



WATCHARAPONG PATANGTALO, D.Eng.

Senior Engineer
Seagate Technology (Thailand) Ltd.

Personal Information

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Summary

Mechanical engineering researcher with a research experience in the field of Mechanics of Composite Materials and Lightweight Structural Design. Seeking a challenging position in an intellectually stimulating environment where I can use my knowledge, expertise, skills and enthusiasm: which will assist my career development and contribute effectively to the continual growth of the organization.

Core competencies

- Discipline-specific conceptual knowledge
- Research skill development
- Communication skills
- Professionalism
- Leadership and management skills
- Responsible conduct of research

Work Experiences

- 2017 - Present Senior Mechanical Engineer
Seagate Technology (Thailand) Ltd.
- 2016 - 2017 Post-Doctoral Researcher
Advanced Materials and Structures Laboratory, Department of Mechanical Engineering, Faculty of Engineering, King Mongkut's University of Technology Thonburi

Educations

- 2009 - 2016 **Doctor of Engineering in Mechanical Engineering**,
King Mongkut's University of Technology Thonburi, Thailand
GPA: 4.00/4.00
Thesis topic: Analysis and Design of Isotropic and Composite Belleville Springs
- 2007 - 2008 **Master of Engineering in Mechanical Engineering**,
King Mongkut's University of Technology Thonburi, Thailand
GPA: 3.87/4.00
Thesis topic: Deformation of a Suspension in a Hard Disk Drive Caused by Laser Scribing Process

2003 – 2006 **Bachelor of Engineering in Mechanical Engineering,**
King Mongkut’s University of Technology Thonburi, Thailand
GPA: 3.45/4.00 (2nd Class Honor)
Thesis topic: Light Weight Truck Container Structure

Academic Honors

2016 Runner-up Best Paper Award
The 7th TSME International Conference on Mechanical Engineering (TSME-
ICOME 2016), Duangtawan Hotel, Chiang Mai, Thailand
Topic: An Energy Method for Analysis of Belleville Springs

2013 – 2015 Research Scholarship from Shell 100th Year Education Foundation
Scholarship

2009 – 2014 The Royal Golden Jubilee Ph.D. (RGJ-Ph.D.) Program Scholarship under the
Thailand Research Fund (TRF)

2009 – 2011 Granted King Mongkut’s Brilliant Student Scholarship

2007 – 2008 Research Scholarship from Industry/University Cooperative Research
Center in HDD Component, Khon Kean University

2007 – 2008 Granted Mechanical Engineering Department Brilliant Student Scholarship

Training Experiences

Jul – Dec 2014 Visiting Scholar, Engineering Science and Mechanics Department (ESM),
College of Engineering, Virginia Polytechnic Institute and State University,
USA
Responsibilities: Research Assistance

Mar – May 2006 Tool Department, Isuzu Engine Manufacturing (Thailand) Co., Ltd.
Responsibilities: Design Jig and Fixture

Research Experiences

2015 – Now ATE Co., Ltd.
Research Topic: Structural Design of Parabolic Trough Solar Collector

2015 – 2016 GRE Composite Co., Ltd.
Research Topic: Composite Belleville spring for Foot valves

2009 – 2015 Thai Composite Co., Ltd.
Research Topic: Design Composite Belleville Springs

2008 – 2009 Design mechanical parts and equipment e.g. NGV composite cylinder,
Composite pressure vessel, Gas manifold equipment, Anti-Freezer
Concentrator, blast-resistant doors for several company

2007 – 2008 Western Digital (Thailand) Co., Ltd.

Research Topic: Factors Affecting Deformation of a HSA Caused by Laser Scribing Process

2006 – 2007 Thai Composite Co., Ltd.

