

## **Education**

- B.Sc. in Mechanical Engineering, [Production and Manufacturing](#) , University of Science & Technology, Tehran, Iran. (2003)
- M.Sc. in Mechanical Engineering, [Production and Manufacturing](#) , University of Science & Technology, Tehran, Iran. (2006)

## **Industrial Experience**

- Researcher of Iranian Oil & Telecommunication Company (IOPTC) (2005-2007)
- Product Manager of Atra Orthoped Urmia Co. (Orthopedic & Spinal Implants Manufacturer. 2008-2010)

## **TEACHING EXPERIENCE**

- Design of Tool Machine
- Design of Forging Die
- Manufacturing Processes
- Advanced Machining Process
- Design of Injection Plastic
- Metrology & measurement
- Cutting Tool Technology

## **Research Attempting Areas:**

- Orthopedic and Spinal Implants (Design, manufacturing and simulation)
- Manufacturing Processes
- Biomechanics
- Fracture at high temperature
- Nanostructured SPD materials

## **Research Background**

- Oil Pipeline and Telecommunication Company of Iran (Co- Investigator) (2006 - 2008)

"Evaluation of creep damage and life assessment of gas turbine blades made of nickel base Super Alloy "

- The National Iranian Gas Company (Co- Investigator) (2007 - 2009)

"Estimation of parameters in the parts of life at high temperatures and provide suggestions for increasing the life Partners "

- West Azarbaijan Power Plant Company (Principal Investigator) (2010 - 2012)

"Investigation of gas turbine power plants, combined inserts ring Urmia and strategies for improvement ".

- Atra Orthoped Urmia Company (Principal Investigator) (2011 - 2012)

"The Technical knowledge to produce orthopedic plates and screws Bones "

- West Azarbaijan Gas Company (Principal Investigator) internship Plan (2012 - 2013)

" The Investigation of Usage of Exhausted gases from CGS Filters "

- West Azarbaijan, State Organization of Schools Renovation, development and mobilization (Principal Investigator) (2012 - 2013)

"Design and manufacture of school furniture depend on student's anthropometric characteristics in West Azarbaijan primary & high schools"

### **ISI papers:**

- **S.Kargarnejad** , F.Djavanroodi, "Failure assessment of Nimonic 80A gas turbine blade", *J. Engineering Failure Analysis* 26 (2012) 211–219, In Press, Accepted Manuscript, Available online 30 August 2012.

### **Conference papers:**

- A.Hamrang, F.Javanroodi, K.Nikbin, **S.Kargarnejad**, "Numerical determination of Limit Load using Elastic Modulus Reduction (E.M.R.) Method", The third international conference on advances in mechanical engineering and mechanics December-17-19, 2006 hammamet, Tunisia. (In English).

- **S.Kargarnejad**, A.Hamrang, F.Javanroodi, "Estimated remaining life of the thermal effects on the size and phase volume in the gas turbine blades made of nickel base super alloy Nimonic 80A", 8th Seminar on Surface Science and Heat treatment, ISSST8, 2007, Kerman, Iran. (In Persian).

- **S.Kargarnejad**, F.Javanroodi, A.A.Mirabi, J.Dabbagh, "Effect of two cycles heat treatment on grain size, Volume fraction of primary phase and improving lifetime of a gas turbine blades made of Nickel-base alloy ", *Scientific-Propagative Monthly*, May 2009- 15 Issue. (In Persian).

- **S.Kargarnejad**, A.Hamrang, F.Javanroodi, K.Nikbin, "Three-dimensional stress analysis and creep life assessment of gas turbine blades made of super alloy Nimonic 80A", 15th Annual-International Conference on Mechanical Engineering, ISME2007, Amirkabir University of Technology and Tehran, Tehran, Iran. (In Persian).

- A.Pirgholi, **S.Kargarnejad**, F.Javanroodi, "Numerical Study in Effect of Forces and Tool Geometry on Part accuracy and Life of tool in Fine Blanking with Finite Element Method (FEM)". 2th International Conference on Product and Manufacturing Engineering, ticme2007, Iran University of technology, Tehran, Iran. (In Persian).

