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International University Cooperation: A Roadmap for Sino-Nordic Collaboration

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TURKU CENTRE *for* COMPUTER SCIENCE

The Global Campus: Joint Centers

Globalization requires new collaborative working models for realizing the potential benefits

A model for this: A Joint Center on Education and Research

- A Sino-Finnish Center; A Sino-Nordic Countries Center; or a Sino-EU Center
- Built around a Joint (Network-format) Graduate School

An operational vision of the model

- Physical presence at a Chinese university campus as well as at a European campus
- Offering of joint (double) degrees to Master's degree and Ph.D. degree students; joint exchange programs also to postdocs
- Offering of study and research opportunities in ambitious joint industrial or basic research projects (Sino-European)
- Efficient provision of information to students about the new opportunities
- The personnel at the center facilitates all operations; there is a well-functioning support infrastructure for international personnel mobility
- Close interaction with the relevant industries



The Global Campus: Joint Centers

Benefits

- An innovative platform for education and research cooperation
- Enables focusing on excellence and mutual benefits for research and industry development
- Enables enhanced personal development of students, researchers, and professors
 - Education for future multicultural leadership for R&D operatives of emerging companies and corporations
 - Substantial career development opportunities also for both researchers and teachers
- Active recruitment of international students

Recruitment benefits to companies collaborating actively with the Sino-Nordic campus system

- Reach of a competitive edge in recruitment visibility and access to students
- Enhanced knowledge acquisition from universities

This could build on the existing Sino-Swedish Campus (Campus Sweden) infrastructure:

- Chinese parties: Peking University; Fudan University—Shanghai
- Swedish parties: Royal Institute of Technology--Stockholm; Chalmers University of Technology--Gothenburg; Karolinska Institute--Stockholm



Joint international Master's degree programs

- Joint development of courses, based on detailed joint planning for realizing the commonly-agreed goals
- Students from all over the world are sought, albeit there would perhaps be a focus on East-Asian students
- All courses will be given in English; the participating universities would jointly assume the responsibility of quality control of the courses and the entire education modules
- Double degree (2 x M.Sc.) opportunity with substantial opportunities for personal internationalization of the students

Joint Ph.D. degrees and exchange of Ph.D. students

- The basic arrangements for the joint development of courses are the same as above
- A limited number of excellent students will be selected for Ph.D. studies for joint degrees or as exchange Ph.D. students. The host university or the advisor at the host university should arrange a scholarship for each visiting PhD students during his/her stay at the host university.
- Double degree (Ph.D., e.g. engineering or science + M.Sc., e.g. management) opportunity with substantial opportunities for personal internationalization of the students

Joint research projects; joint research publications in the name of the Center

Joint faculty members; active exchange of researchers



A Joint Graduate School

The doctoral education could be realized within the facilities of an international Joint Graduate School (JGS)

The JGS organizational infrastructure would support:

- administering funding for Ph.D. student positions
- administering joint courses and educational modules for Ph.D. training
- potentially, postdoc training and research could be facilitated by the JGS
- the international exchange of professors and researchers to teach in the JGS programs

Employment of a “sandwich” structure:

- Each student would spend 50% of the degree completion time in a Chinese and 50% in an European university

JGS focus areas – suggestions:

- Micro- and nanoelectronics circuits and systems
- Embedded systems (HW and SW aspects)
- Mobile communications platforms and testbeds
- Mobile services
- Product development in software
- Management

Universities and geographical areas:

- The JGS could connect several top-tier universities both in Eastern Asia and Europe





An Exemplar: The Sino-Swedish Collaboration Model of KTH and FDU

First Year (joint): 50-100 students

KTH offers ~50% courses

FDU offers ~50% courses

Second Year:

Part students to
FDU
FDU courses
FDU thesis & exam

Part students to
KTH (SWE or CN)
KTH courses
KTH thesis & exam

Joint Diploma

FDU Degree

KTH Degree

60CU Courses + 20CU Thesis

- To get a KTH degree, one needs to perform thesis work as well as take 40CU KTH courses (TBD).
- Needs to build up common credit unit system, joint curriculum
- Excellent students will be selected to continue in the **joint Ph.D.** program.
- Establish distance learning in the future.

KTH will offer 5-7 courses in China (25-35CU) each year.

Joint Diploma (i.e. certificate of study, not the degree)

Students get single degree (FDU or KTH) and double degree (FDU & KTH)



Adopted from slides kindly provided by
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