

Academia Sinica, Taipei, Taiwan

# SNHCC: Mobile Social Networks

## Introduction

### Instructors:

Hung-Chin Jang (NCCU)

Chung-Ta King (NTHU)

Yuh-Jong Hu (NCCU)

Cheng-Hsin Hsu (NTHU)

# Time/Location/People

- ❑ Tuesdays 2:00 - 5:00 p.m. at IIS new build Room 107
- ❑ Four instructors
  - Cheng-Hsin Hsu (chsu@cs.nthu.edu.tw): Multimedia networking, mobile multimedia, networked games, and peer-to-peer networks
  - Hung-Chin Jang (jang@cs.nccu.edu.tw): Wireless Network, Mobile Communication, Software Defined Networks, Wearable Computing
  - Chun-Ta King (king@cs.nthu.edu.tw): Pervasive computing, Cluster computing, Parallel and distributed systems
  - Yuh-Jonh Hu (hu@cs.nccu.edu.tw): Semantic Web, Internet Security, Software Agent System
- ❑ Android programming assistant
  - Shu-Ting Wang (kelvinstwang@gmail.com): second-year graduate student, working on delay-tolerant networks on Android

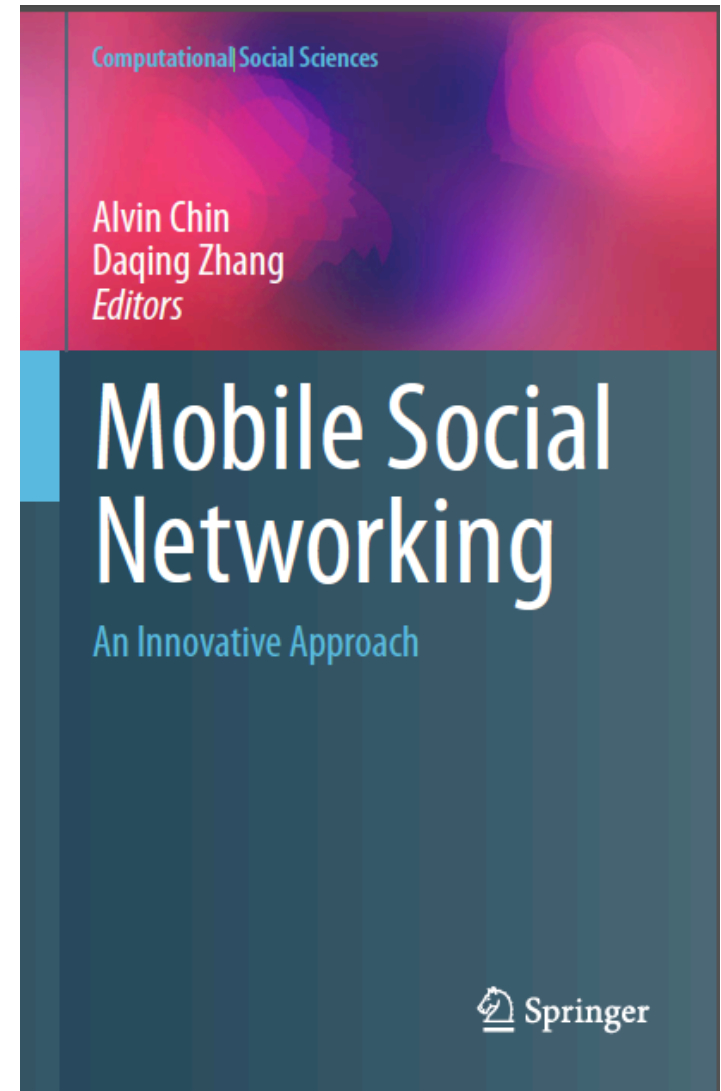
# What are Mobile Social Networks

- ❑ Communities built upon mobile technologies
  - **Facebook mobile app**: capture/share videos, check-in locations, tag friends in the same events
  - **Foursquare** (locations)
  - **Instagram** (pictures) and others



# Textbook

- ❑ “Mobile Social Networking: An Innovative Approach,” A. Chin and D. Zhang (Eds), Springer.
  - E-copy (PDF) is available at the libraries at NTHU and NCCU.
  - 10 chapters, 253 pages.
- ❑ Mobile social networking is an **emerging** research area
- ❑ Textbook is **only a starting point**  
← you are required to find, read, and present the latest papers



