



김 영 진 (in Korean)

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Ph.D. in Applied Physics

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## RESEARCH INTERESTS

Game Theory, Social Dilemma, Evolutionary Dynamics, Social Network Analysis, Big data Analysis

## EDUCATION

HANYANG UNIVERSITY, Ph.D. in Applied Physics Mar. 2013 - Aug. 2019

Advisor: Dr. Seung-Woo Son

Thesis: "Patterns of success and cooperation in complex networks"

HANYANG UNIVERSITY, B.S. in Applied Physics Mar. 2006 - Feb. 2013

Bachelor of Business Administration (double majors)

Korean military service (Jan. 2008 - Dec. 2009)

## EXPERIENCE

Student Researcher, [KISTI](#), KOREA Mar. 2018 - Aug. 2019

Research Assistant, [HANYANG UNIVERSITY](#), KOREA Mar. 2015 - Aug. 2019

Teaching Assistant, [HANYANG UNIVERSITY](#), KOREA Mar. 2013 - Dec. 2014

## HONERS & AWARDS

Best award, [2017 fall conference of Korea Academy of Complexity Studies](#) (Seoul, Korea) Nov. 2017

Best award, [The 8<sup>th</sup> KIAS CAC Summer School](#) (Seoul, Korea) Jul. 2017

Competition Award, 4<sup>th</sup> [Bigcontest](#) (Seoul, Korea) Oct. 2016

Best award, [2016 NIMS-SKKU Big data Summer School](#) (Jeju, Korea) Jul. 2016

Best poster award, [The 2015 KPS spring conference](#) (Daejeon, Korea) Apr. 2015

Scholarly award, College of Science and Technology, Hanyang University Dec. 2013

Best poster award, The 2013 KPS autumn conference (Changwon, Korea) Nov. 2013

Best poster award, The 2013 KPS spring conference (Daejeon, Korea) Apr. 2013

## SPECIALITY & SKILLS

- C and C++ programming language for numerical simulations of statistical physics problems and data pre-processing
- Python programming language for data analysis and visualization
- Scraping (crawling) for data collecting with python
- Gephi / D3.js for network visualization
- Master of presentation programs such Powerpoint and Prezi
- Management of Linux system and Windows applications
- Amateur Photographer, boxer, music performer (playing guitar and djembe, singing :)

## REVIEWED PUBLICATIONS

1. Y. Seo, J. Hwang, E. Lee, Y. J. Kim, K. Lee, C. Park, Y. Choi, H. Jeon, J. Choi\*,  
“[Engineering copper nanoparticles synthesized on the surface of carbon nanotubes for anti-microbial and anti-biofilm applications](#)”,  
Nanoscale **10**, 15529(2018).
2. Y.-J. Park, D. W. Kim, S. H. Nam, Y. J. Kim, S.-W. Son\*,  
“[Korean Football Stylometry by Using the Football Events Networks](#)”,  
New Phys.: Sae Mulli **68**, 642 (2018).
3. Y. J. Kim, S. Lim, Y. J. Park, S. W. Son\*,  
“[Quantitative Analysis of K-Pop Writers' Network by Using K-Pop Lyrics](#)”,  
New Phys.: Sae Mulli **68**, 700 (2018).
4. Y.-J. Park, Y.-B Kim, S.-Y Jeong, Y. J. Kim, and S.-W. Son\*,  
“[Network Analysis in Korean Presidential Speeches by Using Word2Vec](#)”,  
New Phys.: Sae Mulli **67**, 569(2017).
5. Y. J. Kim, M. Roh, S.-Y. Jeong, and S.-W. Son\*,  
“[Dynamics Motifs of Strategies in Prisoner's Dilemma Games](#)”,  
J. Korean Phys. Soc. **65**, 11 (2014) [arXiv:1412.5245](#).
6. Y. J. Kim, M. Roh, and S.-W. Son\*,  
“[Network Structures between Strategies in Iterated Prisoners' Dilemma Games](#)”,  
J. Korean Phys. Soc. **64**, 341 (2014) [arXiv:1403.1048](#).
7. Y. J. Kim, Y.-J. Park, and S.-W. Son\*,  
“Effect of the mobility on iterated prisoners' dilemma game with reputation-based-

strategy”,  
in preparation (2016).

