Personal Information

Name: **Reza MIRESMAEILI**

Gender: Male
Date of Birth: 5th, March 1980
Nationality: IRANIAN
Languages: Persian (Native), English (Advanced), Japanese (Elementary)

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Current Position

Assistant Professor at Department of Materials Engineering, Tarbiat Modares University
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Educational Background

1. Apr. 2007- Mar. 2010 — Doctor of Engineering (PhD)
Solid Mechanics
Computational Mechanics Laboratory
Department of Intelligent Machinery and Systems
Graduate School of Engineering, ***Kyushu University***, Japan
Thesis Title: Finite Element Analysis of Large Elasto-Plastic Deformation in Hydrogen Related Problems

2. Sep. 2002 – Sep. 2005 — Master of Science (M.Sc.)
Materials Engineering-Welding Metallurgy
School of Metallurgy and Materials Engineering, University College of Engineering, ***University of Tehran***, Iran
Thesis Title: Residual Stress Simulation in TIG Welding Process

3. Sep. 1998 – Sep. 2002 — Bachelor of Science (B.Sc)
Materials Engineering-Extractive Metallurgy
Mining and Metallurgical Engineering Department, ***AmirKabir University of Technology***, Iran
Project Title: Study on Thermodynamic of Cadmium Extraction from sulphuric acid solution by resins (Ion Exchange)

Postdoctoral Experience

1. October 15, 2011- December 15, 2011 — Department of Mechanical Engineering, School of Engineering & Applied Science, ***Gonzaga University***, WA, USA
   Supervisor: Professor Patrick Ferro (ferrop@gonzaga.edu)

2. October 01, 2010- March 31, 2012 — Department of Mechanical Engineering, Faculty of Engineering, ***Kyushu University***, Fukuoka, Japan
   Supervisor: Professor Hiroshi Kanayama (kanayamah@fc.jwu.ac.jp)

3. May 01, 2010- September 30, 2010 — International Research Center for Hydrogen Energy, ***Kyushu University***, Fukuoka, Japan
   Supervisor: Professor Hiroshi Kanayama (kanayamah@fc.jwu.ac.jp)

Teaching Background

University or Institution/Country	Title of Courses	Date	
		Start	Finish
Tarbiat Modares University/Iran	1- Fracture Mechanics, 2- Fatigue and Fracture of Materials, 3- Simulation in Materials Engineering, 4- Advanced Joining Techniques, 5- Technical Inspection of Equipment for Oil and Gas Industry	April 10, 2012	Present
Kyushu University/Japan	1- Computational Mechanics, 2- Introduction to Theory of Elasticity and Plasticity, 3- Fracture Mechanics	April 01, 2007	March 31, 2012
University of Applied Science and Technology/Iran	1- Fracture and Stress Analysis in Weldments	February 19, 2005	July 22, 2006
Technical and Vocational College/Iran	1- Weld Design, 2- Materials Science	September 23, 2005	July 22, 2006

Research History

University or Institution/Country	Research Subject	Date	
		Start	Finish
Tarbiat Modares University/Iran	Effect of cold work on mechanical properties of steel samples produced by wire arc additive manufacturing	September 22, 2016	Present
Tarbiat Modares University/Iran	Fracture toughness variable measurement of steel pipeline welds in the present of hydrogen using numerical simulation and experimental investigation	April 13, 2015	Present
Tarbiat Modares University/Iran	Numerical simulation and experimental investigation of hydrogen-induced ductile crack propagation in welds	April 13, 2015	Present
Tarbiat Modares University/Iran	Laser welding of thin stainless steel bipolar plates in hydrogen fuel cells	September 22, 2012	September 22, 2013
Tarbiat Modares University/Iran	Hydrogen-plasticity interactions in the vicinity of crack during large deformations	April 10, 2012	Present
Gonzaga Univeristy/USA	Fatigue strength of austenitic stainless steel welds in the presence of hydrogen	October 15, 2011	December 15, 2011
Kyushu University/Japan	Numerical simulation of ductile crack propagation in hydrogen related problems	October 01, 2010	March 31, 2012
International Research Center for	Fatigue crack propagation in high pressure	May 01,	September

