

Fall 2018 Mobile Social Networks

- **Instructors:** [Chih-Ya Shen](#) (National Tsing Hua University), [Chih-Wei Huang](#) (National Central University), [Tung-Wei Kuo](#) (National Chengchi University), [Kate Ching-Ju Lin](#) (National Chiao Tung University), [Yi-Ling Chen](#) (National Taiwan University of Science and Technology)
- **Coordinator:** Chih-Ya Shen (National Tsing Hua University)
- **Time:** Fridays 14:00 - 17:00 p.m. (13:00 – 16:00 for classes in NTHU)
- **Location:** O108, IIS or R601, Delta Building, NTHU
- **Office Hour:** By appointment
- **TA:** George (georgekibirige@yahoo.com)
- **TA Office Hour:** By appointment

Course Description

Mobile Social Networks is an emerging and exciting new research area, and the course will consist of the presentations in four directions:

1. *Introduction on Mobile Social Networks*
2. *Random Graphs and Small World Properties*
3. *Multimedia in Mobile Social Networks*
4. *Content Dissemination in Mobile Social Network*
5. *User Information Inference, Influence Maximization, and Other Related Applications*

In addition to presentations given by the lecturers, students will also work on a term project on mobile social networks.

Textbook:

"Mobile Social Networking: An Innovative Approach," A. Chin and D. Zhang (Eds), Springer. Available at the libraries at National Tsing Hua University and National Cheng Chi University.

References:

Related papers that can be found in ACM Digital Library, IEEE Xplore, or other online databases.

Teaching Methods:

- *Presentations done by lecturers*
 - *Student presentations*
 - *Discussion*
 - *Tutorials of Programming Packages*
 - *Term project*
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Syllabus:

Tentative detailed topics to cover are:

1. *Socially Aware Computing: Concepts, Technologies, and Practices*
 2. *Ephemeral Social Networks*
 3. *Random Graphs in Social Networks*
 4. *Small World Properties*
 5. *Multimedia in Mobile Social Networks*
 6. *Content Dissemination in Mobile Social Networks*
 7. *User-related Inference in Mobile Social Networks*
 8. *Link Prediction and Influence Maximization*
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Grading:

- *Assignments: 20% * 5 = 100%*

Schedule:

Week	Topics	Lecturer	Note
2018/09/14	Introduction to Mobile Social Networks	Chih-Ya Shen	@ NTHU
2018/09/21	Socially Aware Computing: Concepts, Technologies, and Practices	Chih-Ya Shen	@ NTHU
2018/09/28	Modeling Social Networks: Random Graphs and Preliminaries	Tung-Wei Kuo	@ AS
2018/10/05	Introduction to Machine Learning Approaches for Mobile Social Networks	Chih-Ya Shen	@ NTHU
2018/10/12	Properties of Random Graphs	Tung-Wei Kuo	@ AS
2018/10/19	Small World Properties	Tung-Wei Kuo	@ AS
2018/10/26	Introduction to Multimedia Communications for Mobile Social Networks	Chih-Wei Huang	@AS
2018/11/02	Multimedia Coding Fundamentals	Chih-Wei Huang	@AS
2018/11/09	Optimization for Mobile Networks	Chih-Wei Huang	@AS
2018/11/16	Self-study week or invited talk	-	-
2018/11/23	Content Dissemination over Mobile Social Networks	Kate Ching-Ju Lin	@AS
2018/11/30	Introduction to Wireless Communication for Mobile Social Networks	Kate Ching-Ju Lin	@AS
2018/12/07	Wireless Content Multicasting	Kate Ching-Ju Lin	@AS
2018/12/14	Approaches and Applications of Link Prediction in Social Networks	Yi-Ling Chen	@ AS
2018/12/21	Social Network Diffusion Models and Social Influence Maximization	Yi-Ling Chen	@ AS
2018/12/28	Recommendations in Social Networks	Yi-Ling Chen	@ AS
2019/01/04	Self study or Invited talk		
2018/01/11	(review week, or make-up reschedule a class...flexible)		