

# *Resume*

Bong Taek Oh

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## **OBJECTIVE**

To obtain an internship which will provide me with the opportunity to apply both knowledge and technical training by making an identifiable contribution in an area of practical concern to the organization or industry.

## **AREAS OF EXPERTISE**

- Optimizing Design of Advanced Materials and Structures under Various Environment
- Building and Operating Test Systems for Advanced Materials
- Material Preparation for Damage Characterization
- Data Acquisition and Analysis
- Stress Analysis of Structure and Advanced Materials
- Finite Element Analysis for Structure and Advanced Materials

## **EDUCATION**

- Texas A&M University, College Station, TX, Aerospace Engineering. 2000 – current, Doctorate program. GPA in degree plan: 3.7
- SoongSil University, Seoul, Korea, Mechanical Engineering. Mar. 1994 - Feb. 1996, M.S. GPA: 3.88
- SoongSil University, Seoul, Korea, Mechanical Engineering. Mar. 1987 - Feb. 1994, Bachelor

## **HONORS & AWARDS**

- Member of the Korea Society of Mechanical Engineer, 1994-1998
- Member of the Korea Society of Automotive Engineers, 1994-1998
- Recipient of the Tuition Scholarship for excellent academic records from Soong Sil University Graduate School, 1995
- Recipient of the Tuition Scholarship for excellent academic records from Soong Sil University, 1993

## **RESEARCH EXPERIENCE**

- "Characterization of Damage and Permeability in Laminated Composite for Cryogenic Applications" (2001-current), Funded by NCAM (National Center for Advanced Manufacturing)
- "Development of Flatness Measuring System using Laser Interferometry" (2000), Funded by 3M
- "A Study on the Evaluation of Bonding Strength in Dissimilar Materials" (1994-1996), Funded by Korea Science and Engineering Foundation.
- "Prediction of Fracture Strength on Adhesively Bonded Scarf Joints in Dissimilar Materials", (1995), Funded by Soong Sil University.
- "Analysis of Stress Intensity Factor for the Interface Crack in Bonded Dissimilar Materials", (1994), Funded by Soong Sil University.

## TEACHING EXPERIENCE

- "Machine Drawing & Manufacturing Practice" (Sep. 1994-Aug. 1995)  
teaching assistantship, Dept. of Mechanical Engineering in Soong Sil Univ.
- "Mechanical Design" (fall term, 1996)  
Instructor, Dept. of Mechanical Design in Dae Yeu Technical College

## SOFTWARE AND EQUIPMENT TRAINING

- ANSYS (FEM Commercial Program) • ABAQUS (FEM Commercial Program)
- BEM (Boundary Element Method) • Interferometry (YAG Laser)
- Instron Universal Testing Instrument (Model 4206)
- MTS (Material Testing System) • Fatigue Testing System
- Freezing Furnace • Photoelasticity
- Strain Gage, DC-LDT, Load Cell
- Metallograph • PIV • Thermal Shock Test System
- Cryogenic Test System (Thermomechanical test, uniaxial tension and four-point bending)
- In-situ Crack Opening Displacement Loading Frame

## COMPUTER EXPERIENCE

- Working knowledge of Maple, Mathematica, Adobe Photoshop, SolidWorks, and MS Office including Word, Excel and Power Point
- Basic programming knowledge of FORTRAN and BASIC languages
- Operating systems use have included MS Dos, MS Windows (9x, 2000, NT), and UNIX

## CURRENT RESEARCH AREA

- Finite Element Analysis of Composite Laminates Design
- Cryogenic Test of Composite Materials
- Damage Characterization of Composite Materials
- Advanced Aerospace Structures and Materials

## PAPERS

- Bongtaek Oh, Dimitris C. Lagoudas. "Mechanical Characterization in Laminated Composite for Cryogenic Applications", In Progress, 2005.
- Bongtaek Oh, J. Noh, J. Whitcomb, and Dimitris C. Lagoudas "Design of Composite Laminates including Thermal Shock under Cryogenic Environment", In Progress, 2005.
- J. Noh, P. Peddiraju, Bongtaek Oh, A. Ganpatye, K. Maslov, J. Whitcomb, Vikram Kinra, and Dimitris C. Lagoudas "Prediction of Permeability of Cryogenic Composites", 60<sup>th</sup> SAMPE, Long Beach, CA, May 16-20, 2004.
- Atul S. Ganpatye, Bongtaek Oh, Konstantin Maslov, Vikram K. Kinra and Dimitris C. Lagoudas. "Mechanical Characterization and Ultrasonic NDE of Cryogenic Composites," *44th AIAA/ASME/ASCE/AHS Structural Dynamics, and Materials Conference (SDM)*, Norfolk, Virginia, April 7-10, 2003.
- Bongtaek Oh, J. Noh, Dimitris C. Lagoudas, and J. Whitcomb. "Effect of Thermal Shock on Damage in Cryogenic Composite Laminates," 18th Annual Technical Conference American Society for Composites, Gainesville, Florida, Oct. 19-22, 2003.
- Vikram Kinra, Dimitris C. Lagoudas, J. Whitcomb, K. Maslov, J. Noh, Bongtaek Oh, A. Ganpatye, and Pravin Peddiraju. "Characterization of Damage in Laminated Composites for Cryogenic Applications," *ASME International Mechanical Engineering Congress & Exposition*, New Orleans, November, 2002.

- J. Noh, J. Whitcomb, Bongtaek Oh, Dimitris C. Lagoudas, K. Maslov, A. Ganpatye, and V. Kinra. "Numerical Modeling, Thermomechanical Testing, and NDE Procedures for Prediction of Microcracking Induced Permeability of Cryogenic Composites" *Fifth Conference on Aerospace Materials, Processing, and Environmental Technology (AMPET), Huntsville*, September 16-18, 2002.
- Bongtaek Oh, Nam Y. Chung. "Evaluation Method of Bonded Strength Considering Stress Singularity on Adhesively Bonded Joints", *Journal of KSMTE*, 7-1, pp. 58-68, 1998.
- Bongtaek Oh, Nam Y. Chung. "Strength Evaluation of Bonded Dissimilar Materials by Using Stress Singularity Factor", *Journal of KSME*, 20-7, pp. 2087-2096, 1996
- Bongtaek Oh, Nam Y. Chung. "Bonding Residual Stress in Bonded Joints of Dissimilar Materials", *Proceedings of the KSME Spring Annual Meeting '96*
- Bongtaek Oh, Nam Y. Chung. "Strength Evaluation of Bonded Dissimilar Materials considering Stress Singularity", *Proceedings of the KSME Spring Annual Meeting '95*
- Bongtaek Oh, Nam Y. Chung. "A Evaluation Method of Bonding Strength considering Stress Singularity on Adhesive Joints", *Proceedings of the KSME Fall Annual Meeting '95*
- Bongtaek Oh, Nam Y. Chung. "Static Strength Evaluation on Adhesively Bonded Single-lap Joints of the Dissimilar Materials", *Proceedings of the KSAE Fall Annual Meeting '95*
- Bongtaek Oh, Nam Y. Chung. "Analysis of Strength Singularity Factors at the Interface Edges of Scarf Joints in Bonded Dissimilar Materials", *Proceedings of the KSME Spring Annual Meeting '94*

## REFERENCES

Available on request