Hydrogen Energy, Kyushu University/Japan	hydrogen vessels	2010	30, 2010
Kyushu University/Japan	Finite element analysis of large elasto-plastic deformation in hydrogen related problems	October 01, 2006	March 25, 2010
The 21st Century Center of Excellence (COE) Program, Kyushu University/Japan	Mitigation of hydrogen hazards and the related safety issues	May 01, 2007	February 29, 2008

Employment History

University or Institution/Country	Position	Date	
		Start	Finish
Tarbiat Modares University/Iran	Assistant Professor	April 10, 2012	Present
Kyushu University/Japan	Research Assistant Professor	October 01, 2010	March 31, 2012
International Research Center for Hydrogen Energy, Kyushu University/Japan	Research Assistant Professor	May 01, 2010	September 30, 2010
The 21st Century Center of Excellence (COE) Program, Kyushu University/Japan	Research Assistant	May 01, 2007	February 29, 2008
Kyushu University/Japan	Research Assistant	October 01, 2006	March 31, 2007
Technical and Vocational College/Iran	Lecturer	September 23, 2005	July 22, 2006
University of Applied Science and Technology/Iran	Lecturer	February 19, 2005	July 22, 2006
Iran Weld Research and Engineering Center/Iran	Consultant Engineer	May 24, 2004	November 21, 2004

Journal Publications

1. A. Heydari Astaraee, , R. Miresmaeili, S. Bagherifard, M. Guagliano and M. Aliofkhazraei, “Incorporating the Principles of Shot Peening for a Better Understanding of Surface Mechanical Attrition Treatment (SMAT) by Simulations and Experiments”, *Materials & Design,* Vol. 116 (2017), pp. 365-373.
2. A. Latifi V., R. Miresmaeili and A. Abdollah-Zadeh, “The Mutual Effects of Hydrogen and Microstructure on Hardness and Impact Energy of SMA Welds in X65 Steel”, *Materials Science and Engineering: A,*Vol. 679 (2017), pp. 87-94.
3. M. Askari-Paykani, H.R. Shahverdi and R. Miresmaeili, “Effect of Boron Addition on Microstructural Evolution and Room-Temperature Mechanical Properties of Novel Fe66 xCrNiB xSi (x = 0, 0.25, 0.50 and 0.75 Wt Pct) Advanced High-Strength Steels”, *Metallurgical and Materials Transactions A,* Vol. 47 (2016), pp. 5423-5437.
4. M. Askari-Paykani, H.R. Shahverdi and R. Miresmaeili, “First and Third Generations of Advanced High-Strength Steels in A FeCrNiBSi System”, *Journal of Materials Processing Technology*, Vol. 238 (2016), pp. 383-394.
5. M. Askari-Paykani, H.R. Shahverdi and R. Miresmaeili, “Fatigue Crack Growth Behavior of a Type of Novel Advanced High-Strength Steel in a FeCrNiBSi Alloy System: A Comparison Between Heat-Treated Cast and Hot-Rolled”, *Materials Science and Engineering: A,*Vol. 673 (2016), pp. 280-287.
6. M. Askari-Paykani, H.R. Shahverdi and R. Miresmaeili, “Microstructural Evolution and Mechanical Properties of A Novel FeCrNiBSi Advanced High-Strength Steel: Slow, Accelerated and Fast Casting Cooling Rates”, *Materials Science and Engineering: A,*Vol. 668 (2016), pp. 188-200.
7. M. Kermajani, F. Malek Ghaini, R. Miresmaeili, A.A. Aghakouchak and M. Shadmand, “Effect of Weld Metal Toughness on Fracture Behavior Under Ultra-Low Cycle Fatigue Loading (Earthquake)”, *Materials Science and Engineering: A,* Vol. 668 (2016), pp. 30-37.
8. M. Habibi, R. Miresmaeili, M. Aliofkhazraei and S. Alikhani Chamgordani, “Laser Melting Effects on Microstructure and Corrosion Behavior of Plasma Electrolytic Oxidation Nanocomposite Coatings on Pure Titanium”, *Procedia Materials Science*, Vol. 11 (2015), pp. 491-497.

