

Curriculum Vitae

Name: **Soon Woo Park**
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Education

2017 Aug. B. S. E. in Mechanical Engineering, Sungkyunkwan University, Korea

Research Experiences

2017-present **Research Assistant**, Sungkyunkwan University, Korea
School of Mechanical Engineering

2016-2017 **Undergraduate Research Assistant**, Sungkyunkwan University, Korea
School of Mechanical Engineering

Research Interests

- Accelerated molecular dynamics simulation
- Computational structural biology

Publications

Journal Articles:

- Lee, B.H., **Park, S.W.**, Jo, S.J., Kim, M.K., "Protein Conformational Transitions Explored by a Morphing Approach Based on Normal Mode Analysis in Internal Coordinates", *PLOS One*, Vol. 16, Article No. 0258818, 2021

Conference Proceedings and Posters:

● International Conferences

1. Soon Woo Park, Moon-ki Choi, Byung Ho Lee, Woo Kyun Kim, and Moon Ki Kim, "Development of an accelerated simulation technique for exploring protein transition pathways", *66th Annual Meeting of the Biophysical Society*, Feb. 19-23, 2022, San Francisco, California
2. Soon Woo Park, and Moon Ki Kim, "Statistical analysis of protein secondary structures with an emphasis on their static and dynamic characteristics", *65th Annual Meeting of the Biophysical Society*, Feb. 22-26, 2021, Online
3. Hyunki Kim, Soon Woo Park, Byung Ho Lee, and Moon Ki Kim, "Statistical analysis of protein dynamics using the KOSMOS database", *64th Annual Meeting of the Biophysical Society*, Feb. 15-19, 2020, San Diego, California
4. Soon Woo Park, Moon-ki Choi, Byung Ho Lee, Woo Kyun Kim, and Moon Ki Kim, "Development of an accelerated molecular dynamics for proteins based on the bond-boost method", *Asia Pacific Congress on Computational Mechanics 2019*, Dec. 18-21, 2019, Taipei

5. Soon Woo Park, Moon-ki Choi, Byung Ho Lee, Woo Kyun Kim, and Moon Ki Kim, "An accelerated molecular dynamics study of proteins using the bond-boost hyperdynamics method", *63rd Annual Meeting of the Biophysical Society*, Mar. 2-6, 2019, Baltimore, Maryland
 6. Soon Woo Park, Soojin Jo, and Moon Ki Kim, "Heat-sensitive gating mechanism of TRPV1 channel revealed by molecular dynamics simulation", *62nd Annual Meeting of the Biophysical Society*, Feb. 17-21, 2018, San Francisco, California
- **Domestic Conferences**
 1. Soon Woo Park, Byung Ho Lee, Seung Hun Song, and Moon Ki Kim, "Statistical analysis of protein structures in terms of their static and dynamic characteristics", *The KSME Annual Spring Conference*, May. 18-21, 2022, Busan
 2. Soon Woo Park, Moon-ki Choi, Byung Ho Lee, Woo Kyun Kim, and Moon Ki Kim, "An accelerated molecular dynamics simulation of biomolecules using the bond-boost method", *The 6th Korea Multi-Scale Mechanics 2019 Symposium*, Jul. 4-5, 2019, Seoul
 3. Soon Woo Park, Moon-ki Choi, Byung Ho Lee, Woo Kyun Kim, and Moon Ki Kim, "Development of an accelerated molecular dynamics for biomolecules using the bond-boost method", *The KSME Annual Spring Conference*, Apr. 18-20, 2019, Jeju
 4. Soon Woo Park, Byung Ho Lee, and Moon Ki Kim, "Statistical analysis using database integrated by normal mode analysis of biomolecules", *The KSME Annual Fall Conference*, Dec. 12-15, 2018, Jeongseon
 5. Soon Woo Park, Byung Ho Lee, and Moon Ki Kim, "Statistical analysis of biomolecules based on normal mode analysis", *2018 KSMCB*, Sep. 17-19, 2018, Seoul
 6. Soon Woo Park, Soojin Jo, and Moon Ki Kim, "Heat-activated gating mechanism of TRPV1 channel determined by molecular dynamics simulation", *The KSME Annual Spring Conference*, Apr. 26-28, 2018, Yeosu
 7. Soon Woo Park, Soojin Jo, Byung Ho Lee, and Moon Ki Kim, "Normal mode analysis for TRPV1 gating mechanism based on mass-weighted chemical elastic network model", *The 4th Symposium on Multiscale and Multiphysics Mechanics*, Dec. 14-15, 2017, Yangpyeong
 8. Soon Woo Park, Soojin Jo, Byung Ho Lee, and Moon Ki Kim, "Normal mode analysis for TRPV1 mechanism based on mass-weighted chemical elastic network model", May. 25-27, 2017, Busan