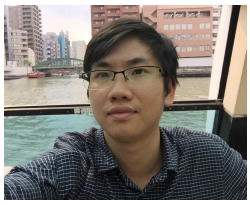

Quoc Tuan Pham

Curriculum Vitae

PERSONAL DETAILS

Birth	April 4, 1991
Affiliation	Postdoc, Department of Mechanical Engineering
University	Blekinge Institute of Technology, Karlskrona, Sweden
Phone	(+46) 455-38-55-05
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EDUCATION

Dr. Mechanical Engineering 2017-2020
Kyungpook National University, South Korea
Advisor: Prof. Young Suk Kim
Thesis title: Constitutive modeling of anisotropic sheet metals subjected to large strain forming processes

MSc. Mechanical Engineering 2015-2016
Kyungpook National University, South Korea

BSc. Mechatronics 2009-2014
Hanoi University of Science and Technology, Vietnam

WORKING EXPERIENCES

Researcher 2020-2022
Ton Duc Thang University, Ho Chi Minh City, Vietnam
Institute for Computational Science

Postdoc 2022-now
Blekinge Institute of Technology, Karlskrona, Sweden
Department of Mechanical Engineering

PARTICIPATED PROJECTS

• **Development of a die-design technology for a car-channel bending process using finite element method** 06/2014-06/2015
supported by Dong-Gae company, Korea
Contribution (from 03/2015):
Finite element analysis of a bending process of a complex-cross-section beam

• **Development of a hybrid drawing-stretching method to reduce springback of incremental sheet forming parts** 05/2014-05/2017
supported by National Research Foundation of Korea
Contribution (from 03/2015):
Finite element analysis of incremental sheet forming processes

• **Deformation characteristics of high formability Titanium sheets for Plate-Heat-Exchanger application** 02/2015-11/2015
supported by Pohang Institute of Industrial Sciences, Korea
Contribution:
Finite element analysis of a press-forming process of pure titanium sheets

• **Evaluation of fracture limit and anisotropic yielding behavior of aluminum sheets used in automotive industry** 09/2017-03/2018
supported by Huyndai Motor Group - Industrial project team, Korea

Contribution:

Identification of plasticity characteristics of three aluminum alloy sheets: AA6016, AA6022, AA7075

Development of an algorithm to estimate the fracture limit of the tested materials using the mill-sheet data

• **Development of a single point incremental forming technology for hard-to-form sheet materials** 03/2019-03/2020

supported by National Research Foundation of Korea

Contribution:

Development of an isotropic-distortional hardening model for titanium sheets

Implement of the developed material model in Abaqus to simulate several forming processes of titanium sheets

• **Comparative Study Between Performance of Lagamine And Comsol Solvers For Finite Element Thermal Analyses** 03/2020-03/2021

collaboration with professor Anne Marie Habraken, University of Liege, Belgium

Contribution:

Develop a finite element model in Comsol software to analyze the thermal evolution during a direct energy deposition process of M4 high-strength steels

• **EDPOMP - Efficient Data-driven Physics-informed Optimization of Manufacturing Processes** 11/2020-11/2022

supported by Vingroup innovation foundation - VINIF, Vietnam

Contribution:

Optimization of process parameters of metal stamping processes using machine learning techniques

• **PREDICT - Prediction of strain and fracture for complex load cases in sheet metal forming** 11/2020-12/2023

supported by VINNOVA, Sveriges innovationsmyndighet, Sweden

Contribution:

Effect of non-linear strain paths and stretch-bending on the failure of stamped automotive sheet metals

PUBLICATIONS

Peer review publications in international journals

2022

15. **Quoc Tuan Pham*** and Young-Suk Kim*. *Evaluation on Flexibility of Phenomenological Hardening Law for Automotive Sheet Metals*. **Metals**, 12(4) (2022), 578. **SCIE**, IF=2.351 (2020).

14. Young-Suk Kim*,**Quoc Tuan Pham**, Xiao Xiao, Jin-jae Kim. *Calibration of the Flow Curve Up to Large Strain Range by Incremental Sheet Forming Coupled with FEM Simulation*. **Metals**, 12(2) (2022), 252. **SCIE**, IF=2.351 (2020).

13. Thinh Quy Duc Pham, Truong Vinh Hoang, Xuan Van Tran *, **Quoc Tuan Pham**, Seifallah Fetni, Laurent Duchêne, Hoang Son Tran, Anne-Marie Habraken. *Fast and accurate prediction of temperature evolutions in additive manufacturing process using deep learning*. **Journal of Intelligent Manufacturing**, 2022. **SCIE**, IF=6.485 (2020).