9. S.H. Hashemian Rahaghi, R. Poursalehi and R. Miresmaeili, "Optical Properties of Ag-Cu Alloy Nanoparticles Synthesized by DC Arc Discharge in Liquid", *Procedia Materials Science*, Vol. 11 (2015), pp. 738-742.
10. P.Ferrro, R. Miresmaeili, R. Mitra, J. Ross, W. Tiedemann, C. Hebert, , T. Goade, , D. Howard and K. Davidson, "Hydrogen-Exposed Welded Specimens in Bending and Rotational Bending Fatigue", *Ceramic Transactions*, Vol. 241 (2013), pp. 221-229.
11. R. Miresmaeili, L. Liu and H. Kanayama, "A Possible Explanation for the Contradictory Results of Hydrogen Effects on Macroscopic Deformation", *International Journal of Pressure Vessels and Piping,*Vol. 99-100 (2012), pp. 34-43.
12. A. Premono, L. Liu, R. Miresmaeili and H. Kanayama, "Finite Element Simulation of Tensile Tests for α-Iron in the Presence of Hydrogen", *Journal of Computational Science and Technology,* Vol.6, No.2 (2012), pp. 39-53.
13. L. Liu, R. Miresmaeili, M. Ogino and H. Kanayama, "Finite Element Implementation of an Elastoplastic Constitutive Equation in the Presence of Hydrogen", *Journal of Computational Science and Technology,* Vol.5, No.1 (2011), pp. 62-76.
14. K. Edalati, R. Miresmaeili, Z. Horita, H. Kanayama and R. Pippan, "Significance of Temperature Increase in Processing by High-Pressure Torsion", *Materials Science and Engineering: A,* Vol. 528, No. 24 (2011), pp. 7301-7305.
15. R. Miresmaeili, N. Saintier, H. Notsu, J.M. Olive and H. Kanayama, "One-Way Coupled Crystal Plasticity-Hydrogen Diffusion Simulation on Artificial Microstructure", *Journal of Computational Science and Technology*, Vol.4, No.2, (2010), pp. 105-120.
16. R. Miresmaeili, M. Ogino, T. Nakagawa and H. Kanayama, "A Coupled Elastoplastic-Transient Hydrogen Diffusion Analysis to Simulate the Onset of Necking in Tension by Using the Finite Element Method", *International Journal of Hydrogen Energy*, Vol. 35, Issue 3, (2010), pp. 1506-1514.
17. H. Kanayama, S. Ndong-Mefane, M. Ogino and R. Miresmaeili, "Reconsideration of the Hydrogen Diffusion Model Using the McNabb-Foster Formulation", *Memoirs of the Faculty of Engineering, Kyushu University*, Vol.69, No.4 (2009), pp. 149-161.
18. H. Kanayama, M. Ogino, R. Miresmaeili, T. Nakagawa and T. Toda, "Hydrogen Transport in a Coupled Elastoplastic-Diffusion Analysis near a Blunting Crack Tip", *Journal of Computational Science and Technology*, Vol. 2, No. 4 (2008), pp. 499-510.
19. S.A.A. Akbari Mousavi and R. Miresmaeili, "Experimental and Numerical Analyses of Residual Stress Distributions in TIG Welding Process for 304L Stainless Steel", *Journal of Materials Processing Technology*, Vol. 208, Issues 1-3 (2008), pp. 383-394.
20. R. Miresmaeili and S. A. A. Akbari Mousavi, "Experimental and Numerical Investigations of Residual Stress Distributions in the TIG Welding Process", *Materials Science Forum,* Vols. 580-582 (2008), pp 331-334.
21. M. Aliofkhazraei, C. Morillo, R. Miresmaeili and A. Sabour Rouhaghdam, "Carburizing of Low-Melting-Point Metals by Pulsed Nanocrystalline Plasma Electrolytic Carburizing", *Surface and Coatings Technology*, Vol. 202, Issues 22-23 (2008), pp. 5493-5496.
22. R. Miresmaeili, M. Ogino, R. Shioya, H. Kawai and H. Kanayama, "Finite Element Analysis of the Stress and Deformation Fields Around the Blunting Crack Tip", *Memoirs of the Faculty of Engineering, Kyushu University,* Vol. 68, No. 4 (2008), pp. 151-161.