Research Topic: Design Composite Container Structure

Publications and Conferences Proceedings

1. Patangtalo, W., Aimmanee, S., and Chutima, S., 2017, "Development of Design Map for Belleville Springs with an Energy Method Model," **KMUTT Research & Development Journal**, Vol. 40, No.2, pp. 175-187.
2. Patangtalo, W., Aimmanee, S., and Chutima, S., 2016, "A Unified Analysis of Isotropic and Composite Belleville Springs," **Journal of Thin-walled structures**, Vol. 109, pp. 285-295.
3. Patangtalo, W., Hyer M.W., Aimmanee, S., 2015, "On the Non-axisymmetric Behavior of Quasi-isotropic Woven Fiber Reinforced Composite Belleville Springs," **Journal of Reinforced Plastics and Composites**, Vol. 35, no. 4, pp. 334-344.
4. Patangtalo, W., Aimmanee, S., and Chutima, S., 2016, "An Energy Method for Analysis of Belleville Springs," **The 7th TSME International Conference on Mechanical Engineering (TSME-ICOME 2016)**, Duangtawan Hotel, Chiang Mai, Thailand, 13-16 Dec 2016, *Runner-up Best Paper Award*.
5. Patangtalo, W., Hyer M.W., Aimmanee, S., 2015, "Composite Belleville Springs," **The 30th Annual Technical Conference of the American Society for Composites (ASC)**, the Kellogg Hotel & Conference Center on the campus of the Michigan State University, East Lansing, Michigan, USA, 28-30 Sep 2015.
6. Patangtalo, W., Aimmanee, S., and Chutima, S., 2013, "Analysis of Load-deflection Characteristics of Composite Belleville Springs," **RGJ-Ph.D. Congress XIV**, Jomtien Palm Beach Hotel and Resort, Pattaya, Thailand, 5 – 7 May 2013.
7. Patangtalo, W., Aimmanee, S., and Chutima, S., 2010, "Prediction of Static Attitudes Adjustment for Head Suspension by Laser Scribing Process," **The 3rd International Data Storage Technology Conference 2010**, Bangkok International Trade and Exhibition Centre, Thailand, 30 Jul – 1 Aug 2010.
8. Patangtalo, W., Aimmanee, S., and Chutima, S., 2009, "Deformation of a Suspension in a Hard Disk Drive Caused by Laser Scribing Process," **The 2nd International Data Storage Technology Conference 2009**, Thailand Science Park, National Electronics and Computer Technology Center, Thailand, 13 – 15 May 2009

Invited Speaker

11- 14 May 2016 The 10th ASEAN's Largest International Industrial Subcontracting Event (SUBCON THAILAND 2016)

Topic: Composite Materials for Electric Vehicle

Extracurricular Activities

- Jan 2010 – Jun 2014 **Co-founder and Tutor:** Suan Thon Tutor House, Private school under the control of the Ministry of Education.
- Jun 2012 – Feb 2013 **Teaching Assistant:** Advanced Finite Element Method
- Jun 2009 – Feb 2010 **Teaching Assistant:** Mechanical Engineering Laboratory
- Oct 2007 – Feb 2008 **Teaching Assistant:** Engineering Mechanics

Skills

- Computer ABAQUS, ANSYS, Solid Works, Auto CAD, Wolfram Mathematica, Sigma Plot, JMP, Microsoft Office
- Language Thai (Native), English (Upper Intermediate) TOEIC Score: 735/990
- Research Engineering Mechanics, Composite Material, Finite Element Method, Thermal Stress Analysis, Computational mechanics, Smart Materials and Structures, Renewable and Alternative Energy, Data analysis, Mechanical vibrations

References

Name	e-mail
Asst. Prof. Dr. Sontipee Aimmanee <i>Department of Mechanical Engineering KMUTT, Thailand</i>	<i>sontipee.aim@mail.kmutt.ac.th</i>
Assoc. Prof. Dr. Surachate Chutima <i>Department of Mechanical Engineering KMUTT, Thailand</i>	<i>surachate.chu@kmutt.ac.th</i>