# Course Style

- ❑ We design this course as a **research-oriented** course
- ❑ Each student will work on a term project
- ❑ Instructors present some backgrounds in four core directions, following the textbook
  - Introduction on Mobile Social Networks
  - Mobile Social Network Services
  - Context-Aware Mobile Computing in Mobile Social Networks
  - Data Analysis and Privacy in Mobile Social Networks
- ❑ Instructors give 8 Android programming tutorials
  - Prepare students to build real mobile social networking systems

# Term Projects

- ❑ Students are encouraged to discuss with the instructors to pick a project topic
- ❑ Three (incremental) **written reports** are emailed to Cheng-Hsin Hsu
  - Proposal: by 2 p.m. on March 31
  - Mid-term: by 2 p.m. on April 28
  - Final report: by 2 p.m. on June 23
- ❑ Biweekly progress **presentations**
  - Online feedback will be provided by the instructors, but the presentations are not graded
- ❑ A final presentation/demo on June 16

# Course Presentations

- Each professor will cover 3 lectures on the following topics
  1. Socially Aware Computing: Concepts, Technologies, and Practices (Cheng-Hsin Hsu)
  2. Ephemeral Social Networks (Cheng-Hsin Hsu)
  3. Social Behavior in Mobile Social Networks: Characterizing Links, Roles, and Communities (Hung-Chin Jang)
  4. Mobile Social Service Design for Special Context (Hung-Chin Jang)
  5. Exploiting Personal and Community Context in Mobile Social Networks (Chung-Ta King)
  6. Enhancing Mobile Social Networks with Ambient Intelligence (Chung-Ta King)
  7. Data Analysis on Location-Based Social Networks (Yuh-Jong Hu)
  8. Towards Trustworthy Mobile Social Networking (Yuh-Jong Hu)

# Course Presentations (cont.)

- Every 3-hour lecture consists of
  - 80 minutes of presentation done by professors
  - 50 minutes of student paper presentations ← 2 students per week, each student pick a paper for each direction; the papers need to be approved by each instructor via email; in total everyone presents for 4 times
  - 20 minutes of biweekly project updates ← 4 students per week, each student presents for 5 mins, instructors provide feedbacks verbally and online (without grading the presentations)
- In addition to the presentation lectures, we also reserve
  - Four lectures for Android tutorials
  - One week for final presentation/demo



# Android Tutorials

## □ Tentative topics

1. Environment setup: My First Android Project
2. Basic User Interface: Activity and Action Bar
3. Advanced User Interface: Fragment and Layout
4. Multithreading: Handler and AsyncTask
5. Data Management: Content Provider and Database
6. Networking: WiFi and Bluetooth
7. Multimedia: Exo Player and Camera
8. Integration: Facebook API

## □ Four 3-hour lectures, each lecture covers two topics

## □ You need to bring your own laptop for the tutorials

# Android Tutorials (cont.)

- Tentative programming projects
  1. A Bluetooth chat app with a Bluetooth devices discovery logger
  2. Split display showing news data from different sources
  3. An Image gallery that fetches images from the web and maintains a small local database
  4. A Facebook online viewer or a customized Gmail client

# Grading Policy

- ❑ **Assignments 20%:** One written assignment (5% each) in each direction. Please turn your assignments to individual professors for grading.
- ❑ **Android programming projects 40%:** Four projects (10% each). Please turn in your code/report to Cheng-Hsin Hsu and Shu-Ting Wang
- ❑ **Term projects 40%**
  - Paper presentation 10%: Four presentations graded by the instructors
  - Technical report: 5% for proposal, 10% mid-term report, and 10% final report, graded by Cheng-Hsin Hsu and Shu-Ting Wang
  - Final project presentation/demo: 5%, graded by Cheng-Hsin Hsu and Shu-Ting Wang

# Course Websites

- Entry point
  - <https://nmsl.cs.nthu.edu.tw/index.php/courses>
- Three pages:
  - Outline
  - Schedule
  - Assignment

## SNHC7430-Schedule-2015

Category: [Courses](#)

Last Updated on Monday, 23 February 2015 19:34

Written by Cheng-Hsin Hsu

Hits: 1650

The tentative schedule is given below.

