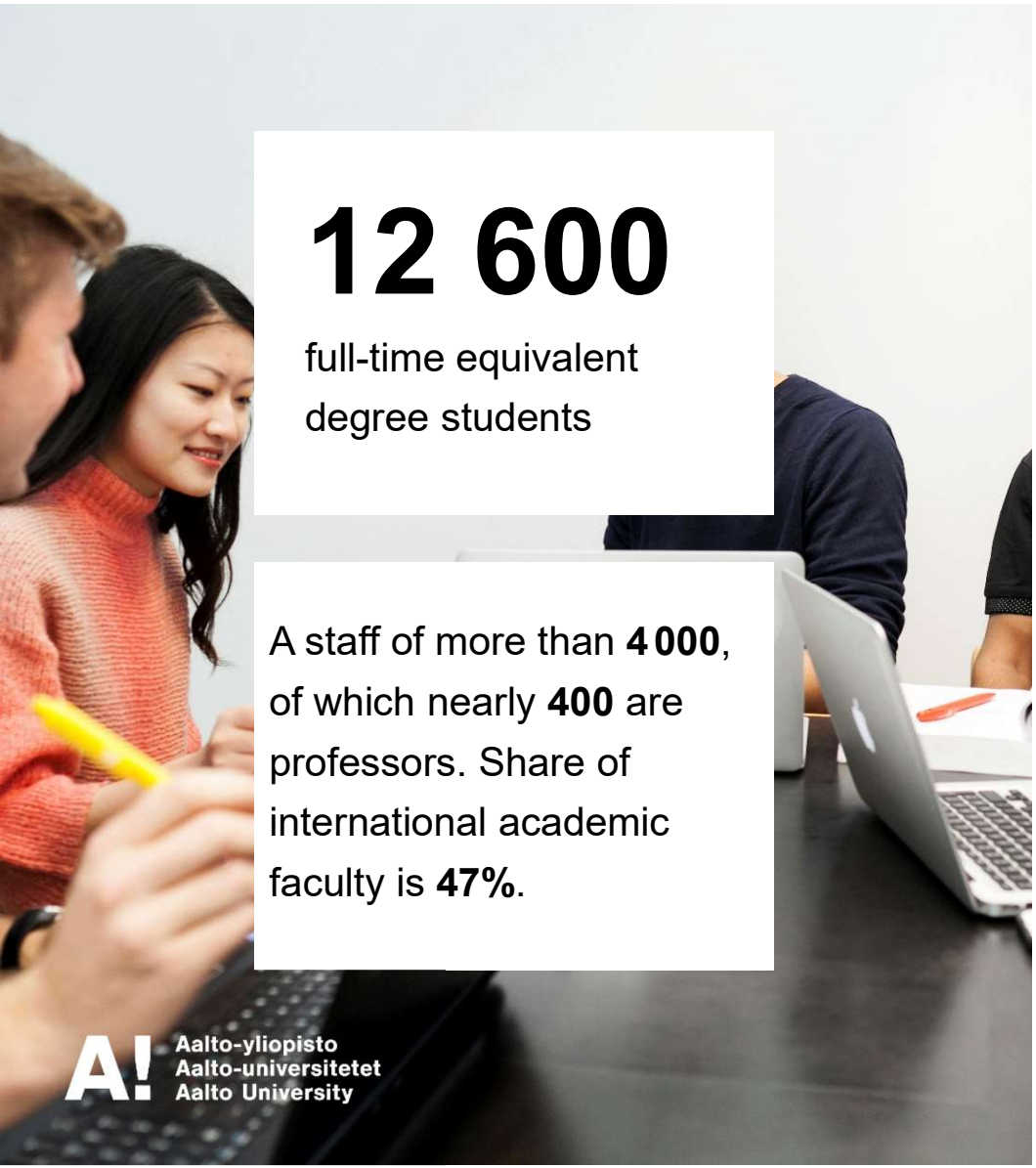
Aalto University
School of Chemical
Engineering