- **S.Kargarnejad**, A.R.Soleimani, M.Paiamifar, F.Javanroodi, "Three-dimensional stress analysis and creep life assessment of gas turbine blades made of super alloy Inconel X-750, 16th Annual-International Conference on

Mechanical Engineering, ISME2008, Shahid Bahonar University of Technology and Kerman, Kerman, Iran. (In Persian).

- **S.Kargarnejad** , I.Mirzaei, F.Javanroodi, B.Oveisi, "Numerical Fatigue behavior of dynamic spinal implants made of Ti-6AL-4V", 19th International Conference on Mechanical Engineering-ISME2011, Birjand University (In Persian).

- **S.Kargarnejad** , I.Mirzaei, F.Mobadersani, "Study of Non-Steady Temperature Distribution in the Burner Rings, 7th International Conference on Computational Heat and Mass Transfer", ICCHMT July 18-22, 2011, Istanbul, Turkey. (In English).

- F.Mobadersani, I.Mirzaei, H.saffari, S.Azizi, **S.Kargarnejad**, A.Rezavand, "Numerical Study of the Dynamics of Drop Formation and Ejection in Thermal Bubble Jets", 7th International Conference on Computational Heat and Mass Transfer, ICCHMT July 18-22, 2011, Istanbul, Turkey. (In English).

- **S.Kargarnejad** , N.Ardabilchi, F.Javanroodi, B.Oveisi, "Study of fixed Fractured Humeral Bone by Internal Fixation using FEM", 1th International Symposium on Numerical Simulation in Orthopedic Biomechanics", 26-27.08.2011, Rostock, Germany. (In English).

- A.Fazeli, **S.Kargarnejad**, F.Javanroodi, A.Faramarzvash, "Statistical modeling of effect parameters on amount of tilt of Ruston TA1750 Gas Turbine blade in creep feed grinding process by design of experiments", 3th Conference on Rotating & Power Industries in Oil & Power Industries", Nov, 22-23, 2011, Razi Inil Conference Center, Tehran, Iran (In Persian).

- **S.Kargarnejad** , A.Fazeli, F.Javanroodi, "Examination of Micro structural changes in Inconel X-750 super alloy-material gas turbine blade", 3th Conference on Rotating & Power Industries in Oil & Power Industries", Nov, 22-23, 2011, Razi Inil Conference Center, Tehran, Iran(In Persian).

- **S.Kargarnejad** , S.Gorbani, F.Djavanroodi, "The effect of process parameters affecting the flow and strain distribution channels other than the cross Pressing (NECP) a typical angular, 3th International Conference on Manufacturing Engineering, University of Tehran, ICME2011, Tehran, Iran (In Persian).

- **S.Kargarnejad** , S.Gorbani, F.Djavanroodi, M.Ebrahimi, "Pressing forging an angular shape compared with other channels in the same period", , 3th International Conference on Manufacturing Engineering, University of Tehran, ICME2011, Tehran, Iran (In Persian).

- **S.Kargarnejad** , J.Niksokhan, M.Ebrahimi, F.Djavanroodi, "Mechanical properties of pressed Copper Equal Channel Angular Pressing", , 3th International Conference on Manufacturing Engineering, University of Tehran, ICME2011, Tehran, Iran (In Persian).

- **S.Kargarnejad** , E.Yekani Motlag, "An Investigation on Damage Causes of Gas Turbines Insert Ring In V94.2", Journal of Electric Power Industry , No.172, 1392, Iran. (In Persian).

F.Mohammadkhani, Sh.Khalilarya, I.Mirzaee, **S.Kargarnejad**, "Exergoeconomic Analysis of Internal Combustion Engine Cogeneration System", 20th Annual International Iranian Mechanical Engineering Conference, ISME2012, Shiraz University, Shiraz, Iran (In English).