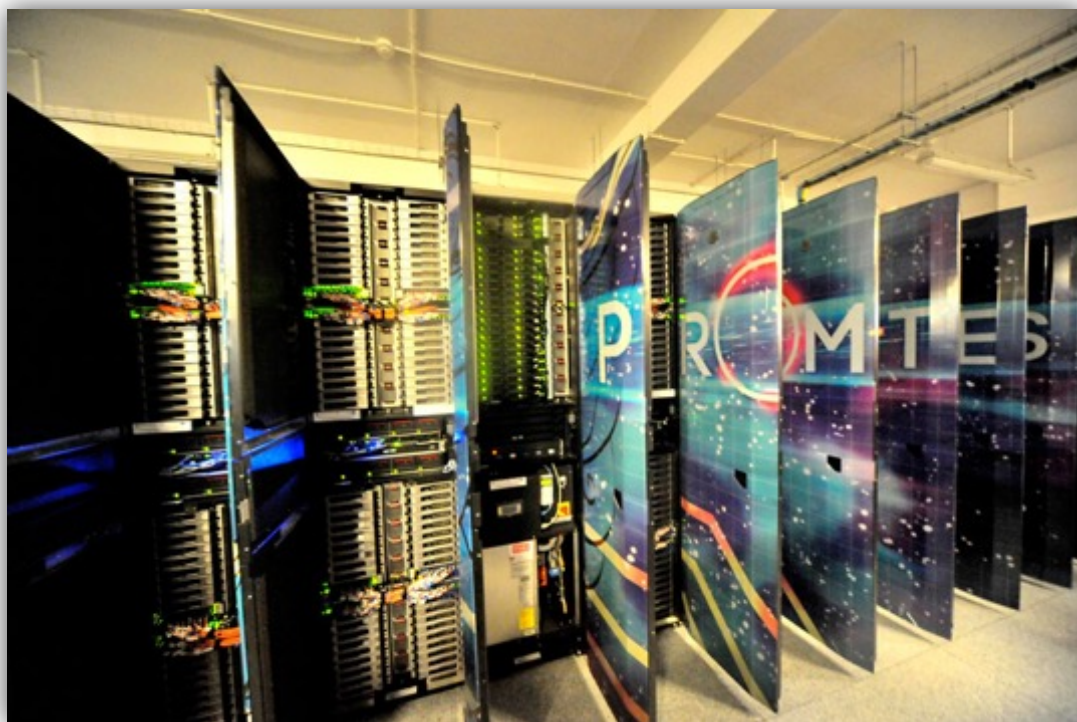
### CTK's main areas of activity:

- scientific research into space exploration,
- development of inter-disciplinary space technology research teams,
- promoting cooperation with other AGH UST units as well as research and development centres in Poland and abroad





