



## **SASIKORN LEUNGVICHCHAROEN**

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**Field of Study :** Structural Engineering  
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### **Education Background**

D. Eng. in Structural Engineering, Tokyo Institute of Technology, Japan, 2004

M. Eng. in Structural Engineering, Chulalongkorn University, Thailand, 1998

B. Eng. in Civil engineering, Chulalongkorn University, Thailand, 1995

### **Research Interests**

My research focuses in the area of Continuum Mechanics, Wave Propagation, and Nonlinear Elasticity.

### **Teaching**

- 304212 Mechanic of Materials II
- 304418 Prestressed Concrete Design
- 304393 Advanced Mathematics for Civil Engineering
- 304556 Advanced Mechanic of Materials

### **Selected Publications**

#### **Journals**

1. Leungvichcharoen, S. and Wijeyewickrema, A. C. "Stress concentration factors and scattering cross-section for plane SH-wave scattering by a circular cavity in a pre-stressed elastic medium," Journal of Applied Mechanics JSCE, Vol. 7, pp. 15-20, 2004.
2. Leungvichcharoen, S., Wijeyewickrema, A. C. and Yamamoto, T., Anti-symmetric waves in pre-stressed

- imperfectly bonded incompressible elastic layered composites, *International Journal of Solids and Structures*, Vol. 41, 6873-6894.
3. Leungvichcharoen, S. and Wijeyewickrema, A. C., The effect of an imperfect interface on the singular stress field of an orthotropic bimaterial wedge, *Key Engineering Materials*, Vol. 261, pp. 459-464, 2004.
  4. Leungvichcharoen, S. and Wijeyewickrema, A. C., Dispersion effects of extensional waves in pre-stressed imperfectly bonded incompressible elastic layered composites, *Wave Motion*, Vol. 38, pp. 311-325, 2003.
  5. Wijeyewickrema, A. C., Leungvichcharoen, S. and Poonsawat, P., Singular stress fields of anisotropic bimaterial wedges with imperfect interfaces, *The Chinese Journal of Mechanics, Series A*, Vol. 19, No. 1, pp. 203-210, 2003.
  6. Leungvichcharoen, S. and Suriyamongkol, S., Application of Maxwell-Betti's theorem and complete function theorems in plate structures, *Thai Engineering Journal*, Vol. 2, pp. 61-68, 1998 (in Thai).

### **Conferences/ Proceeding**

1. Yangchayutpong, T., Seetapan, P. and Leungvichcharoen, S., " Application of Natural Rubber for Expansion Joint in Reinforced Concrete Pavement." *Proceedings of the 13th National Conventional on Civil Engineering*, EIT, Pattaya, Chonburi, Thailand, 14-16 May 2008 (in Thai).
2. Danpitak, K., Leungvichcharoen, S. and Pichayapan, P., " Application of Linear Complementarity Problems in Numerical Analysis of Beams on Tensionless Elastic Foundation," *Proceedings of the 13th National Conventional on Civil Engineering*, EIT, Pattaya, Chonburi, Thailand, 14-16 May 2008 (in Thai).
3. Thaewsamart, K., Pichayapan, P. and Leungvichcharoen, S., " Structural Design Consideration for Precast Concrete Traditional Thai House," *Proceedings of the 12th National Conventional on Civil Engineering*, EIT, Phitsanulok, Thailand, 2-4 May 2007 (in Thai).
4. Danpitak, K. and Leungvichcharoen, S., " A Finite Beam on A Tensionless Pasternak Foundation Subjected to A Point Load," *Proceedings of the 12th National Conventional on Civil Engineering*, EIT, Phitsanulok, Thailand, 2-4 May 2007 (in Thai).
5. Leungvichcharoen, S., Seetapan, P. and Subsomboon, K., "Development of Structural Analysis Program on Mathematica Platform," *Proceedings of the 11th National Conventional on Civil Engineering*, EIT, Phuket, Thailand, 20-22 April 2006 (in Thai).
6. Wijeyewickrema, A. C. and Leungvichcharoen, S., Dispersion and stability analysis of waves in pre-stressed imperfectly bonded layered composite, *21th International Congress of Theoretical and Applied Mechanics, XXI ICTAM*, Warsaw, Poland, 15-21 August 2004.
7. Wijeyewickrema, A. C., Hattori, M. and Leungvichcharoen, S., Point load generated surface waves in a transversely isotropic halfspace using elastodynamic reciprocity, *International Conference on Computational & Experimental Engineering and Sciences, ICCES'04 Madeira*, Portugal, 26-29 July 2004.
8. Leungvichcharoen, S. and Wijeyewickrema, A. C., Scattering of plane SH-waves by a circular cavity in a pre-stressed elastic medium, *First International Conference on Urban Earthquake Engineering*, Tokyo, Japan, 8-9 March 2004.
9. Leungvichcharoen, S. and Wijeyewickrema, A. C., The effect of an imperfect interface on the singular stress field of an orthotropic bimaterial wedge, *Proceedings of the Fifth International Conference on*