12. **Quoc Tuan Pham**, Hai Son Le, Anh Tuan Nguyen, Xiao Xiao, Young-Suk Kim, Van Dung Nguyen, Hoang Son Tran, Van Xuan Tran*. *A machine learning-based methodology for identification of the plastic flow in aluminum sheets during incremental sheet forming processes*. **The International Journal of Advanced Manufacturing Technology**, 120 (2022), 3559–3584. **SCIE**, IF=3.266 (2020).

2021

11. **Quoc Tuan Pham***, Trung Nguyen-Thoi, Jinjin Ha, Young-Suk Kim. *A Hybrid Fitting-Numerical Method for Determining Strain Hardening Behavior of Sheet Metals*. **Mechanics of Materials**, 161 (2021) 104031. **SCI**, IF=3.266 (2020).

10. **Quoc Tuan Pham**, Thi Bich Mac, Young-Suk Kim, Duc Toan Nguyen*. *A Comparative Investigation on Theoretical Models for Forming Limit Diagram Prediction of Automotive Sheet Metals*. **Mechanics Based Design of Structures and Machines**, 28 (2021) 1009-1018. .

9. The Thanh Luyen, **Quoc Tuan Pham**, Thi Bich Mac, Tien Long Banh, Duc Toan Nguyen*. *Graphical method based on modified maximum force criterion to indicate forming limit curves of 22MnB5 boron steel sheets at elevated temperatures*. **Journal of Iron and Steel Research International**, 28 (2021) 1009-1018. **SCIE**, IF=1.263 (2020).

8. **Quoc Tuan Pham**, Myoung-Gyu Lee, Young-Suk Kim*. *New procedure for determining the strain hardening behavior of sheet metals at large strains using the curve fitting method*. **Mechanics of Materials**, 154 (2021) 103729. **SCI**, IF=3.266 (2020).

7. Jinjae Kim, **Quoc Tuan Pham**, Young-Suk Kim*. *Thinning prediction of hole-expansion test for DP980 sheet based on a non-associated flow rule*. **Int. J. Mech. Sci.**, 191 (2021) 106067. **SCI**, IF=5.239 (2019).

2019

6. (Invited paper) **Quoc Tuan Pham**, Jinjae Kim, The Thanh Luyen, Duc Toan Nguyen, Young Suk Kim*. *Application of a graphical method on estimating forming limit curve of automotive sheet metals*. **Int. J. Auto. Tech.**, 20 (S) (2019) 3-8. **SCIE**, IF=1.523 (2018).

5. **Quoc Tuan Pham**, Myoung Gyu Lee, Young Suk Kim*. *Characterization of the isotropic-distortional hardening model and its application to commercially pure titanium sheet* . **Int. J. Mech. Sci.**, 160 (2019) 90-102. **SCI**, IF=4.134 (2018) .

2018

4. **Quoc Tuan Pham**, Seok Hwan Oh, Young Suk Kim*. *An efficient method to estimate the post-necking behavior of sheet metals*. **Int. J. Adv. Manuf. Tech.**, 98 (9-12) (2018) 2563-2578. **SCIE**, IF=2.601 (2017).

3. **Quoc Tuan Pham**, Bong Hyun Lee, Kee Cheol Park, Young Suk Kim*. *Influence of the post-necking prediction of hardening law on theoretical forming limit curve of aluminium sheets*. **Int. J. Mech. Sci.**, 140 (2018) 521-536. **SCI**, IF=3.570 (2017).

2017

2. Van Cuong Do, **Quoc Tuan Pham**, Young Suk Kim*. *Identification of forming limit curve at fracture in incremental sheet forming*. **Int. J. Adv. Manuf. Tech.**, 92 (2017) 4445-4455. **SCIE**, IF=2.209 (2016).

1. **Quoc Tuan Pham**, Young Suk Kim*. *Identification of the plastic deformation characteristics of AL5052-O sheet based on the non-associated flow rule*. **Met. Mater. Int.**, 23 (2) (2017) 254-263. **SCI**, IF=1.889 (2016).

Peer review publications in conference proceedings

2021

10. Thinh Quy Duc Pham, Truong Vinh Hoang, **Quoc Tuan Pham** et al.. *Data-driven Prediction of Temperature Evolution in Metallic Additive Manufacturing Process*, , **ESAFORM 2020 proceeding** , Virtual, Belgium. DOI:10.25518/esaform21.2599.

