

**WICHIT LIEWKONGSATAPORN**  
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**EDUCATION**

**Georgia Institute of Technology, Atlanta, Georgia**  
**School of Mechanical Engineering**  
**Ph.D. in Paper Science and Engineering** 3/2008  
Thesis: A numerical study of pulse-combustor jet impingement heat transfer  
Co-advisors: Drs. Fred Ahrens & Tim Patterson  
GPA: 3.8/4.0

**Georgia Institute of Technology, Atlanta, Georgia**  
**M.S. in Mechanical Engineering** 8/2006  
Thesis: Characteristics of pulsating flows in a pulse combustor tailpipe  
GPA: 3.7/4.0

**Institute of Paper Science and Technology, Atlanta, Georgia**  
Direct-to-Ph.D. program 8/2001-7/2003  
GPA: 3.9/4.0

**King Mongkut's Institute of Technology, Bangkok, Thailand**  
**B.S. in Control Engineering** 4/1992  
GPA: 3.4/4.0

**EXPERIENCE**

**Georgia Institute of Technology, Atlanta, Georgia**  
**Institute of Paper Science and Technology**

**Graduate Research Assistant** 1/2005 - present  
Developed a simplified model of Helmholtz pulse combustors  
Designed numerical experiments for pulsating jet impingement heat transfer on stationary and moving surfaces  
Performed CFD simulations with FLUENT software for steady and pulsating jet impingement heat transfer  
Evaluated the effects of pulsation frequency, mean velocity, tailpipe width, and surface velocity on pulsating impingement heat transfer  
Identified mechanisms of impingement heat transfer enhancement by pulsating jets  
Conducted laboratory experiments of impingement drying and heat transfer with steady and pulsating jets

**Thai Kraft Paper Industry, Co., Ltd., Kanchanaburi, Thailand**

**Section Manager** 10/2000 - 7/2001  
Controlled the production of corrugating medium and sack kraft paper at the capacity of 330 tons/day.  
Controlled the production of secondary fibers from recycled boxes at the capacity of 300 tons/day  
Maintained standard and productivity activities: ISO9002, ISO14001, TIS18001, TQM, and TPM

**Process Engineer**

1/1999 - 9/2000

Designed, with the machine supplier, and studied financial feasibility of the fractionation system for the existing recycled paper stock preparation systems No. 4 and 5, resulting in budget approval

Evaluated technical and financial feasibility of the de-bottleneck project of paper machine No. 5

Studied the technical feasibility of production capacity expansion for paperboard machines No. 1-7

**Project Engineer**

1/1997 - 12/1998

**At United Pulp and Paper, Inc., Bulacan, the Philippines**

Implemented the installation and commissioning work of DCS and the electrification of new paper machine, recycled paper stock preparation plant, and effluent treatment plant.

Conducted test run and start-up with the main machine supplier (Voith from Germany) of new recycled paper stock preparation plant

Supervised, with civil consultant, building construction work of new recycled paper stock preparation plant

**Project Engineer**

5/1992 - 12/1996

Implemented the installation and commissioning work of DCS and the electrification of new recycled paper stock preparation plants Nos. 6 and 7

Designed and improved process control schematics with single-loop controllers, PLC's, and DCS systems of existing plants

**SKILLS**

MATLAB, FLUENT, GAMBIT, C/C++, Microsoft Office

Numerical methods, CFD simulation

**PUBLICATIONS Reviewed Conferences**

Liewkongsataporn, W., Ahrens, F., Patterson, T. (2006) "A numerical study of axisymmetric pulsating jet impingement heat transfer," the 13<sup>th</sup> International Heat Transfer Conference, Sydney, Australia.

Liewkongsataporn, W., Patterson, T., Ahrens, F., Loughran, J. (2006) "Impingement drying enhancement using a pulsating jet," the 15<sup>th</sup> International Drying Symposium, Budapest, Hungary.

**Journals**

Liewkongsataporn, W., Patterson, T., Ahrens, F. (2008) "Pulsating jet impingement heat transfer enhancement," accepted for publication in Drying Technology.

Liewkongsataporn, W., Patterson, T., Ahrens, F. (2008) "A simplified model of Helmholtz pulse combustors," Journal of Fluids Engineering. (in preparation)

Liewkongsataporn, W., Patterson, T., Ahrens, F. (2008) "Pulsating jet impingement heat transfer on a moving surface," Drying Technology. (in preparation)

**AWARD**

IPST International Scholarship and Fellowship 2001-2004