CURRICULUM VITAE of Jungho Park (As of Oct. 1, 2018)
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EDUCATION

Ph.D.	Mechanical Engineering	Seoul National University	Expected Aug. 2019
B.S.	Mechanical Engineering	Seoul National University	Aug. 2012

(Received National Science and Engineering Scholarship, Korean Ministry of Education in 2006, 2007, 2008, and 2011)

PERSONAL EXPERIENCE

Visiting Scholar	University of Alberta	June 2018-Present
Visiting Researcher	PARC, a Xerox Company	Nov. 2017-May. 2018
Research Assistant	PARC, a Xerox Company	Jul. 2017-Nov. 2017
Solid Mechanics Teaching Assistant	Seoul National University	Mar. 2013-Aug. 2013
Winter Intern	Samsung Heavy Industries	Dec. 2011-Feb. 2012
Sergeant (Squad Leader)	Republic of Korea Army	2009-2011
Captain (Team Leader)	Engineering Soccer Club	2008-2009

PROJECT EXPERIENCE

- Advances in Fault Detection Techniques for OHT (Overhead Hoist Transport) Driving and Non-driving Parts (In progress)

  Jan. 2018-Dec. 2018
  - Funded by Samsung Electronics
  - Developing fault features for critical components in OHT driving and non-driving parts.

- Development of a Health Feature Model in an Industrial Robot Considering Operating Conditions

  Sep. 2017-Aug. 2018
  - Funded by Hyundai Heavy Industries
  - Developing a meta-model using vibration-based fault features considering complex operating conditions of the industrial robot

- Development of Fault Detection Techniques for OHT (Overhead Hoist Transport) Driving Parts under Various Operating Conditions

  Jan. 2017-Dec. 2017
  - Funded by Samsung Electronics
  - Developing fault detection techniques for critical components in OHT driving parts.

- Fault Diagnostics of Industrial Robot: Commercialization

  June. 2016-May. 2017
  - Funded by Hyundai Heavy Industries
  - Validating the developed fault detection techniques in actual operating conditions.

- Optimal Sensing and Signal Processing Development for Planetary Gear Fault Diagnostics of Excavator Spinning Part

  June. 2015-Mar. 2016
  - Funded by Doosan Infracore
  - Developed fault detection techniques for planetary gearboxes in an excavator.

- FMECA and Development of Optimal Sensing Techniques for Fault Diagnostics and Prognostics of Motor Drives in an Industrial Robot

  Mar. 2015-Feb. 2016
  - Funded by Hyundai Heavy Industries
  - Developed fault detection techniques for gearboxes in the industrial robots.

- Development of Hybrid Health Prognostics Platform to Forecast Faults in Key Mechanical and Electrical Components Caused by Compound Failure Mechanisms for Optimal Management of Offshore Wind Turbines

  Mar. 2013-Nov. 2014
  - Funded by Korean Ministry of Trade, Industry and Energy
  - Developed model-based fault diagnosis techniques of gearboxes using TE (Transmission Error).

- Investigation on Statistical Prediction of Impact Test

  Nov. 2012-Apr. 2013
  - Funded by Hyundai Motor Company
  - Developed a statistical validation method of impact test models with time-variant function

AWARDS

•	Bronze Medal	KSME-SEMES Open Innovation Challenge	Nov. 2017
•	Achievement Award	PARC, a Xerox Company	Oct. 2017
•	Best Paper Award	Asia Pacific Conference of the Prognostics and Health Management Society 2017	Jul. 2017
•	Winner	Asia Pacific Conference of the Prognostics and Health Management Society 2017, Data Challenge	Jul. 2017
•	Student Best Paper Award	Reliability Division, The Korean Society of Mechanical Engineers	Feb. 2017
•	Best Paper Award	Reliability Division, The Korean Society of Mechanical Engineers	Apr. 2016
•	Winner	2015 PHM Data Challenge, PHM Society	Oct. 2015
•	Student Best Paper Award	Reliability Division, The Korean Society of Mechanical Engineers	Feb. 2015
•	Best Paper Award	Korean Wind Energy Association	Dec. 2014
•	Winner	2014 PHM Data Challenge, PHM Society	Oct. 2014

JOURNAL PUBLICATION

[J1] Kim, H., Hwang, T., **Park, J.**, Oh, H., & Youn, B. D. (2014). Risk prediction of engineering assets: An ensemble of part lifespan calculation and usage classification methods. *International Journal of Prognostics and Health Management*, 5(2).

