COLLEGE OF INFORMATION & COMMUNICATION TECHNOLOGY (CICT)

www.cit.ctu.edu.vn
Outline

• Can Tho University
• College of ICT (CICT)
  – Mission
  – Organization
  – Fields of Study
  – Facilities
  – Relation & Cooperation
  – Research Topics & Groups
Can Tho University (CTU)

- Can Tho University is the biggest university in the Mekong Delta region
- The Mekong Delta (MD) area:
  - 12 provinces and 1 central city (Can Tho city)
  - 4 million hectares and over 18.4 million people
  - the biggest agricultural production in Vietnam

www.ctu.edu.vn
Can Tho University

• Established in 1966
• 4 campuses:
  – Campus I: 5 hectares
  – Campus II: 87 hectares
  – Campus III: 0.65 hectares
  – Campus IV: 130 hectares
Mission of Can Tho University

By offering high quality educational programs, the CTU focuses on
– training,
– conducting scientific research,
– and transferring technology to advance socio-economic development of the Mekong Delta region.
Can Tho University

- **Students**
  - 35,038 undergraduate
  - 1,806 master students
  - 68 PhD students

- **Staffs**
  - 1,908 staffs
    - 927 lecturers
      - 211 PhDs
    - 981 supporting staffs
Can Tho University

• Organizations
  – 13 Colleges/Schools
  – 3 Institutes
  – 8 Centers
  – 11 Administrative Offices

• Study Programs
  – 76 undergraduate programs
  – 28 master programs
  – 8 doctoral programs
College of Information & Communication Technology (CICT)

- Established since 1994 (developed from the Informatics and Electronics Center - 1990)
- Located on campus 3

01 Ly Tu Trong Street,
Ninh Kieu District,
CanTho City, Vietnam
Mission of the CICT

- Offering higher educational programs in ICT
- Participating in scientific research and technology transfer
- Supplying high-qualified human resources for the ICT industry
CICT’s Organizations

• 4 Departments:
  – Information Systems
  – Computer Network and Data Communications
  – Computer Science
  – Software Engineering

• Intelligent Data Processing Lab
• Francophone Space
• Technical Service Group
• Administration Office
109 staffs (56 lecturers)
- 11 PhDs, 2 Assoc. Prof.
- 9 PhDs on training aboard
- 32 Masters

2200 students
- 1900 students on campus
- 300 students in satellite centers
Undergraduate Programs

- Information Systems
- Computer Network & Communications
- Computer Science
- Software Engineering
- Bilingual Informatics Engineering (in French-Vietnamese instruction)

Annual Intakes: 4 x 80 = 320 students (passed the university entrance exam)
Graduate Programs

• MSc. in Information Systems
  – 108 students, for instance
  – Annual Intakes: 40 - 60 students (passed the entrance exam)
  – Courses in Vietnamese & English

• MSc. in Data Mining - in cooperation with Nantes University – France
  – 3 students/year
  – From 2008-2012, finished students: 15
  – Courses in French, Video conferencing
Software Engineering Program

- 135 credits; 4.5 years
- 300 students
Software Engineering Program
Department of Computer Network and Data Communication

• Missions
  – Offer the undergraduate training program in computer networks and data communication
  – Conduct scientific research and technology transfer in the fields of Computer System, Networking, and Distributed Computing

• Faculties
  – 2 PhD
  – 11 MSc (6 PhD students)
  – 6 BSc

• Students
  – 320 CNC students (specialized courses)
  – 1200 CICT students (fundamental courses)
Department of Computer Network and Data Communication

• **Research domains**
  – Network technology
  – Distributed computing
  – Web technology development
  – Network Security

• **Some specialized courses**
  – Network design and implementation
  – Network programming
  – Computer and network security
  – *Wireless and mobile networks*
  – Mobile device programming
  – Introduction to embedded programming
  – Grid computing
Facilities

• 14 computer labs:
  – 2 labs for basic practice
  – 5 labs for specialized subjects
  – 2 labs for project and thesis
  – 4 e-learning labs
  – 1 open lab

• Library
  – 1,954 book titles (with 1,015 in English and French)
Relation & Cooperation

• Domestic cooperation
  – In training: IFI Hanoi, Uni. Of Science HCMC
  – Enterprises: TMA, IBM Vietnam, Axion Active Vietnam, CyberSoft,…
  – Other local companies in Can Tho City

• International cooperation
  – AUF (Francophone): For bilingual BSc. training
  – Nantes University, France: For MSc. training
  – IRD, France: PhDs co-supervisors and project
  – Kemi-Tornio Uni, Finland: Student/Staff Exchanges
Typical research results