Metsäakatemia visits Aalto University

Kristiina Kruus, Dean, School of Chemical Engineering
21.3.2024



Our community in numbers

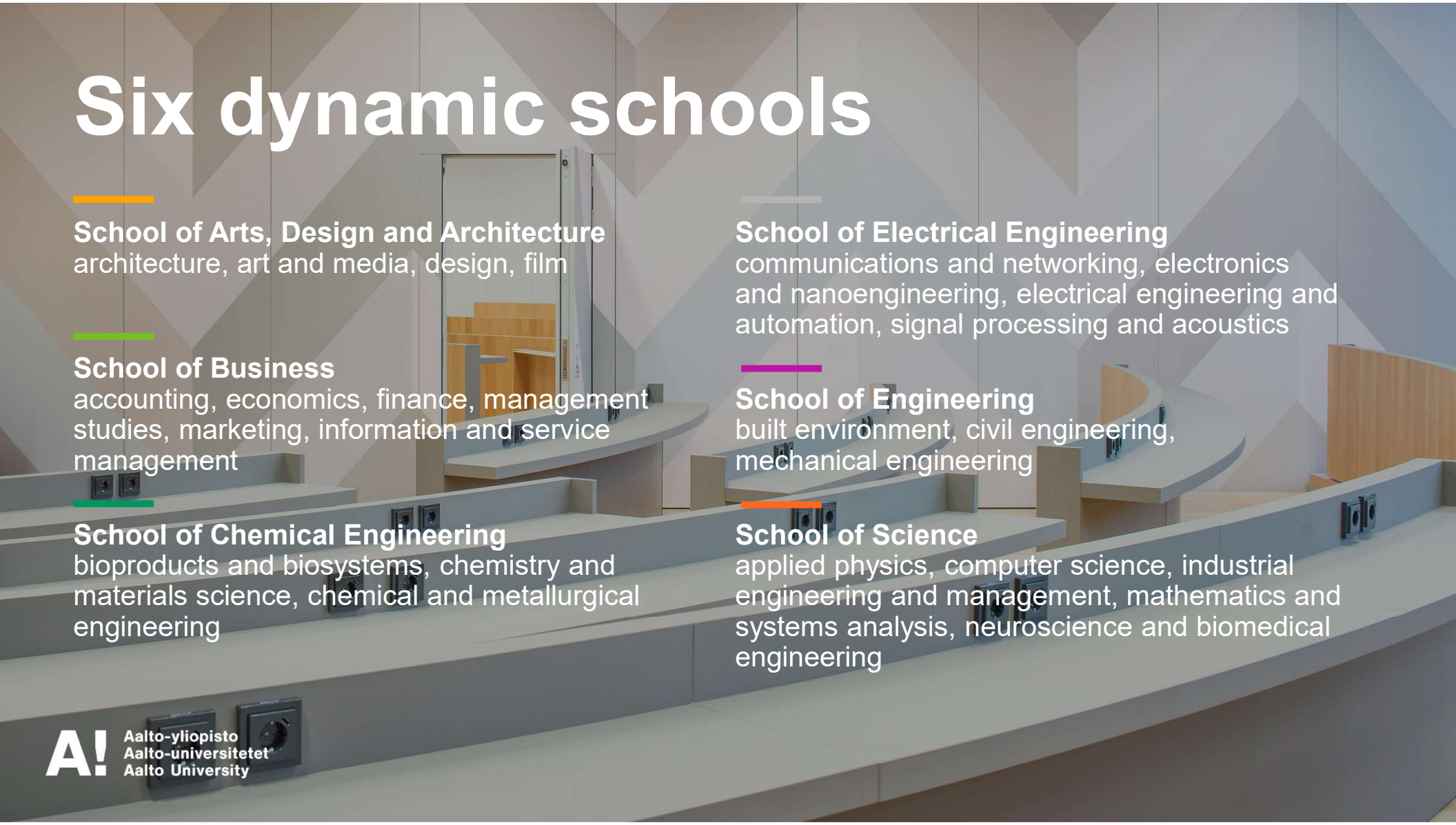
Each year our students earn about

200 doctoral degrees,

1 800 master's degrees,

1 500 bachelor's degrees and

300 MBA and EMBA certificates.



Six dynamic schools

School of Arts, Design and Architecture
architecture, art and media, design, film