- Fracture and Strength of Solids, FEOFS 2003, Tohoku University, Sendai, Japan, 20-22 October 2003.
10. Wijeyewickrema, A. C. and Leungvichcharoen, S., A review of analytical methods to determine effective mechanical properties of composites with spherical inclusions, Proceedings of the Symposium on Environmental Issues Related to Infrastructure Development, Manila, Philippines, 8-9 August 2003.
  11. Wijeyewickrema, A. C. and Leungvichcharoen, S., Prediction of interphase properties of a three-phase composite using three-phase and four-phase composite models, Proceedings of the 16th Engineering Mechanics Division Conference, ASCE, EM2003, Seattle, 16- 18 July 2003.
  12. Leungvichcharoen, S., Wijeyewickrema, A. C., and Poonsawat, P., Effect of an imperfect interface on the singular stress field of a monoclinic bimaterial wedge, Proceedings of the Fourth Regional Symposium on Infrastructure Development in Civil Engineering (RSID4), Bangkok, Thailand, 3-5 April 2003.
  13. Iwase, T., Wijeyewickrema, A. C. and Leungvichcharoen, S., Application of three-phase and four-phase models to calculate effective properties of a composite, Proceedings of the JSPS-DOST Regional Symposium on Construction Materials and Testing, Manila, Philippines, 13-14 September 2002.
  14. Wijeyewickrema, A. C. and Leungvichcharoen, S., Dispersive behavior of extensional waves in pre-stressed imperfectly bonded incompressible layered composites, Proceedings of the 15th Engineering Mechanics Division Conference, ASCE, EM2002, New York, 2-5 June 2002.
  15. Leungvichcharoen, S. and Wijeyewickrema, A. C., Extensional wave propagation in pre-stressed imperfectly bonded incompressible layered elastic composites, Proceedings of the Third Australasian Congress on Applied Mechanics ACAM 2002, Sydney, Australia, 20-22 February 2002.
  16. Leungvichcharoen, S. and Wijeyewickrema, A. C., Dispersion curves for extensional waves in pre-stressed imperfectly bonded incompressible layered elastic composites, Proceedings of the Third International Summer Symposium JSCE, Tokyo, Japan, 08 August 2001.
  17. Wijeyewickrema, A. C., Yamamoto, T., and Leungvichcharoen, S., Flexural wave propagation in incompressible pre-stressed imperfectly bonded elastic composites, Proceedings of the 2001 Mechanics & Materials Conference MMC 2001, San Diego, California, 27-29 June 2001.
  18. Leungvichcharoen, S., Suriyamongkol, S. and Wijeyewickrema, A. C., Application of reciprocal theorem with complete functions in static and vibration problems of thin elastic plates, Proceedings of the Third Regional Symposium on Infrastructure Development in Civil Engineering, Tokyo, Japan, 4-6 December 2000.
  19. Parnploy, U. and Leungvichcharoen, S., A design practice for billboard space structures, Sixth International Conference on Steel and Space Structures, Singapore, 2-3 September 1998.
  20. Leungvichcharoen, S. and Suriyamongkol, S., Application of Maxwell-Betti's theorem and complete function theorems in plate structures, Proceedings of the fourth National Conventional on Civil Engineering, EIT, Phuket, Thailand, 12-14 November 1997 (in Thai).

## Research Grants

- 2004, Development of Finite Element Program for Structural Analysis using Mathematica, Faculty of Engineering Naresuan University Research Fund
- 2006, Development of Analysis and Design Package for Reinforce Concrete Structures on Mathematica Platform, Faculty of Engineering Naresuan University Research Fund
- 2007, Development of RC Structure Drawing Program on CAD-Thai, IRPUS Research Fund
- 2007, Development of RC Beam Analysis, Design and Drawing Program on CAD-Thai, IRPUS Research Fund
- 2008, Using of Bottom Ash and Water Supply Sludge for Synthetic Aggregate Production, Faculty of Engineering Naresuan University Research Fund
- 2008, Development of RC Beam, Column and Footing Analysis, Design and Drawing Program on CAD-Thai, IRPUS Research Fund

## Affiliations

- **Member**, The Engineering Institute of Thailand under His Majesty The King's Patronage (E.I.T.), Thailand

## Research Keywords

- Continuum Mechanics, Elasticity } Fracture Mechanics, Mechanics of Composite, Pre-stressed Elastic Media, Wave Propagation.