- ~90 publications (2008-2013)
- Finished Projects:
  - 06 projects; City level; 1.75 Billion VND
  - 04 projects; University level
  - 04 student projects
- Currently running Projects:
  - 06 projects; University level; 282 Million VND
  - 01 project; International level; 40,000 EUR
Main research topics & groups

- Simulation and Modeling group
  - Project: “Brown rice/plant hopper spread simulation” (pcdh.ctu.edu.vn) --- done
  - Time: 2009-2010, 1 Million VND
  - Approaches: Simulation, Data Mining
  - Main participants:
    - Dr. Le Quyet Thang
    - Dr. Pham Nguyen Khang
    - Dr. Do Thanh Nghi
    - Assoc. Prof. Dr. Huynh Xuan Hiep
Simulation and Modeling group

- Project: DREAMS - “Designing Resilient Environments through Advanced Modeling and Simulation” — submitted
- Purpose: “developing a platform to support the design of coastal cities with strong resilience towards climate change”
- Approaches: Simulation, Data Mining, Visualization, DSS,…
- Total cost: 2.2 Million Euros, 3 years (2013-2016)
- 15 partners (France, Australia, Japan, Vietnam)
- Main participants:
  - Assoc. Prof. Dr. Huynh Xuan Hiep
  - Dr. Nguyen Thai Nghe
  - Dr. Pham Nguyen Khang
Main research topics & groups

• High performance & Cloud computing group
  – Topics: Cloud computing: Load-balancing/ resource optimization; Data synchronization; Hadoop, Map Reduce,..
  – Projects:
    • “Building information systems for supporting quality assurance of higher education on cloud computing platform” -- submitted
    • “Optimizing cloud computing systems: Case study on Course registration system” -- submitted
  • Participants:
    – Assoc. Prof. Dr. Tran Cao De
    – Dr. Le Quyet Thang
    – Dr. Ngo Ba Hung
Main research topics & groups

- **Image processing & Pattern Recognition group**
  - Hand-written recognition
  - Fingerprint recognition
  - Vehicle license-number recognition
  - Content-based Image retrieval
Main research topics & groups

- **Machine Learning & Data Mining group**
  - **Topics:**
    - Mining large datasets: complex, imbalanced, high-dimensional data; Visual data mining
    - Mining user-behaviors: Recommender Systems
  - **Members:**
    - Dr. Do Thanh Nghi
    - Dr. Pham Nguyen Khang
    - Dr. Nguyen Thai Nghe
    - Dr. Tran Nguyen Minh Thu
  - **Project:**
    - “A system for Course result prediction and recommendation” – *On going*
    - Participants: Dr. Nguyen Thai Nghe
Main research topics & groups

• Information Retrieval group
  – Topics:
    • Automated text summarization;
    • Document classification
  – Project:
    • “A system for student thesis copying detection” – done
    • “Building a network for thesis reference and copying detection” --submitted
  • Participant:
    – Dr. Truong Quoc Dinh
    – Dr. Ngo Ba Hung
Main research topics & groups

• Information Systems & Application group
  – Topics: Management IS, GIS, E-learning..
  – Projects:
    • “GIS for supporting infrastructure management in Can Tho City” -- done
    • “E-Learning Website for online teaching and evaluation” (elcit.ctu.edu.vn) -- done
    • “Electronic interactive white-board” -- done
    • “An IS for Religious Management” -- on going
    • ...
  – Participants:
    • Assoc. Prof. Dr. Tran Cao De
    • Dr. Pham Thi Xuan Loc
    • MSc. Doan Hoa Minh
    • MSc. Nguyen Van Linh,...
Main research topics & groups

- Information Systems & Application group
  - Topics: Decision Support Systems, Recommender Systems, E-Commerce,…
  - Projects:
    - “Building a general Information System for supporting Tourism” -- submitted
    - “A tourist recommendation system” -- submitted
    - …
  - Participants:
    - Dr. Truong Quoc Dinh
    - Dr. Nguyen Thai Nghe
Typical future plan: Training

- Update the curriculums (using ACM standards)
- Open new graduate programs in 2014:
  - MSc in Computer Science
  - PhD in Information Technology
- Participate the “MOET 911 project” (20,000 PhD Candidates will be trained by 2020)
- Incorporate with University of Houston - Clear Lake to open “Double Degree”
- Continue incorporating with Nantes University for the “MSc. in Data Mining”
Typical future plan: Research

• Submitted Projects (Proposals):
  – 08 projects, Ministry of Education level
  – 04 projects, Can Tho City level
  – 04 student projects; University level
  – 01 International project for “Belmont Forum and G8 IOF 2013”: Incorporated with IRD France
The College of Information & Communication Technology (CICT)

Thank you!