International Conferences (Full Articles)

1. P. Ferro, R. Miresmaeili and A. Nekimken, "Fatigue Testing of Hydrogen-Exposed Austenitic Stainless Steel Welded Samples", *International Hydrogen Conference (IHC 2012): Hydrogen-Materials Interactions*, Grand Teton National Park, Jackson Lake Lodge, Moran, Wyoming, USA, September 9th-12th, 2012 (Poster Presentation).
2. L. Liu, A. Premono, R. Miresmaeili and H. Kanayama, "Numerical Simulations of Hydrogen-Plasticity Interactions in Metallic Materials", *JSME 24th Computational Mechanics Division Conference, CMD 2011*, Okayama University, Okayama, Japan, October 8th - 10th, 2011 (Oral Presentation).
3. A. Premono, L. Liu, R. Miresmaeili, M. Ogino and H. Kanayama, "Finite Element Simulation of Hydrogen Effects on the Tensile Properties of Metals and Alloys", *JSME 24th Computational Mechanics Division Conference, CMD 2011*, Okayama University, Okayama, Japan, October 8th - 10th, 2011 (Oral Presentation).
4. R. Miresmaeili, L. Liu, A. Premono, M. Ogino and H. Kanayama, "Finite Element Modeling of Hydrogen-Assisted Micro-crack Deformation", *The 16th Japan Society for Computational*

Engineering and Science (JSCES) Conference, Chiba, Japan, May 25th-27th, 2011 (Oral Presentation).