**Deadlines:** All the assignments, programming projects, and technical reports (including proposal, mid-term drafts, and final reports) are all due at 2:00 p.m. on Tuesdays. Assignments and reports must be submitted as either PDF (written reports) or zip files via emails to the instructors. Late submissions lead to the following penalty. Within 24 hrs, 10%; between 24 and 48 hrs, 30%, between 48 and 120 hrs, 50%. Submissions after 120 hrs will not be graded.

Week	Lecture Presentations (80 mins)	Paper Presenters (50 mins)	Biweekly Updates (20 mins)	Deadline (before the Tuesday lecture starts)
1: Feb 24	Introduction on Mobile Social Networks ( <i>Cheng-Hsin Hsu, NTHU</i> )			
2: Mar 3	Socially Aware Computing: Concepts, Technologies, and Practices ( <i>Cheng-Hsin Hsu, NTHU</i> )	Roberto Carv, Sakthidasan Renu	NCCU Students	
3: Mar 10	Ephemeral Social Networks ( <i>Cheng-Hsin Hsu, NTHU</i> )	Yu-Lun Hsieh, Kalpana Kannan	NTHU Students	
4: Mar 17	Mobile Social Network Services ( <i>Hung-Chin Jang, NCCU</i> )	Fedrick Awuor, Cedric Fotsing	NTHU Students	Homework #1 Introduction on Mobile Social Networks ( <i>Cheng-Hsin Hsu, NTHU</i> )
5: Mar 24	[Tutorial #1] Environment setup: My First Android Project, [Tutorial #2] Basic User Interface: Activity and Action Bar ( <i>Cheng-Hsin Hsu, NTHU; Shu-Ting Wang, NTHU</i> )	Fatma Abousaleh, Khurshed Ali	NCCU Students	

# Paper Presentations

- ❑ Start from **week 2**. See the webpage for initial assignments.
- ❑ To pick a paper to present, you may start from the **references** of the textbook chapters
- ❑ Check with the instructors **beforehand** (via emails) to see if your selection is OK to present ← to avoid weak papers

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A. Chin and D. Zhang

such as Foursquare, and discusses the distinct properties, data analysis, and research issues of location-based social networks from the data mining perspective, as well as applications of data mining to real-world location-based social networks. Chapter 9 addresses the security, privacy, and trust in mobile social networks, where the authors present a trust management framework that supports context-aware trust/reputation generation, trustworthy content recommendations, secure communications, unwanted traffic control, user privacy recommendation and preservation, and other trust and privacy enhancement technologies. Finally, Chap. 10 concludes the book with discussion about outstanding research issues in mobile social networking, and a call for action for a research agenda from both academia and industry to realize this vision.

## References

- Abrams, J. (2006). System, method and apparatus for connecting users in an online computer system based on their relationships within social networks. United States Patent 7069308. <http://www.google.com/patents/US7069308?dq=Friendster+social+networking+patent&ei=LR57UN-nCCuX1AWDhID4Aw>. Accessed 2 Dec 2012.
- Blanchard, A. (2008). Sense of virtual community. In S. Kelsey & K. St. Amant (Eds.), *Handbook of research on computer mediated communication* (pp. 325–338). Hershey: Information Science Reference. doi:10.4018/978-1-59904-863-5.ch025.
- Chin, A., & Chignell, M. (2008). Automatic detection of cohesive subgroups within social hypertext: A heuristic approach. *New Review of Hypermedia and Multimedia*, 14(1), 121–143.
- Chin, A., Xu, B., Hong, D., Wang, Y., Yin, F., Wang, X., Wang, W., & Fan, X. (2012). Using proximity and homophily to connect conference attendees in a mobile social network. In *Proceedings of the IEEE ICDCS'12 international workshop on PhoneCom* (pp. 1–8). Macau, China: IEEE Press.
- Erickson, T., & Herring, S. (2004). Persistent conversation: A dialog between research and design. In *Proceedings of the 37th annual Hawaii international conference on system sciences*, Hawaii, USA. Vol. 1. doi: 10.1109/HICSS.2004.1265280.

# Questions?



Contact me at [chsu@cs.nthu.edu.tw](mailto:chsu@cs.nthu.edu.tw) anytime