

# Suyeon Moon

**Birth Date** : 10-02-1960.

**Present Position: Senior Researcher, International Technology Cooperation Div.,  
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## Education

Ph. D. , 1990-1998,

Mechanical & Aerospace Engineering,

University of Alabama in Huntsville, Huntsville, Alabama.

Ph. D. Dissertation “Applications of FDMEI of Chemically Reacting Shock  
Wave Boundary Layer ”

Ph. D. Enrollment, 1988-1990

Mechanical & Aerospace Engineering,

University of Missouri in Rolla, Rolla, Missouri

M.S., 1984-1986,

Mechanical Engineering,

University of Inha , Incheon, Korea, 1986

M.S. Dissertation “Characteristics of Soot Concentration in Turbulent  
Diffusion Flame with Swirl ”

B.S., 1980-1984,

Mechanical Engineering,

University of Kyunghee, Seoul, Korea,

## **Professional Experiences**

July 2006 – March 2007 : Head in Department of International Technology Cooperation,  
Korea Institute of Industry Technology Evaluation and  
Planning

May 2004 – July 2006 : Director in Department of Planning and Coordination, Deagu  
Regional Innovation Agency

Feb. 2003– May 2004 : Research Associate Professor in the Department of Mechanical  
Engineering, Kyungpook National University in Daegu, South Korea

Feb. 2000 – Feb. 2003: Research Assistant Professor in the Department of  
Mechanical Engineering, Kyungpook National University in Daegu, South  
Korea

Aug.1998 – Aug. 1999 : Visiting Assistant Professor in the Department of Mechanical  
Engineering, Purdue University in Fort Wayne, Indiana, U.S.,  
Teaching on Fluid Mechanics, Dynamics, Machine Design.

Sep. 1990 - May 1998 : Graduate Research Assistant & Teaching Assistant  
Research Assistant supported by NSF and Air Force  
Teaching Assistant on Heat and Mass Transfer and  
Kinematics Labs, University of Alabama in Huntsville, Huntsville,  
Alabama, U. S.

March 1987- Feb 1988: Daewoo Motor Co. , Seoul, Korea  
Project Member  
Developed small and medium companies  
in autoparts for Daewoo Motor  
Managed small and medium companies  
Developed autoparts with small and medium companies

## **Publications**

### **Journals**

1. S. Shin, Y.H. Ku, S.Y. Moon, J.S. Suh, "A laser-diffraction slit rheometer to measure red blood cell deformability", *Review of Scientific Instruments* 78 12 (p.567 -569), 2004.
2. Choong-Won Lee, Hyun-Jin Youn, Su-Yeon Moon, and Chang-Hyun Sohn, "Spray and Combustion Characteristics of a Dump-type Ramjet Combustor", *KSME International Journal* Vol. 17 No. 12, 2003.12.
3. S. Shin, Y.H. Ku, S.Y. Moon, J.S. Suh, "Characteristics of Blood Flow Resistance under Transverse Vibration: RBC suspension in Dextran-40 *Annals of Biomedical Engineering*, Vol 31, 2003.10.
4. Sehyun, Yun-Hee Ku, Su-Yeon, Moon, Jang-Soo, Suh, "The Effect of Vibration on the Hemorheological Characteristics of Non-aggregated Blood", *KSME International Journal* Vol.17 No.7, 2003.7.
5. C.W. Lee and S.Y. Moon, "An experimental investigation of the effects of turbulence generators attached to an axial swirler nozzle on mixing and combustion *Aerospace Science and Technology*, Vol. 6 No. 7, 2002.11.
6. Y. G. Park, S.Y. Moon, C.W. Lee, "Design and development of a new gasoline direct swirl injector, *J. of Automobile engineering*, Vol. 216 No. 10, 2002.10.
7. C.H. Sohn, G.S. Yang, D.W. Cho, G.N. Kim, and S.Y. Moon, "Investigations of Three-dimensional Flow Characteristics in the Liquid Ramjet Combustor using PIV Method" *,Journal of Visualization*, Vol. 5 No. 1, 2002.2.
8. S.Y. Moon, C.H. Sohn, and C.W. Lee, "Applications of a FDMEI method to Heat and Fluid Dynamics Problems," *Numerical Heat Transfer Part B*, Vol. 39, 2001.8.
9. H.M. Chung, J.K. Seok, S.Y. Moon, and C.W. Lee, "A Theoretical Study of the Longitudinal Motion of a Vertical Liquid Jet," *Journal of Physics A*, Vol. 34 No. 34, 2001.8.
10. S.Y. Moon, S.H. Bae, C.W. Lee, "Optimized Design of a New Gasoline Direct Swirl Injector, *Numerical Heat Transfer Part A*, Vo. 40, 2001.8.
11. C.H. Sohn, B.S. Kim, S.Y. Moon, and K.I. Ahn, "A Numerical study on the heat transfer enhancement behavior of water-microparticles suspension," *Journal of thermal science*, Vol.11 No. 2, 2002.7.