5. L. Liu, R. Miresmaeili, M. Ogino and H. Kanayama, "Finite Element Analysis of a Coupled Elastoplastic-Transient Hydrogen Diffusion in Materials", *JSME 23rd Conference of Computational Mechanics, CMD2010*, Kitami Institute of Technology, Hokkaido, Japan, September 23rd- 25th, 2010 (Oral Presentation).
6. H. Notsu, R. Miresmaeili, N. Saintier, J.M. Olive and H. Kanayama, "One-Way Coupled Crystal Plasticity-Hydrogen Diffusion Simulation in a Material", *The 59th National Congress of Theoretical and Applied Mechanics (NCTAM 2010)*, Science Council of Japan, Tokyo, Japan, June 8th-10th, 2010 (Oral Presentation) *In Japanese*.
7. R. Miresmaeili, H. Notsu, N. Saintier, J.M. Olive and H. Kanayama, "An Uncoupled Crystal Plasticity-Transient Hydrogen Diffusion Analysis to Investigate the Effect of Crystallographic Orientation on Hydrogen Redistributions", *KSME-JSME Joint Symposium 2010 on Computational Mechanics and Computer-Aided Engineering*, Seoul, Korea, March 3rd-5th, 2010 (Oral Presentation).
8. R. Miresmaeili, N. Saintier, H. Notsu, J.M. Olive and H. Kanayama, "A One-Way Coupled Crystalline Plasticity-Transient Hydrogen Diffusion Analysis to Simulate the Effect of the Heterogeneity of Stress-Strain States on Hydrogen Distributions in Microstructure", *JCST (Journal of Computational Science and Technology) Forum, Japan Society of Mechanical Engineers (JSME) 22nd Conference of Computational Mechanics, CMD2009*, Kanazawa University, Kanazawa, Ishikawa, Japan, October 10th – 12th, 2009 (Oral Presentation).
9. R. Miresmaeili, H. Notsu, T. Nakagawa, J.M. Olive, M. Ogino and H. Kanayama, "A Finite Element Analysis of Hydrogen Diffusion in a Stainless Steel Containing Strain-Induced Martensite", *JCST (Journal of Computational Science and Technology) Forum, Japan Society of Mechanical Engineers (JSME) 22nd Conference of Computational Mechanics, CMD2009*, Kanazawa University, Kanazawa, Ishikawa, Japan, October 10th – 12th, 2009 (Oral Presentation).
10. R. Miresmaeili, M. Ogino, R. Shioya, H. Kawai and H. Kanayama, "Modeling of the Hydrostatic Stress and Equivalent Plastic Strain Distributions around the Blunting Crack Tip in Impure Iron", *Third Asian-Pacific Association for Computational Mechanics (APACM'07) in conjunction with Eleventh International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC XI)*, Kyoto, Japan, December 3rd -6th, 2007 (Oral Presentation).
11. M. Aliofkhazraei, C. Morillo, R. Miresmaeili and Al. Sabour Rouhaghdam, "Carburizing of Low Melting Point Metals by Pulsed Plasma Electrolytic Carburizing", *Sixth Asian-European International Conference on Plasma Surface Engineering*, Yasuragi-Ioujima, Nagasaki, Japan, September 24th – 29th, 2007 (Poster Presentation).
12. S.A.A. Akbari Mousavi, S. F. Kashani Bozorg and R. Miresmaeili, "Experimental and Numerical Investigations of Residual Stress Distributions in the TIG Welding Process", *International Welding Joining Conference-Korea 2007 (IWJC 2007)*, COEX Convention Center, Seoul, Korea, May 10th-12th, 2007 (Oral Presentation).
13. A.A Akbari Mousavi, S.F. Kashani Bozorg and R. Miresmaeili, *"Experimental and Numerical Investigations of the Influences of Weld Length and Groove Configurations on Residual Stress Distributions"*, Tehran International Congress on Manufacturing Engineering (TICME2005), Tehran, Iran, December 12th-15th, 2005 (Oral Presentation).
14. A. A. Akbari Mousavi and R. Miresmaeili, "Experimental and Numerical Analysis of TIG Welding Process With Emphasis on Groove Configurations on Residual Stresses and Distortions", *International Conference on technology of plasticity (ICTP2005)*, Verona, Italy, October 9th-13th, 2005 (Oral Presentation).
15. R. Miresmaeili and A. A. Akbari Mousavi, *"Experimental and Three Dimensional Finite Element Analysis of Residual Stresses and Distortions for Multi-pass TIG Welding"*, International Conference on Recent Advances in Mechanical & Materials Engineering (ICRAMME2005), University of Malaya, Kuala Lumpur, Malaysia, May 30th-31st, 2005 (Oral Presentation).

International Conferences (Abstract)

1. P. Ferro and R. Miresmaeili, "Mechanical Testing and Modeling of 304 Stainless Under a Range of Gaseous Hydrogen Exposure Conditions", *2016 International Hydrogen Conference (IHC 2016)*, Jackson Lake Lodge, Moran, Wyoming, USA, September 11th-14th, 2016 (Poster Presentation).

