

CONTACT INFORMATION	Center for Complex Network Research Northeastern University 111 DA / Physics Dept. 110 Forsyth Street Boston, MA 02135 USA	Voice: (617) 903-0036 Fax: (617) 373-4385 E-mail: yongyeol@gmail.com WWW: http://yongyeol.com
RESEARCH INTERESTS	Community structure in complex networks; Evolution and optimized structure of living organisms; Relationship between structure and dynamics in complex networks; Robustness of networks; Pattern of online social interactions; Epidemic dynamics on complex networks	
EDUCATION	<b>KAIST</b> , Daejeon, South Korea  Ph.D., Physics, February 2008 <ul style="list-style-type: none"><li>• Thesis topic: Organizing Principles and Dynamics of Complex Networks</li><li>• Advisor: Professor Hawoong Jeong</li></ul> M.S., Physics, February 2003 <ul style="list-style-type: none"><li>• Advisor: Professor Hawoong Jeong</li></ul> B.S., Physics, February 2001	
ACADEMIC EXPERIENCE	<b>Northeastern University</b> , Boston, MA USA Post-doctoral research associate	<b>June 2008 to present</b>
	<b>Dana-Farber Cancer Institute, Harvard University</b> , Boston, MA USA Visiting Researcher	<b>June 2008 to present</b>
	<b>Jacobs University</b> , Bremen, Germany ICTS fellow Visiting Researcher	<b>March 2007 to April 2007</b> <b>July 2006 to August 2006</b>
	<b>KAIST</b> , Daejeon, South Korea Postdoctoral Research Associate Research Assistant Teaching Assistant	<b>February 2008 to May 2008</b> <b>March 2003 to January 2008</b> <b>March 2002 to February 2003</b>
SELECTED HONORS & AWARDS	<b>Conference</b> <ul style="list-style-type: none"><li>• Best paper award, ACM Internet Measurement Conference (IMC, San Diego, California, USA), 2007</li><li>• Best oral presentation award, The 14th Workshop for Statistical Physics (Nami Island, Chuncheon, Korea), 2007</li></ul> <b>Scholarship</b> <ul style="list-style-type: none"><li>• Scholarship from DAAD (Germany) and KOSEF (Korea), 2006</li></ul> <b>Etc</b> <ul style="list-style-type: none"><li>• Grand prize, The 1st KOBIC Bioinformatics Contents Contest, 2007</li></ul>	

PUBLICATIONS  
(JOURNALS)

- [1] **Y.-Y. Ahn\***, J. P. Bagrow\*, and S. Lehmann\*. Link communities reveal multi-scale complexity in networks. *Nature (in press)*, 2010.
- [2] Y. Shen, J. Liu, G. Estiu, B. Isin, **Y.-Y. Ahn**, D.-S. Lee, A.-L. Barabási, V. Kapatral, O. Wiest, and Z. N. Oltvai. A blueprint for antimicrobial hit discovery targeting metabolic networks. *PNAS*, 107:1082, 2009.
- [3] Y. Sohn, M. K. Choi, **Y.-Y. Ahn**, J. Lee, and J. Jeong. Topological cluster analysis elucidates the systemic organization. *submitted to PLoS Comp. Biol.*, 2009.
- [4] S. H. Lee, P.-J. Kim, **Y.-Y. Ahn**, and H. Jeong. Googling social interactions: web search engine based social network construction. *accepted in PloS One*, 2009.
- [5] M. Cha, H. Kwak, P. Rodriguez, **Y.-Y. Ahn**, and S. Moon. Analyzing the video popularity characteristics of large-scale user generated content systems. *ACM/IEEE Transactions on Networking*, 17:1357, 2009.
- [6] F. Radicchi, **Y.-Y. Ahn**, and H. Meyer-Ortmanns. Impact of the updating scheme on stationary states of networks. *J. Phys. A: Math. Theor.*, 41:224010, 2008.
- [7] **Y.-Y. Ahn**, N. Masuda, H. Jeong, and J. D. Noh. Epidemic dynamics of two species of interacting particles on scale-free networks. *Phys. Rev. E*, 74:066113, 2006.
- [8] **Y.-Y. Ahn**, B. J. Kim, and H. Jeong. Wiring cost in the organization of a biological neuronal network. *physica A*, 367:531, 2006.
- [9] J. D. Noh, H.-C. Jeong, **Y.-Y. Ahn**, and H. Jeong. Growing network model for community with group structure. *Phys. Rev. E*, 71:036131, 2005.
- [10] D.-H. Kim, S.-W. Son, **Y.-Y. Ahn**, P.-J. Kim, Y.-H. Eom, and H. Jeong. Underlying scale-free trees in complex networks. *Progress of Theoretical Physics Supplement*, 157:213, 2005.
- [11] S.-W. Son, D.-H. Kim, **Y.-Y. Ahn**, and H. Jeong. Response network emerging from simple perturbation. *J. Korean Phys. Soc.*, 44:628, 2004.

PUBLICATIONS  
(CONFERENCES)

- [1] H. Chun, H. Kwak, Y.-H. Eom, **Y.-Y. Ahn**, S. Moon, and H. Jeong. Comparison of online social relations in terms of volume vs. interaction: a case study of cyworld. In *Proceedings of ACM Internet Measurement Conference*, 2008.
- [2] M. Cha, H. Kwak, P. Rodriguez, **Y.-Y. Ahn**, and S. Moon. I tube, you tube, everybody tubes: Analyzing the world's largest user generated content video system. In *Proceedings of ACM Internet Measurement Conference*, 2007.
- [3] **Y.-Y. Ahn**, S. Han, H. Kwak, S. Moon, and H. Jeong. Analysis of topological characteristics of huge online social networking services. In *Proceedings of the 16th International World Wide Web Conference*, 2007.
- [4] S. Han, **Y.-Y. Ahn**, S. Moon, and H. Jeong. Collaborative blog spam filtering using adaptive percolation search. In *Proceedings of the 15th International World Wide Web Conference, workshop on the Weblogging Ecosystem*, 2006.

SELECTED LIST OF  
TALKS

**Invited talks and lectures**

- 5th APCTP-KIAS Winter School on Statistical Physics (Topical Review), “Epidemics on Meta-population Network”, (Phoenix Park, Korea, January 2008).

**International Conferences**

- NetSci09, “Hierarchical Link Clustering in Complex Networks” (Venice, Italia, Aug. 2009).
- APS March Meeting, “Hierarchical Link Clustering in Complex Networks” (Pittsburgh, PA, Mar. 2009).
- APPC10: The 10th Asia Pacific Physics Conference, “Analysis of Topological Characteristics of Huge Online Social Networking Services” (Postech, Pohang, Korea, Aug. 2007).
- WWW2007, “Analysis of Topological Characteristics of Huge Online Social Networking Services” (Banff, Alberta, Canada, May 2007).
- 3rd Int. Conf. on NEWS, EXPECTATIONS and TRENDS in Statistical Physics, “Wiring Cost in the Organization of a Neural Network” (Kolybari, Greece, Aug. 2005).

- STATPHYS22, “Role of Wiring cost and Pattern Retrieval Performance in the Evolution of C. Elegans Neural Network” (Bangalore, India, July 2004).
- ICCS2004, “Extremely Clustered Network” (Boston, USA, May 2004).

PROFESSIONAL  
ACTIVITIES

**Referee work**

- Physics: Physica A, Physical Review Letters, Physical Review E, Physical Letters A
- Biology: BMC Systems Biology
- Computer Science: WWW, SIGKDD

**Program committee member**

- CompleNet 2010