



## Yuan Di

2600 Clifton Ave, Cincinnati, OH, 45221  
(513)-655-8493 diyn@mail.uc.edu

### 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](http://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 <sup>st</sup> 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