8. Y. J. Kim, Y. Kim, S.-W. Son\*, and B. M. Weon\*,  
“Symmetric distribution in the last digits of the prime numbers”,  
in preparation (2015).
9. Y. J. Kim, M. Roh, S.-Y. Jeong, and S.-W. Son\*,  
“Fine phase structures in the payoff space of iterated prisoners’ dilemma games”,  
in preparation (2015).

## PRESENTATIONS

1. “Quantitative analysis of success of repositories in GitHub”  
[KPS 2019 Spring conference](#) (Daejeon, oral, Apr. 25, 2019)  
[KPS 2018 Fall conference](#) (Changwon, oral, Oct. 26, 2018)  
[NetSciX2019](#) (Santiago, Chile, poster, Jan. 4, 2019)
2. “[Quantitative analysis of K-pop writers' network using K-pop lyrics](#)”,  
[NSPCS2018](#) (Seoul, Korea, poster, Jul. 9, 2018)
3. “Network Analysis using K-POP lyrics”,  
The 19<sup>th</sup> Workshop for Statistical Physics (Mungyeong, Korea, Aug. 29, 2017)  
KPS 2017 Fall conference (Gyeongju, Korea, poster, Oct. 25, 2017)  
2017 fall Korea Academy of Complexity Studies (Seoul, Korea, Nov. 25, 2017)
4. “K-POP genre prediction using CNN”,  
The 8<sup>th</sup> KIAS CAC Summer School (Seoul, Korea, Jul. 5, 2017)
5. “Machine learning based insurance fraud forecast”,  
4<sup>th</sup> Bigcontest, (Seoul, Korea, Competition, Oct. 20, 2016)
6. “Effect of the mobility on iterated prisoners’ dilemma game with reputation-based-strategy”,  
NSPCS16 (Seoul, Korea, poster, Jul. 4, 2016)
7. “Composer network using morphological analysis of K-POP lyrics”,  
2016 NIMS-SKKU MDA-TDA Summer school (Jeju, Korea, oral, Jul. 2, 2016)
8. “Structure of player-interaction networks on iterated prisoners’ dilemma game with mobility”,  
NetSci 2016 (Seoul, Korea, poster, Jun. 1, 2016)  
KPS 2016 Spring conference (Daejeon, Korea, poster, Apr. 21, 2016)

9. "Mobile prisoners' dilemma game with reputation",  
KPS 2015 Autumn conference (Gyeongju, Korea, oral, Oct. 22, 2015).
10. "How does reputation affect spatial prisoners' dilemma game?",  
The 18<sup>th</sup> Workshop for Statistical Physics (Jeonju, Korea, oral, Aug. 21, 2015).
11. "Network analysis of iterated prisoners' dilemma games with a single step memory",  
Granada Seminar on Computational and Statistical Physics (Granada, Spain, June 15, 2015)
12. "Symmetric distribution in the last digits of prime numbers",  
KPS 2015 Spring conference (Daejeon, Korea, poster, Apr. 23, 2015).
13. "Diverse network structures of strategies in iterated prisoners' dilemma games",  
Application of Econophysics and Social Physics : Summer Workshop (Incheon, Korea, oral, Aug. 21, 2014).
14. "Fine phase structures (Network analysis) of iterated prisoners' dilemma games",  
KPS 2014 Spring conference (Daejeon, poster, Apr. 23, 2014).  
KIAS 2014 Summer School on Active Systems (Gwangju, oral, June 22 - July 4, 2014).  
The 6<sup>th</sup> Conference on Statistical Physics NSPCS 2014 (Seoul, Korea, poster, July 8 - 11, 2014).
15. "Analysis of win-lose circulations between strategies in iterated prisoners' dilemma game",  
The 17<sup>th</sup> Workshop for Statistical Physics (Tongyeong, Korea, oral, Oct. 31 - Nov. 3, 2013)  
KPS 2013 Autumn conference (Daejeon, poster, Oct. 24, 2013).
16. "Iterated prisoners' dilemma game with a limited memory",  
KPS 2013 Spring conference (Daejeon, poster, Apr. 24, 2013).

## REFERENCES

### **Dr. Seung-Woo Son**

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### **Dr. Beom Jun Kim**

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