School of Business
accounting, economics, finance, management studies, marketing, information and service management

School of Chemical Engineering
bioproducts and biosystems, chemistry and materials science, chemical and metallurgical engineering

School of Electrical Engineering
communications and networking, electronics and nanoengineering, electrical engineering and automation, signal processing and acoustics

School of Engineering
built environment, civil engineering, mechanical engineering

School of Science
applied physics, computer science, industrial engineering and management, mathematics and systems analysis, neuroscience and biomedical engineering

Aalto-yliopisto
Aalto-universitetet
Aalto University

Aalto University
School of Chemical
Engineering

School of Chemical Engineering

Catalyst of Change

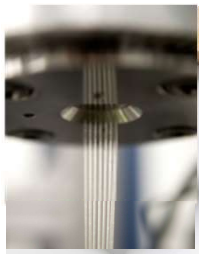
Research focus areas of the School of Chemical Engineering

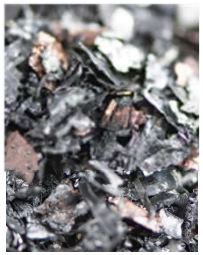
Biomass refining and advanced lignocellulosic materials

Driving Excellence: 3 ERCs, FinnCERES Flagship, Bioinnovation Center
Impact & sustainability: Valorization of lignocellulose materials and Solutions with corporates
Radical creativity: CHEMARTS 10 years
Entrepreneurial mind: Research to Business funding, Ioncel pilot and startups, ERC PoC

Molecular bioscience and Industrial biotechnology

Driving Excellence: 2 ERC, 2 Novonordisk
Impact & sustainability: next generation biocatalysis, processes and materials
Radical creativity: New silk, CHEMARTS
Entrepreneurial mind: Research to Business funding





Ca. 85 M€ total cumulative Project portfolio in 2022

Chemical and metallurgical engineering

Driving Excellence: Leading role in national and global engineering clusters: BATCircle 2.0, large EU projects
Impact & sustainability: Neste partnership, BATCircle, catalytic and recycling solutions with corporates
Radical creativity: Profiling professorship for Circular chemical engineering
Entrepreneurial mind: Ioncell pilot

Chemistry for energy materials and functional materials

Driving Excellence: 2 ERC, large EU projects, ALD expertise
Impact & sustainability: New energy materials and storage
Radical creativity: Virtual laboratory environment
Entrepreneurial mind: Research to Business funding

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Key figures 2023

(end of year)

Personnel:
Professors 40 (female 11) Doctoral students ~130 Undergraduates ~1480 Staff ~460

Research:
Peer reviewed articles 407
4 ERC grants
8 Patents and 18 inventions disclosures

Completed Degrees:
118 Bachelors
199 Masters
28 Doctors

Infrastructures:
Bioeconomy and RAMI Research Infrastructures on the national RI roadmap

Total funding 40.9 M€
External funding ~21 M€ (Corporates, EU, Business Finland, Academy of Finland)

FinnCERES Flagship:
Redefining the Bioeconomy with advanced bio-based materials

From fundamental research to innovations

ACADEMY OF FINLAND

erc HORIZON 2020

J&AE JANE AND AATOS ERKKO FOUNDATION

CENTRES OF EXCELLENCE IN RESEARCH

strategicRESEARCH

BUSINESS FINLAND TUTLI

Pilot phase

AaltoCell
Nordic
Bioproduct Group

ANDRITZ

IONCELL™

Aalto-yliopisto
Aalto-universitetet
Aalto University

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FinnCERES Flagship

Funded by the Research Council of Finland

Host organizations: Aalto and VTT

29 Member and collaborator companies and institutions.

FinnCERES uncovers answers to fundamental questions about lignocellulose disassembly and re-assembly to create cost-competitive, bio-based materials for sustainable future.

Research themes:
Future Biorefineries
Clean Air and Water
Lignocellulosics Beyond Plastics
Electronics, Optics and Energy Applications

Aalto University
School of Chemical Engineering

Kiitos
aalto.fi