2020

9. **Quoc Tuan Pham**, Myoung-Gyu Lee, Young-Suk Kim*. *Distortional hardening behavior and strength different effect of pure titanium grade 1 sheets: Experimental observation and constitutive modeling*, , **IDDRG 2020 proceeding** , Virtual, Korea. IOP Conference Series: Materials Science and Engineering 967 (2020) 012052.

8. **Quoc Tuan Pham**, Nguyen Ho Quang, Van-Xuan Tran, Xiao Xiao, Jin Jae Kim, Young-Suk Kim*. *Process Parameter Optimization for Incremental Forming of Aluminum Alloy 5052-H32 Sheets Using Back-Propagation Neural Network*, , **RICE 2020 proceeding** , Binh Duong, Vietnam. Research in Intelligent and Computing in Engineering, AISC: 1254 (2021) 585-594.

2019

7. **Quoc Tuan Pham**, Jung Han Song, Joong Cheul Park, Young Suk Kim*. *Investigation of springback prediction for an Aluminum 7000 sheet subjected to press forming*, , **MMMS 2018 proceeding** , Da Nang Vietnam (2018). Applied Mechanics and Materials 889 (2019) 203-210.

6. **Quoc Tuan Pham**, Duc Toan Nguyen, Jin Jae Kim, Young Suk Kim*. *A graphical method to estimate forming limit curve of sheet metals*, , **AEPA 2018 proceeding** , Jeju Korea (2018). Key Engineering Materials 794 (2019) 55-62.

2018

5. **Quoc Tuan Pham**, Seok Hwan Oh, Kee Cheol Park, Young Suk Kim*. *Material modeling of pure titanium sheets and its application to bulge test simulation*, , **Metal Forming 2018 proceeding** , Toyohashi Japan (2018). Procedia Manufacturing 15 (2018) 1886-1892.

4. **Quoc Tuan Pham**, Young Suk Kim*. *An alternative procedure to identify stress-strain relation for DP980 sheet over a large strain range*, , **NUMISHEET 2018 proceeding**, Tokyo Japan (2018). Journal of Physics: Conference Series 1063 (1) (2018) 012115.

3. **Quoc Tuan Pham**, Myoung Gyu Lee, Young Suk Kim*. *Effect of distortional hardening behavior on material responses of pure titanium sheets during hydraulic bulge test*, , **NUMISHEET 2018 proceeding**, Tokyo Japan (2018). Journal of Physics: Conference Series 1063 (1) (2018) 012024.

2016

2. **Quoc Tuan Pham**, Joong Cheul Park, Seong Jin Kwon, Young Suk Kim*. *New strain hardening model for sheet metals and its application on predicting springback of titanium sheet*, , **FISITA 2016 proceeding**, Busan Korea (2016). FISITA 2016 World Automotive Congress - F2016-MFMC-001.

1. **Quoc Tuan Pham**, Young Suk Kim*. *Evaluation of press formability of pure titanium sheets*, in:Danuta Szeliga and Krzysztof Muszka (Eds), **Metal Forming 2016 proceeding**, Krakow Poland (2016). Key Engineering Materials 716 (2016) 87-98.

AWARDS

KINGS scholarship 2015-2019
Scholarship for international graduate student
Awarded by Kyungpook National University, Korea

Brain Korea 21 scholarship 2015-2019
Scholarship for international graduate student
Awarded by Kyungpook National University, Korea

Best paper award 2020
The prize was given for the best paper published during the year
Awarded by Kyungpook National University, Korea

TEACHING

- **Mathematical Modeling in Mechanics and Physics**

  Autumn 2020: Graduate course (PhD) in Computational Science
  Ton Duc Thang University, Vietnam.

- **Technical drawing**

  Spring 2021: Undergraduate course in Mechatronics
  Ton Duc Thang University, Vietnam.

- **CAD in Electrical Engineering**

  Spring 2021: Undergraduate course in Electrical Engineering
  Ton Duc Thang University, Vietnam.

- **Mechanical drawing**

  Autumn 2021: Undergraduate course in Mechatronics
  Ton Duc Thang University, Vietnam.

- **Mechanical drawing practice**

  Autumn 2021: Undergraduate course in Mechatronics
  Ton Duc Thang University, Vietnam.

TECHNICAL SKILLS

Language	Vietnamese (mother tongue)
	English (fluent)
	Korean (basic)
Software	ABAQUS, COMSOL
	MATLAB, MAPLE
	CATIA, AUTOCAD
	Origin, MS office, LaTeX
Program	C/C++, Fortran, Pascal, Python

REFERENCES

Advisor: Dr. Prof. Young Suk Kim
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