Youngjai Park

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Research Experience	**Postdoctoral Researcher**	Mar 2022 – present.
	Statistical Physics of Ecology and Evolution Dynamics (SPEED) Group,	
	Department of Physics, Inha University, Republic of Korea	
	Postdoctoral Researcher	Mar 2021 – Feb 2022.
	Statistical Physics of Ecology and Evolution Group,	
	Asia Pacific Center for Theoretical Physics (APCTP), Republic of Korea	
	Visiting Researcher	Aug 2020 – Feb 2021.
	Statistical Physics of Ecology and Evolution Group,	
	Asia Pacific Center for Theoretical Physics (APCTP), Republic of Korea	
	Visiting Researcher	Aug 2018 – Jan 2019.
	Complexity Science Group,	
	Department of Physics and Astronomy, University of Calgary, Canada	

Education	**Ph.D.** in Applied Physics	Mar 2016 – Feb 2021.
	Department of Applied Physics, Hanyang University, Republic of Korea	
	Thesis: Network stylometry in complex systems: focused on the motif structures	
	Thesis Advisor: Prof. Seung-Woo Son	
	B.Sc. in Applied Physics	Mar 2010 – Feb 2016.
	Department of Applied Physics, Hanyang University, Republic of Korea	

Grant	**NRF - GRA program in Canada**	Aug 2018 – Jan 2019.
	Department of Physics and Astronomy, University of Calgary, Canada	

Relevant Activity	**Research & Teaching Assistant**	Mar 2016 – Aug 2018.
	Department of Applied Physics, Hanyang University, Republic of Korea	

- o   General Physics Lab. 1
- o   Computational Physics
- o   Applications of Computational Physics
- o   Scientific Analysis and Presentation

Relevant activity   Apr 2014 – Aug 2015.

- ▪   UST research internships, Korea Electrotechnology Research Institute (KERI) &

University of Science and Technology (UST), Republic of Korea (August 2015); KOSAF Working scholarship in KERI (April 2014).

- o Understand how gyrtron works and quasi-optical (QO) system.
- o Simulate magnetron injection gun (MIG), which is part of gyrotron, with egun program & Matlab.

Korean military service   Mar 2011 – Dec 2012.

Trainings
- 2017 NIMS Study Group with Industry, National Institute for Mathematical Sciences (NIMS) & Innovation Center for Industrial Mathematics (ICIM), Republic of Korea (December, 2017).
- 16th APCTP Science Communication School, Asia Pacific Center for Theoretical Physics (APCTP), Republic of Korea (February 2017).
- 2016 Summer Special Lecture, Korea Academy of Complexity Studies (KACS), Republic of Korea (August 2016).
- 2016 NIMS-SKKU MDA-TDA Summer School, National Institute for Mathematical Sciences (NIMS), Republic of Korea (June 2016).

Honor and Award

Awards
- **Best award**, 2017 KACS autumn conference (November 2017).
- **Best award**, The 8th KIAS CAC Summer School, Republic of Korea (July 2017).
- **Excellent Presentation Award**, 16th APCTP Science Communication School, Republic of Korea (February 2017).
- **Encouragement Prize**, Best Paper Competition commemorating the 2016 International Council on Archives Congress Presidential Archives, Republic of Korea (December 2016).
- **Best Poster Presentation**, 2016 KPS spring conference, Republic of Korea (April 2016).
- **Excellence Award**, 2015 Applied Science Capstone Design Competition, Republic of Korea (November 2015).

Publication

- **Youngjai Park**, Mi Jin Lee, and Seung-Woo Son, "Motif Dynamics in Signed Directional Complex Networks", *J. Korean Phys. Soc.* **78**, 535 (2021). (link)
- Young Jin Kim, Sohee Lim, **Young-Jai Park**, and Seung-Woo Son, "Quantitative Analysis of K-Pop Writers' Network by Using K-Pop Lyrics", New Physics: Sae Mulli **68**, 700 (2018). (link)
- **Young-Jai Park** *et al.*, "Korean Football Stylometry by Using the Football Events Networks", New Physics: Sae Mulli **68**, 642 (2018). (link)
- **Young-Jai Park** *et al.*, "Network Analysis in Korean Presidential Speeches by Using Word2Vec", New Physics: Sae Mulli **67**, 569 (2017). (link)
- **Youngjai Park**, Takashi Shimada, Seung-Woo Son, and Hye Jin Park, "Invasion and Interaction Determine Population Composition in an Open Evolving System", (in preparation).

Organizing

- **Workshop about social science and physics**, Deagu, Republic of Korea (November 29th

– 30th, 2021).

- **Modeling on Ecology and Evolution Workshop**, Seoul, Republic of Korea (October 27th – 29th, 2022).

Presentation	**What determines a shape of biomass pyramids**, MEEW 2022, Seoul, Republic of Korea (October 2022); 2022 KPS fall conference, Busan, Republic of Korea (October 2022); RHINO 2022, Tokyo, Japan (September 2022). **Invasion and Interaction determine Population Composition in an Open Evolving System**, Frontiers in Theoretical Biophysics, Gyeongju, Republic of Korea (November 2021); The 21st Statistical Physics Workshop, Online, Republic of Korea (August 2021). **Diversity and Stability on an Open Evolving Network Model**, 2020 KPS fall conference, Online, Republic of Korea (November 2020); 2020 MEE workshop, Online, Republic of Korea (August 2020). **Evolving open system with Lotka-Volterra dynamics**, RHINO 2020, Online, Republic of Korea (August 2020); 2020 KPS spring conference, Online, Republic of Korea (July 2020). **Motif Dynamics on Signed Directed Complex Networks**, 2019 KPS fall conference, Gwangju, Republic of Korea (October, 2019); The 20th Workshop for Statistical Physics, Byeonsan, Republic of Korea (August 2019); 2019 KPS spring conference, Daejeon, Republic of Korea (April 2019); Dynamics Days 2019, Evanston, United States (January 2019). **Football Stylometry with Football Event Network Analysis**, 2017 KACS autumn conference, Seoul, Republic of Korea (November 2017); Korean society of Science & Football, Seoul, Republic of Korea (June 2017). **Motifs dynamics on a network model of evolving open system**, 2017 KPS fall conference, Gyeongju, Republic of Korea (October 2017); The 2nd Workshop on Self-Organization and Robustness of Evolving Many-Body Systems, Sapporo, Japan (September 2017). **Microscopic network structures on a model of evolving open system**, The 19th Workshop for Statistical Physics, Mungyeong, Republic of Korea (August 2017). **Growth conditions on a model of evolving open system**, 2017 KPS spring conference, Daejeon, Republic of Korea (April 2017). **Network analysis in various systems**, Mini-Workshop on Social Modeling and Simulation and Hands-on Tutorial of OACIS, Kobe, Japan (March 2017). **Network analysis in Korean presidential speeches by using Word2Vec**, 2016 KACS autumn conference, Seoul, Republic of Korea (November 2016); NSPCS16, Hoegi, Republic of Korea (July 2016). **Chronological Changes in the Spoken Word Networks of Korean Presidents**, NetSci2016, Seoul, Republic of Korea (May 2016); 2016 KPS spring conference, Daejeon, Republic of Korea (April 2016).