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### 【在研科研项目】

1. 国家自然科学基金，质量相关的多工况动态间歇过程建模及故障诊断方法研究（61473033），2015年-2018年
2. 北京市自然科学基金，数据驱动的多工况非高斯复杂间歇过程的故障诊断（4142035），2014年-2016年
3. 鞍山钢铁集团公司，转炉智能液态金属成份检测与分析系统（2015-109），2015年-2017年

### 【代表性学术论文】

1. K.X. Peng, K. Zhang, J. Dong, B. You. Quality-relevant fault detection and diagnosis for hot strip mill process with multi-specification and multi-batch measurements. *Journal of the Franklin Institute*, 2015, 352(3): 987-1006.
2. K.X. Peng, K. Zhang, X. He, G. Li, X. Yang. New kernel independent and principal components analysis-based process monitoring approach with application to hot strip mill process. *IET Control Theory and Applications*, 2014, 8(16): 1723-1731.
3. K.X. Peng, K. Zhang, G. Li, D.H. Zhou. Contribution rate plot for nonlinear quality-related fault diagnosis with application to the hot strip mill process. *Control Engineering Practice*, 2013, 21(4): 360-369.



**Kaixiang Peng**, the professor in the School of Automation and Electrical Engineering, and the head of Department of Control Science and Engineering. He received his bachelor, master, and Ph.D. degrees in control theory and control engineering from University of Science and Technology Beijing, in 1995, 2002, and 2007, respectively. From January to July in 2012, he visited University of Duisburg-Essen as a visiting scholar in the institute of Automatic Control and Complex Systems. His research interest covers statistical process monitoring and fault diagnosis, process control and optimization for the iron and steel industry.

#### **【Publications】**

1. K.X. Peng, K. Zhang, J. Dong, B. You. Quality-relevant fault detection and diagnosis for hot strip mill process with multi-specification and multi-batch measurements. *Journal of the Franklin Institute*, 2015, 352(3): 987-1006.
2. K.X. Peng, K. Zhang, X. He, G. Li, X. Yang. New kernel independent and principal components analysis-based process monitoring approach with application to hot strip mill process. *IET Control Theory and Applications*, 2014, 8(16): 1723-1731.
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