

Always ahead of its time

Since partnering with Samsung in 1996, **SUNGKYUNKWAN UNIVERSITY (SKKU)** has developed into a leading global institute. Today, it looks to international industry and academia to convert its esteemed tradition into future success.

During Korea's Joseon dynasty, beginning at the end of the 14th century, an education institute known as Sungkyunkwan taught Confucianism, archery, music, horsemanship, mathematics, and etiquette. Fast forward to 2017, Sungkyunkwan — now Sungkyunkwan University (SKKU) — remains an institution of higher education, but it has developed just as much as its country in the intervening 619 years.

A venerable past

There's an endurance to be found in the annals of SKKU that is nothing short of inspiring. Since it opened its doors in 1398, it has survived numerous regime changes, two major fires, and narrowly evaded closure when it was sidelined under Japanese rule. The university's first president, Chang-suk Kim, argued for Korea's independence in 1919, rallying Confucian scholars to petition the International Peace Conference in Paris. After World War II and the end of Japan's occupation of Korea, Kim started the process of reviving SKKU as a landmark of Korean education.

"As the nation's highest educational institution,

Sungkyunkwan went through vicissitudes with the country it served over the centuries," says Kyu Sang Chung, the university's current president. "SKKU succeeds Sungkyunkwan's main ideology, and nurtures cultured individuals, experts, and creative global leaders."

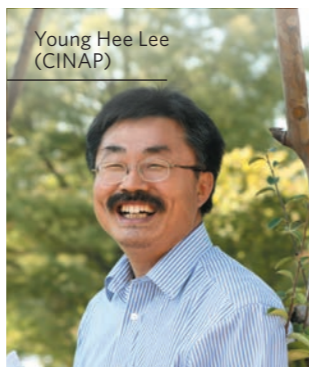
SKKU DOES NOT HESITATE TO INVEST IN ITS STAFF AND STUDENTS

SKKU now intensively promotes its five core fields — nanotechnology, smart ICT, energy systems, neuroscience, and quantum computing. "These fields combined are the toolkit we need to prepare for the era of the fourth industrial revolution," says Chung. Under his leadership, the university is making impressive strides academically, showing annual improvements in university rankings. Particularly striking is its performance in the Times Higher Education (THE) World University Rankings, where SKKU climbed 16 places between 2016 and 2017, and a further 26 places in the recently published 2018 rankings.

Kyu Sang Chung (SKKU)



Young Hee Lee (CINAP)



Seong-Gi Kim (CNIR)



"SKKU does not hesitate to invest in its staff and students with funding for scholarships and research grants," says Chung. This investment appears to be paying off, with QS recently announcing that SKKU took the 85th place globally (1st in Korea) in its Graduate Employability Rankings 2018. SKKU also ranked in the 81-90 bracket

of the THE World Reputation Rankings 2017, a survey of leading academics' opinions on university research and teaching standards.

National backing

The university received a huge boost in 2012 and 2013 when the South Korean government's flagship science institution, the Institute for Basic Science

SKKU AT A GLANCE

SKKU has taken a whole-of-university approach to building multidisciplinary centres of excellence, enabling the university to advance as a world-class research institution

ASIA PACIFIC ACADEMIC INSTITUTIONS IN PHYSICAL SCIENCES (2016; WFC)

TOP 25

WORLD UNIVERSITIES IN MATERIALS SCIENCE (2017; QS World University Rankings by Subject)

#40

WORLD UNIVERSITIES IN CHEMICAL ENGINEERING (2017; QS World University Rankings by Subject)

#48

ASIA PACIFIC ACADEMIC INSTITUTIONS IN CHEMISTRY (2016; WFC)

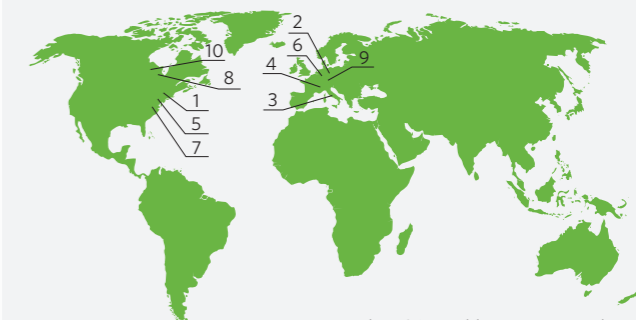
TOP 50

WORLD UNIVERSITIES IN MECHANICAL ENGINEERING (2017; QS World University Rankings by Subject)

#50

TOP 10 INTERNATIONAL COLLABORATORS (2016; FC)

- | | |
|-------------------------------------------------------------------|------|
| 1. Massachusetts Institute of Technology (MIT), USA | 4.42 |
| 2. Helmholtz Association of German Research Centres, Germany | 3.68 |
| 3. National Institute for Nuclear Physics (INFN), Italy | 3.64 |
| 4. European Organization for Nuclear Research (CERN), Switzerland | 2.57 |
| 5. Harvard University, USA | 2.42 |
| 6. RWTH Aachen University (RWTH Aachen), Germany | 2.40 |
| 7. The Johns Hopkins University (JHU), USA | 2.36 |
| 8. Northwestern University (NU), USA | 2.25 |
| 9. Max Planck Society, Germany | 2.25 |
| 10. University of Wisconsin-Madison (UW-Madison), USA | 2.15 |



Source: Nature Index/QS World University Rankings
FC: fractional count; WFC: weighted fractional count

(IBS), chose renowned professors to spearhead two research units at SKKU. The first, named the Center for Integrated Nanostructure Physics (CINAP), now drives the university's research output into pioneering materials science. Its director, Young Hee Lee (pictured left), recalls the backing he received from the university: "One thing I'd like to highlight is SKKU's willingness to host and support distinguished scientists from abroad. For example, SKKU is the only university I've seen to provide an independent new building to each director. This, combined with the financial support for the purchasing of equipment, made a huge change at the beginning and

benefited academic progress at the early stages of my centre's research."

The second IBS unit, the Center for Neuroscience Imaging Research (CNIR), "performs interdisciplinary research for investigating brain functions and networks in animals and humans with various state-of-the-art imaging tools, including animal and human MRI scanners," according to director Seong-Gi Kim (pictured left). The support offered by SKKU to the IBS centres is "extremely strong," agrees Kim.

Collaboration and high-impact output

"SKKU has academic exchange agreements with 900

universities in 80 countries, and has attracted R&D centers from industry leaders such as BASF," says President Chung; however, it's the support of Samsung that has arguably had the greatest impact. After the South Korean tech giant re-established ties with SKKU in 1996, the two organisations formed a strategic alliance allowing for the expansion of mutually interesting research areas and to promote the exchange of next-gen equipment, knowledge, researchers, and students.

With this open approach to industry partnerships, the institution was ranked 8th in THE's 2017 list of universities that publish the highest proportions of their research

output in collaboration with industry. SKKU also has an enviable track record of publishing in the world's top journals, such as *Nature*, *Cell*, and *Science*, and is developing with great scholars such as Professor Nam-Gyu Park, who Clarivate Analytics predicts will receive the Nobel Prize in the near future.

SKKU shows every intention to keep changing and innovating to ensure it stays at the forefront of research and ahead of its time. For time is one thing that SKKU seems to have had on its side. ■

