



Yuan Di

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HIGHLIGHT

- Outstanding knowledge in Prognostics and Health Management (PHM) and industrial Big Data Analytics. Excellence in rotating machinery systems and vibration signal analysis.
- Rich domain experience in manufacturing, energy and semiconductor areas.
- Academic writing and presentation skills. Strong Self-motivation, responsibility and teamwork.

EDUCATION

University of Cincinnati, US

PhD in Mechanical Engineering (GPA: 4.0)

September 2013 to Present

- Graduate Teaching Assistant
- Advisor: Dr. Jay Lee

East China University of Science and Technology (ECUST)

Master's in Mechanical and Electronic Engineering

September 2010 to March 2013

- GPA: 3.5/4.0; Ranking: top 5% out of 200

Bachelor's Degree in Design and Manufacture of Machinery

September 2006 to June 2010

- GPA: 3.18/4.0; Major GPA: 3.39/4.0; Ranking: top 10% out of 299

WORK EXPERIENCE

National Instruments – Intern

May 2016 to August 2016

- Develop the predictive analytical algorithms for the induction motor and the transformer in the power plant.
- Integrate the predictive algorithms into the Big Data Platform – Insight CM.

Eaton Corporation – Intern

June 2015 to September 2015

- Develop the predictive algorithm for the uninterruptable power supply (UPS) system in order to detect abnormal symptoms before failure happens.
- Analyze the historical insulation data and predict its future variation for dynamically grid voltage control.

Zhending Tech – Intern

February 2015 to April 2015

- Establish a health assessment algorithm for the boiler pump using vibration data.
- Design the smart alarm management system for the coppering production line and develop the core algorithm.
- Develop a health assessment approach for the feeding robot arm using motion time data.

Advantech – Intern

June 2014 to August 2014

- Help construct a smart wind turbine predictive monitoring platform. Provide all the PHM algorithms for wind turbine performance assessment by SCADA data.

CURRENT RESEARCH EXPERIENCE

Project with **Applied Materials**

January 2016 to September 2016



www.imscenter.net

- Study the multi-class classification and time series analysis on semiconductor data sets.
- Investigate pattern recognition and automated data segmentation and feature extraction approaches.

Project with Eaton Corporation

June 2015 to December 2015

- Investigate the feature selection approaches and anomaly detection algorithms in the imbalanced data environment.

Project with China State Shipbuilding Corporation

September 2014 to January 2015

- Assess the combustion health condition of the diesel engine on the ship by the engine speed and the cylinder motion signal.

Project with HIWIN

May 2014 to August 2014

- Build Human Machine Interface about the ball screw health diagnosis and remaining useful life prediction using LabVIEW.

PREVIOUS EXPERIENCE

School of Mechanical and Power Engineering, ECUST

Complex and Intelligent Systems Research Center

July 2011 to March 2013

- Improved the model-based identification methods for cracks on rotor systems, which was supported by National Natural Science Foundation of China (NNSFC).

Key Lab of Presser Systems and Safety, Ministry of Education

January 2010 to June 2011

- Investigated the dynamic behavior of a rotor system with a semi-elliptical fronted crack on the shaft, which was supported by NNSFC-Youth Science Foundation.

PUBLICATIONS

Yuan Di, Changli Liu, Qidi Zhang. **Research on Model-based Identification Methods of Cracks in Rotating Shafts.** ROTDYN' 2012, 2012: 260-265.

Yuan Di, Changli Liu, Qidi Zhang, Wei Cheng, Shaoping Zhou. **Dynamic Analysis of the Rotor System with a Semi-elliptical Fronted Crack on the Shaft.** Applied Mechanics and Materials, 2012, 226-228: 665-671.

HONOR AND AWARDS

PHM Data Challenge 1 st Place	2016
LabVIEW Certified Associate Developer	2016
Shanghai Excellent Graduate Student	2013
National Master Scholarship	2012
Shanghai Excellent Undergraduate Student	2010

COMPUTER SKILLS:

MATLAB, LabVIEW, Python, FORTRAN, SolidWorks, AutoCAD