12. Yoon, K. T., Moon, S. Y., Garcia, S. A., Heard, G. W., and Chung, T. J., "Flowfield Dependent Mixed Explicit-Implicit(FDMEI) Methods for High and Low Speed and Compressible and Incompressible Flows," *Comput. Methods Appl. Mech. Engrg.*, Vol. 151, Nos. 1-2, pp. 75-104, 1998.
13. S. Y. Moon, K. T. Yoon, and T. J. Chung, "Numerical Simulation of Heat Transfer in Chemically Reacting Shock Wave Turbulent Boundary Layer Interactions," *Numerical Heat Transfer*, Vol 30, Part A, pp. 55-72, 1996.
14. S. Y. Moon, C.S. Yoon, and T.J. Chung, "Multitasking for Local Parallelism in Applications to Chemically Reacting Supersonic Flows on CRAY Y-MP," *The International Journal of Supercomputer Applications*, Vol. 6 No. 4 Winter 1992

### **Dissertation**

S. Y. Moon, Applications of FDMEI to Chemically Reacting Shock Wave Boundary Layer Interactions, Ph. D. Dissertation, UAH press, 1998

### **Technical Report**

1. T. J. Chung, and S. Y. Moon, "Multitasking for Small and Grain Parallelism in Application for Computational Fluid Dynamics on Cray Y-MP," NSF ASC-8918081.
2. C.H. Sohn, S.Y. Moon, J.Y. Lee, T.W. Joo., Y. D. Sakong, "Numerical Analysis of Inviscid Flowfield (I), " UD029013ED, 2002. 6.
3. C.H. Sohn, S.Y. Moon, J.Y. Lee, S. Choi, Y. D. Sakong, "Numerical Analysis of Inviscid Flowfield (II), " UD029013ED, 2003. 6.

### **Conference Papers**

1. S.Y. Moon, C.H. Sohn, and C.W. Lee Adaptive Finite Element Analysis of Shock-induced Combustion, 38 nd AIAA/ASME/SAE/ASEE Joint Propulsion Conference, 2002.8.
2. Spray and Combustion Characteristics of a Dump-type Ramjet Combustor ,39 nd AIAA/ASME/SAE/ASEE Joint Propulsion Conference, 2003.8  
Effects of the applied electricfield on characteristics of spray  
2000.12.

3. S.Y. Moon, C.H. Sohn, and C.W. Lee A numerical study on effects of design variables upon Gasoline Direct Swirl Injectors ,The 5th Conference of ILASS-Asia and the 9th Symposium (ILASS-Japan), 2000.12.
4. J.M. Seo, G.S. Lee, S.Y. Moon, and C.W. Lee, "Effects of Swirler with Turbulence Generator on the Characteristics of Mixing and Combustion," 17th Annual Conference on Liquid Atomization & Spray Systems, Zurich, Switzerland, September 2-7, 2001.
5. S.D. Kwon , S.Y. Moon, and C.W. Lee, " Effects of the Electrohydrodynamic Forces on Characteristics of Spray," 17th Annual Conference on Liquid Atomization & Spray Systems, Zurich, Switzerland, September 2-7, 2001.
6. C.H. Sohn, G.S. Yang, D.W. Cho, G.N. Kim, S.Y. Moon, C.W. Lee, "Investigations of Three-dimensional Flow Characteristics in the Liquid Ramjet Combustor using PIV Method" 6th Asian Symposium On Visualization, Pusan, Korea , in May 28-31, 2001.
7. S. Y. Moon, C. H. Sohn, "Numerical Simulation of High Speed Flows with Shock Wave Turbulent Boundary Layer Interactions," Korean Computational Fluid Dynamics Conference, Daejeon, Korea, in May 19, 2000.
8. S. Y. Moon and T.J. Chung, "Airbreathing Combustion in Shock Wave Turbulent Boundary Layer Interactions of High Speed Flows," 30th AIAA/ASME/SAE/ASEE Joint Propulsion Conference, June 27-29,1994.
9. S. Y. Moon and T. J. Chung, "Airbreathing Combustion Analysis with Shock Wave Turbulent Boundary Layer Interactions," 31th JANNAF Combustion Meeting, October, 1995.
10. S. Y. Moon and T. J. Chung, "Numerical Simulation of Airbreathing Combustion," 32nd AIAA/ASME/SAE/ASEE Joint Propulsion Conference, July 1-3, 1996.

## References

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