2. A. Latifi V., R. Miresmaeili and A. Abdollah-Zadeh, "The Effect of Electrochemical Hydrogen Charging on Microhardness and Impact Energy of X65 Pipeline Steel and Relevant Weld Metal of Different SMAW Electrodes", *2016 International Hydrogen Conference (IHC 2016)*, Jackson Lake Lodge, Moran, Wyoming, USA, September 11th-14th, 2016 (Poster Presentation).
3. S. Alikhani Chamgordani, R. Miresmaeili and M. Aliofkhazraei, "Tensile and Hardness Properties of Commercially Pure Titanium Processed by Surface Mechanical Attrition Treatment (SMAT)", *The 5th International Conference on Composites Characterization, Fabrication and Application (CCFA-5)*, Tehran, Iran, December 20th-21st, 2016 (Poster Presentation).
4. L. Liu, R. Miresmaeili, M. Ogino and H. Kanayama, "Numerical Analysis of Hydrogen Assisted Ductile Crack Growth in Metals", *11th U.S. National Congress on Computational Mechanics*, Columbus, Minneapolis, Minnesota, USA, July 25th-28th, 2011 (Oral Presentation).
5. H. Kanayama and R. Miresmaeili, "Hydrogen-Plasticity Interactions: Numerical Simulations From Meso- to Macro-Scale", *International Hydrogen Energy Development Forum 2011, International HYDROGENIUS and I2CNER Joint Symposium on Hydrogen-Material Interaction*, Kyushu University (Ito campus), Fukuoka, Japan, February 2nd-3rd, 2011 (Poster Presentation).
6. R. Miresmaeili, H. Notsu, N. Saintier, J.M. Olive and H. Kanayama, "Uncoupled Crystal Plasticity-Transient Hydrogen Diffusion Analysis", *9th World Congress on computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics*, Sydney, Australia, July 19th-23rd, 2010 (Oral Presentation).
7. H. Kanayama, M. Ogino, R. Miresmaeili and L. Liu, , "Finite Element Analysis of a Coupled Elastoplastic-Transient Hydrogen Diffusion to Simulate Necking Problems", *9th World Congress on computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics*, Sydney, Australia, July 19th-23rd, 2010 (Oral Presentation).
8. R. Miresmaeili, M. Ogino, T. Nakagawa and H. Kanayama, "A Coupled Elastoplastic-Transient Hydrogen Diffusion Analysis to Simulate the Onset of Necking in Tension by Using the Finite Element Method", *10th US National Congress on Computational Mechanics*, Columbus, Ohio, USA, July 16th-19th, 2009 (Oral Presentation).
9. J. M. Olive, R. Miresmaeili, H. Kanayama, Y. Mine and Y. Murakami, "Hydrogen-Plasticity Interactions on Stainless Steels. The Effect of Microstructure", *The 3rd International Hydrogen Energy Development Forum 2009, International HYDROGENIUS Symposium Hydrogen-Material Interaction*, Kyushu University (Ito campus), Fukuoka, Japan, February 4th-5th, 2009 (Oral Presentation).
10. R. Miresmaeili, M. Ogino, R. Shioya, H. Kawai and H. Kanayama, "Numerical Simulation of the Crack Tip Elastic-Plastic State", *8th. World Congress on Computational Mechanics (WCCM8) and the 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30th-July 4th, 2008 (Oral Presentation).
11. J. M. Olive, H. Kanayama, R. Miresmaeili, N. Saintier, I. Aubert and F. Plessier, "Simulation of Hydrogen-plasticity interactions: The effect of microstructure", *The 2nd International Hydrogen Energy Development Forum 2008, Hydrogen Simulation Workshop*, Kyushu University (Ito campus), Fukuoka, Japan, February 6th-7th, 2008 (Oral Presentation).
12. M. Aliofkhazraei, C. Morillo, R. Miresmaeili and Al. Sabour Rouhaghdam, "Study of Pulsed Current Effects on Wear Resistance of Pulsed Plasma Electrolytic Carbonitrided 316L Austenitic Stainless Steel", *Sixth Asian-European International Conference on Plasma Surface Engineering*, Yasuragi-Ioujima, Nagasaki, Japan, September 24th – 29th, 2007 (Poster Presentation).

Japan National Conferences

1. H. Notsu, R. Miresmaeili, N. Saintier, J.M. Olive, H. Kanayama, "Characteristic Finite Element Method Applied to the Problem of Hydrogen Diffusion in Materials", *Theory and Practice of Numerical Simulation (NSTP 2010)*, February 16th-17th, 2010, Fukuoka, Japan. (in Japanese)
2. H. Notsu, R. Miresmaeili, N. Saintier, J.M. Olive, H. Kanayama, "A Characteristic-Curve Finite Element Scheme for Hydrogen Diffusion Problem in Materials", *Present and Future of Numerical Analysis -originating from the cooperation and Numerical Analysis Seminar, Kyushu*, November 21st-23rd, 2009, Hakodate, Hokkaido, Japan. (in Japanese)
3. H. Notsu, M. Tabata, R. Miresmaeili, N. Saintier, J.M. Olive, H. Kanayama, "Analysis of Hydrogen Diffusion in Polycrystalline Metals Using Finite Element Method with a Characteristic Curve", Japan Society for Industrial and Applied Mathematics (JSIAM 2009), September 28th-30th, 2009, Osaka, Japan. (in Japanese)