## Research and laboratories – 400 R&D labs



**Computer Centre CYFROMET**  
**Prometheus among 50 most powerful**  
**computers in the world**

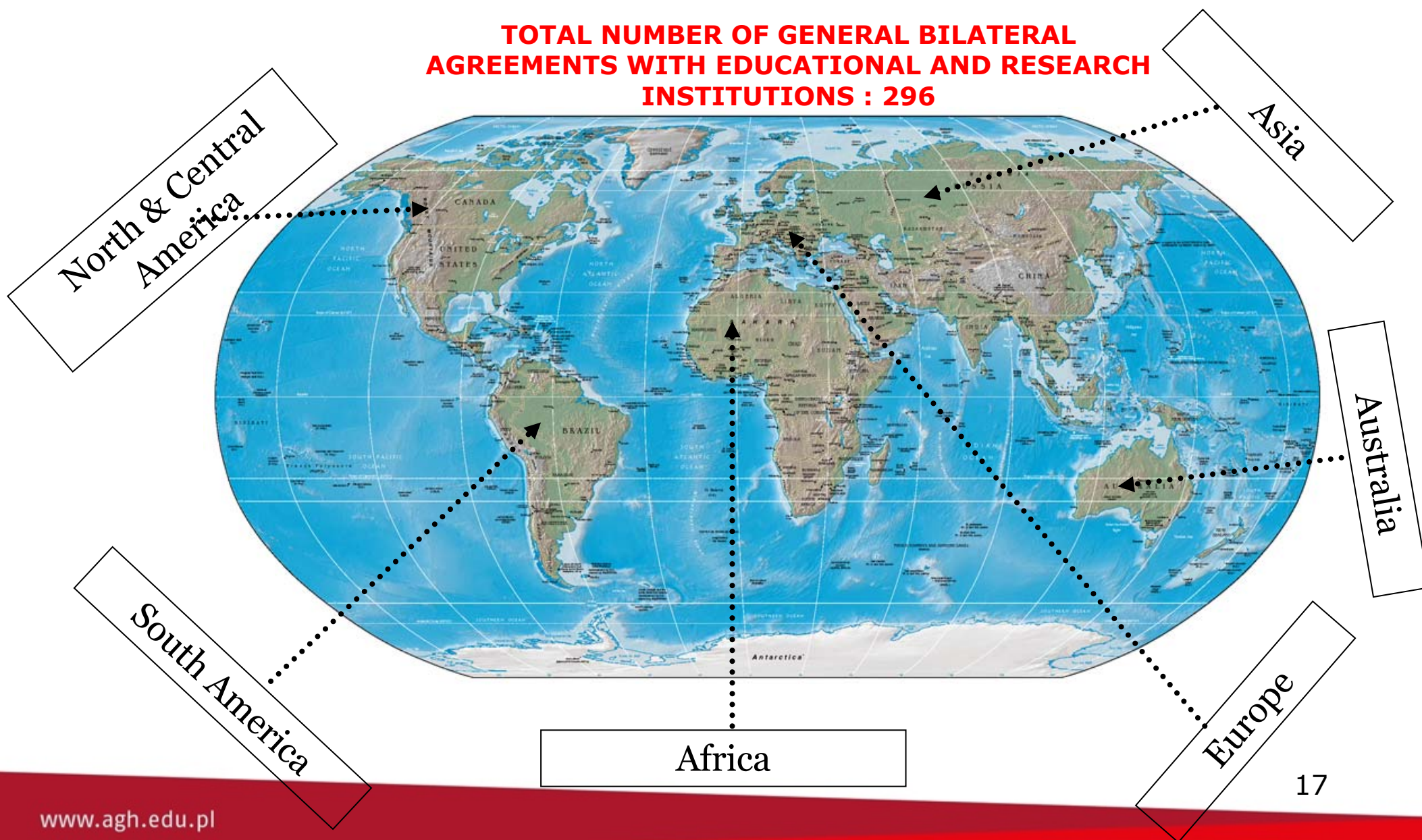
**The latest generation**  
**analytical electron**  
**microscope (S)TEM FEI**  
**Titan Cubed G-2 60-300**





# International collaboration

**TOTAL NUMBER OF GENERAL BILATERAL  
AGREEMENTS WITH EDUCATIONAL AND RESEARCH  
INSTITUTIONS : 296**



## National and international collaboration - 2020

- Active collaboration with academic and research centres in 60 countries (e.g. EU, USA, Russia, China, Japan, Vietnam, Korea, Mexico, Chile, ...)
- Collaboration with world companies (e.g. ArcelorMittal, IBM, Valeo, Comarch, Motorola, Nikia, EDF, L.G., Philips, RWE Power AG, Lafarge, Cemex, Delphi, Siemens, KGHM, ...)
- Participation in many research and educational programmes, e.g. ERASMUS+, T.I.M.E., SMILE, CEEPUS, VULCANUS, ERASMUS MUNDUS



## Internationalisation of studies - 2020

- 17 programmes of study in English
- AGH UST international courses (155 courses)
- About 1500 foreign students
- 256 MOU with world universities (also double degree)
- 420 bilateral agreements within the framework of the LLP Erasmus + programme



Centre for International Students  
[www.international.agh.edu.pl](http://www.international.agh.edu.pl)



# Infrastructure

Investment in new facilities and projects is crucial for the current activity of AGH UST, as well as its future development.



# AGH UST Campus

## the biggest student campus in Poland

- 9,000 places for students
- the biggest in Poland students Cultural Center „STUDIO”
- canteens, restaurants, bars, cafes
- hotel services
- medical centre
- security system (CCTV cameras)
- clubs
- radio station
- shopping facilities
- gyms
- nursery school
- modern wireless computer network (WiFi)





# Infrastructure





# Infrastructure



**Center of New Materials and Nanotechnology**



**Center of Energy**



**Center of Computer Science**



**Center of Ceramics**

# We care about health and fitness





# Student life







**AGH**

**UNIVERSEH PARTNERS**

***Welcome to AGH*** 😊

