دانشجویانو فارق التحصیلان آزمایشگاه تشخیص و شناسایی خطا:

جهت تکمیل سایت آزمایشگاه لازم است تا اطلاعات زیر را به انگلیسی ارسال نمایید تا روی وبسایت بارگذاری شوند.

نام و نام خانوادگی

عکس (شبیه عکس های ۳*۴)

عنوان پروژه و خلاصه پروژه (حدود ۱۰ خط) و نام اساتید راهنما و مشاور

آدرس ایمیل

علایق مطالعاتی

آدرس وب سایت شخصی (اختیاری)

بیوگرافی کوتاه (اختیاری)

- در جدول زیر یک نمونه کامل شده از اطلاعات وجود دارد.

<table>
<tr>
<td>  </td>
<td>Omid Rahmani Seryasat
<u>Marital status</u>: Single

<u>Date of Birth:</u>
11 August 1981, Takestan, Iran

<u>Education</u>
• 2007-2010, MSc., Mechatronics Engineering, K.N.T University of Technology, Tehran, Iran.
• 2000-2004, BSc, Electronic Engineering, Elmosanat University, Tehran, Iran.</td>
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<tr>
<td>Research Interest:</td>
<td>• Fault diagnosis
• Signal Processing,
• Pattern Recognition,
• Mechatronics,
• Image Processing & Machine Vision,
• Artificial Intelligent System,
• System Identification</td>
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<tr>
<td>Thesis Title:</td>
<td>Ball bearing fault diagnosis based on time series analysis with Support Vector Machine</td>
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<tr>
<td colspan="2">Abstract:

Due to the importance of rolling bearings as one of the most populous used industrial machinery elements, development of proper monitoring and fault diagnosis procedure to suppression malfunctioning and failure of these elements during operation is necessary. For rolling bearing fault detection, it is expected that a desired time domain analysis method has good computational efficiency. The point of interest of this investigation is the presence of an effective method for multi-fault diagnosis in such systems with extracting features in time-domain from the vibration signals and multi-class support vector machine (MSVM) that used to the detection and classification of rolling-element bearing faults.

The roller bearings nature of vibration reveals its condition and the features that show the nature are to be extracted through some indirect means. The method consists of two stages. Firstly, the features in time-domain from the vibration signals, which are widely used in fault</td>
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</table>

diagnostics, are extracted. Finally, the features that extracted are classified successfully using MSVM classifier and the work condition and fault patterns of the roller bearings and then faults are diagnosis real tine based on Voting.

Supervisor:	Dr. Mahdi Aliyari, Dr. Farhang Honarvar
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Patents

- **O. R. Seryasat**, M. Ghane, B. Gheisoddin, A. Alavyoon, "Design and manufacturing a new servo phase valve", Patent No. 69545, recorded date: 18/4/2011, recorded in Iran's Organization for Industrial Ownership, 2011.

Publications and Presentations

Books

1. "**Pattern Recognition**" written by Duda, Hart and Stork; translated into Persian by **O. R. Seryasa**i.

Papers

1. M. Ghane, M. Zarvandi, M. J. Tarokh, **O. R. Seryasat**, "Sliding Mode Control of Supply Chain Based on Neural Network ", **Journal of Industrial Engineering International (JIEI)**.

2. **O. R. Seryasat**, M. Aliyari shoorehdeli, F. Honarvar, A. Rahmani, "Multi-fault diagnosis of ball bearing using FFT, wavelet energy entropy mean and root mean square (RMS)", 2010, **11nd IEEE International Conference on Systems, Man, and Cybernetics (SMC 2010 TURKEY)**, p. 4295-4299.

3. **O. R. Seryasat**, M. Aliyari Shoorehdeli, F. Honarvar, A. Rahmani, "Multi-fault diagnosis of ball bearing based on features extracted from time-domain and multi-class support vector machine (MSVM)", 2010, **11nd IEEE International Conference on Systems, Man, and Cybernetics (SMC 2010 TURKEY)**, p. 4300-4303.

4. **O. R. Seryasat**, M. Aliyari Shoorehdeli, F. Honarvar, A. Rahmani, "Multi-fault diagnosis of ball bearing using intrinsic mode functions, Hilbert marginal spectrum and multi-class support vector machine", 2010, **International Conference on Mechanical and Electronics Engineering (ICMEE 2010 JAPAN)**, Vol. 2, p. 145-149.

5. A. Rahmani**, O. R. Seryasat**, E. Hosseini, "Numerical Investigate of Base Doping for Minimum Base Transit Time", **International Conference on Software Technology and Engineering, IEEE 2010**, Vol. 2, p. 404-406.

6. A. Rahmani, J. Haddadnia, **O. R. Seryasat**, "Intelligent Fault Detection of Electrical Equipment in Ground Substations Using", **2th International Conference on Mechanical and Electronics Engineering, IEEE 2010**, Vol. 2, p. 150-154.

7. A. Rahmani**,** J. Haddadnia, A. Sanaei, **O. R. Seryasat**, "Intelligent Detection of Electrical

Equipment Faults in the Overhead Substations based", **2th International Conference on Mechanical and Electronics Engineering, IEEE 2010**, Vol. 2, p. 141-144.

8. **O. R. Seryasat**, M. Aliyari Shooredeli, "Multi-fault diagnosis of ball bearings using FFT, STFT, EMD, and wavelet", submitted to **Journal of Mechanical Engineering Science**.

9. **O. R. Seryasat**, M. Aliyari Shooredeli, "Multi-fault diagnosis of ball bearings using Hilbert, Hilbert-Howang transformations, extracting features from these domains, and SVM based on voting", submitted to **Journal of Sound and Vibration.**

Persian Papers

10. **O. R. Seryasat**, M. Aliyari Shooredeli, "Designing an intelligent system for fault diagnosis in ball bearings", **Mechatronics Magazine, The Quarterly Magazine of Society of Mechatronics ,** Vol. 2 No.1, Spring 2011 .
11. **O. R. Seryasat,J.Haddadnia,"** Intelligent Fault Detection of Ball Bearing**"**, 3rd conference on Rotating Equipment in Oil and Power Industries. **(In Persian)**.

Honors & Awards

- **2011- A member of Iran 's Young Researchers' Club, Azad University, Takestan Branch, Iran**
- Winter-2007: Ranked **9st** in the M. Sc. **national entrance exam** in Mechatronics;
- Summer-2005: Ranked **1st** in the **national entrance exam for government employment**;

Working & Teaching Experiences:

- 2009-2010, Chief Manager of the high education dormitory.
- 2009- Automation of the medicine production line in Baran Company, Tehran, Iran.
- 2010-2011, Azad University of Qazvin(Shal), Takestan, Iran:
  Electrical Circuit Lab, Electrical Machinery (AC/DC), for undergraduate students,
- 2011-2012, Azad University of Takestan, Takestan, Iran:
  Electrical Circuit Lab, Electronics circuit, ,
- 2011-2012, Adiban University of Garmsar, Garmsar , Iran:
  Electrical Circuit Lab, Electronics circuit, ,
- 2008-2009: KNT University of Technology, Tehran, Iran:
  Teaching Assistant (TA) in: Signal & System Analysis.