4. R. Miresmaeili, H. Notsu, N. Saintier, J.M. Olive, H. Kanayama, "A One-Way Coupled Crystalline Plasticity-Transient Hydrogen Diffusion Analysis to Simulate the Effect of the Heterogeneity of Stress-Strain States on Hydrogen Distributions in Microstructure", *7th Mathematical Research Center for Industrial Technology (MRIT) Workshop*, September 3rd, 2009, Kyushu University, Fukuoka, Japan.
5. H. Notsu, R. Miresmaeili, N. Saintier, J.M. Olive, H. Kanayama, "Finite Element Analysis of Hydrogen Diffusion in Austenitic Stainless Steel Having Stress-Induced Martensite Layers", *7th Mathematical Research Center for Industrial Technology (MRIT) Workshop*, September 3rd, 2009, Kyushu University, Fukuoka, Japan.

Invited Lectures

1. Reza Miresmaeili, "Uncoupled Crystal Plasticity-Transient Hydrogen Diffusion Analysis", *Numerical Analysis Seminar at Kyushu University (Q-NA 255)*, Faculty of Engineering, Kyushu University, Japan, June 1st, 2010 (Tuesday) 15:30 to 17:00.
2. Reza Miresmaeili, "A Coupled Elastoplastic-Transient Hydrogen Diffusion Analysis to Simulate the Onset of Necking in Tension by Using the Finite Element Method", *Numerical Analysis Seminar at Kyushu University (Q-NA 245)*, Faculty of Engineering, Kyushu University, Japan, December 1st, 2009 (Tuesday) 15:30 to 17:00.

Awards

1. Monbukagakusho Scholarship from Japanese Government for Studying in Doctoral Course of Kyushu University, Date: 2007/04/01- 2010/03/31.
2. Monbukagakusho Scholarship from Japanese Government to conduct research at Computational Mechanics Laboratory, Department of Intelligent Machinery and Systems, Kyushu University, Date: 2006/10/01- 2007/03/31.

Special Skills

A) Experimental Techniques

1. Materials Characterization and Testing: Metallographic Preparation, Optic Microscope, Scanning Electron Microscope (SEM) and Energy Dispersive X-ray Spectroscopy (EDS).
2. Experimental Measurement of Residual Stress Distributions by X-Ray Diffraction Method (XRD).
3. Mechanical Properties: Tensile Test, Comprehension Test and Impact Test.
4. Metal Forming: Plane Strain Test, Extrusion Test and Rolling.
5. Welding: SMAW, SAW, GTA, MIG/MAG and Oxy Gas Welding.

B) Numerical Techniques

1. Solid Computational Mechanics
2. Coupled Transient Hydrogen Diffusion- Elastoplastic Analysis
3. Hydrogen-Plasticity Interactions, the Effect of Microstructure
4. Welding Simulation
5. Writing Subroutine within Commercial Finite Element Softwares

C) Engineering Softwares

1. MSC.Marc
2. ZeBuLoN
3. ADVENTURE-Solid
4. ANSYS
5. ABAQUS
6. AutoCAD

D) Programming Languages

C Programming and FORTRAN

E) Operating System

UNIX/LINUX

Major Interests

1. Failure Analysis and Fracture Mechanics
2. Surface Mechanical Attrition Treatment (SMAT) and Severe Shot Peening (SSP)
3. Additive Manufacturing (AM)
4. Modelling and Simulation in Materials Science and Engineering
5. Fitness for Service (FFS) Assessments
6. Environmentally-Assisted Cracking
7. Design Methodology and Stress Analysis in Weldments