[J2] Jung, B. C., **Park, J.**, Oh, H., Kim, J., & Youn, B. D. (2015). A framework of model validation and virtual product qualification with limited experimental data based on statistical inference. *Structural and Multidisciplinary Optimization*, 51(3), 573-583. (IF: 2.876, Rank: 13.06%)

[J3] Ha, J. M., Youn, B. D., Oh, H., Han, B., Jung, Y., & **Park, J.** (2016). Autocorrelation-based time synchronous averaging for condition monitoring of planetary gearboxes in wind turbines. *Mechanical Systems and Signal Processing*, 70, 161-175. (IF: 4.370, Rank: 5.078%)

[J4] Kim, H., Ha, J. M., **Park, J.**, Kim, S., Kim, K., Jang, B. C., & Youn, B. D. (2016). Fault Log Recovery Using an Incomplete-data-trained FDA Classifier for Failure Diagnosis of Engineered Systems. *International Journal of Prognostics and Health Management*, 7(1), 004.

[J5] **Park, J.**, Ha, J. M., Oh, H., Youn, B. D., Choi, J. H., & Kim, N. H. (2016). Model-based fault diagnosis of a planetary gear: A novel approach using transmission error. *IEEE Transactions on Reliability*, 65(4), 1830-1841. (IF: 2.729, Rank: 12.981%)

[J6] Ha, J. M., Oh, H., **Park, J.**, & Youn, B. D. (2017). Classification of operating conditions of wind turbines for a class-wise condition monitoring strategy. *Renewable Energy*, 103, 594-605. (IF: 4.900, Rank: 19.697%)

[J7] Ha, J. M., **Park, J.**, Na, K., Kim, Y., & Youn, B. D. (2018). Toothwise Fault Identification for a Planetary Gearbox Based on a Health Data Map. *IEEE Transactions on Industrial Electronics*, 65(7), 5903-5912. (IF: 7.050, Rank: 0.820%)

[J8] **Park, J.**, Jeon, B., Park, J., Cui, J., Kim, M., & Youn, B. D. (2018). Failure prediction of a motor-driven gearbox in a pulverizer under external noise and disturbance. *Smart Structures and Systems*, 22(2), 185-192. (IF: 2.231, Rank: 24.609%)

[J9] **Park, J.**, Hamadache, M., Ha, J. M., Kim, Y., Na, K., & Youn, B. D. (2019). A positive energy residual (PER) based planetary gear fault detection method under variable speed conditions. *Mechanical Systems and Signal Processing*, 117, 347-360. (IF: 4.370, Rank: 5.078%)

[J10] **Park, J.**, Kim, Y., Na, K., & Youn, B. D., Variance of energy residual (VER): An efficient method for planetary gear fault detection under variable-speed conditions, *Submitted*.

PATENTS

[P1] Youn, B.D., **Park, J.**, Ha, J.M., "Method for Diagnosing and Classifying Gear Fault", Patent No. 1020170002036, Republic of Korea, January, 2017 (Patent Registration)

[P2] Park, J.G., Youn, B.D., **Park, J.**, Ha, J.M., "Fault Diagnosis System of Industrial Robot", 10-2016-0123309, Republic of Korea, September, 2016 (Patent Application)

[P3] Kim, K.I., Kim, K., Lim, D.P., Youn, B.D., Ha, J.M., **Park, J.**, "Method and System for Detecting Fault of Swing Device", 10-2017-0042907, Republic of Korea, April, 2017 (Patent Application)

[P4] Youn, B.D., **Park, J.**, Ha, J.M., Kim, Y., Na, K. "Vibration characteristics data map processing apparatus for diagnosing a fault of planetary gear box", 10-2018-0060479, Republic of Korea, May, 2018 (Patent Application)

[P5] Rossi, A.R., Raghavan, A., **Park, J.**, et al., "System and method for one-class similarity machines for anomaly detection", 16/032,944, United States of America, July, 2018 (Patent Application)

[P6] Youn, B.D., **Park, J.**, Kim, Y., Na, K. "Fault detection apparatus and method for gears under variable-speed condition using Short-Time Fourier Transform", 10-2018-0114952, Republic of Korea, Sep., 2018 (Patent Application)

[P7] Raghavan, A., Rossi, A.R., **Park, J.**, et al., "System and method for binned interquartile range analysis in anomaly detection of a data series", 16/143,223, United States of America, Sep., 2018 (Patent Application)

SKILLS

- Computer: Matlab, Python, Labview
- Lab: Installation and manipulation of test-beds (industrial robot, planetary gearbox)

LANGUAGE

- Korean: Native
- English: Fluent