

## VITA

**Name:** Chi Ngoc Thai

**Present Rank:** Associate Professor

**Department:** Biological & Agricultural Engineering

**College of Agricultural & Environmental Sciences - University of Georgia**

**Degrees:** *(Dates and Institutions)*

B.S.Mech.E. 1976 Northrop University (Summa Cum Laude)

M.S.Aerosp.E. 1979 Northrop University

Ph.D.Agric.E. 1983 University of California, Davis

**Positions Held:**

7/92 to Present - Associate Professor, The University of Georgia

1/85 to 6/92 - Assistant Professor, The University of Georgia

4/79 to 6/83 - Research Assistant, University of California at Davis; Davis, CA

9/77 to 1/79 - Test Engineer, Bunker-Ramo Corporation, Chatsworth, CA

### **RESEARCH INTERESTS**

Dr. Thai research areas are in the development of optical sensing systems for stress and disease detection in peanut and cotton plants and for evaluation of quality of agricultural products using standard UV-VIS-NIR spectroscopy as well as Multispectral & Fluorescence Imaging. The first objective is to develop a transportable sensing system combining imaging and non-imaging optical sensors for detecting early stress and quantifying stress levels in peanuts and cotton caused by disease, dehydration and nitrogen deficiency. A multispectral imaging system based on Liquid Crystal Tunable Filters (LCTF) and CCD cameras was developed. The second objective is to develop experimentation and analysis techniques so as to improve existing models for light interactions in real fruits and vegetables using results provided from the above spectral imaging system, with the ultimate goal of designing better quality sorting schemes. Other research interests are in the development of distance learning technologies and methodologies.

### **GRANTS & AWARDS**

<u>Title</u>	<u>Agency</u>	<u>Date</u>	<u>Amount</u>	<u>Investigator</u>
Spectral Imaging for Detection Of Poultry Contaminants	USDA-ARS	1999-2002	\$146,000	Principal
Student Web Access to Engineering Laboratories	UGA Learning Technologies Grant	2001-2002	\$60,000	Co-Principal
Field Spectral Imaging Equipment	Georgia Research Alliance	1998	\$46,000	Co-Principal
Travel Grant	Korean NICEM	1998	\$2,000	Principal

Spectral Imaging Equipment	Georgia Research Alliance	1997	\$65,000	Co-Principal
InGaAs NIR Spectrometer	Georgia Research Alliance	1996	\$28,600	Co-Principal
Liquid Crystal Tunable Filter	GA Lottery Fund	1996	\$23,000	Principal

## **PUBLICATIONS**

### **Chapters in Books:**

Prussia, S. E., Morita, K., Hung, Y-C., Thai, C. N. and Tollner, E. W. 1994. Nondestructive texture measurement of apples. *Proceedings of the 6th International Congress on Engineering and Food*. (Editors: T. Yano & R. Matsuno, Blackie Academic & Professional Publisher, pp. 126-128).

Delwiche, M. J., Affeldt, H. A. Jr., Birth, G., Brown, G. K., Guyer, D. E., Hetzroni, A., Peleg, K., and Thai, C. N. 1994. Surface Color Measurement of Fruits and Vegetables. In *"Nondestructive Technologies for Quality Evaluation of Fruits and Vegetables"*. ASAE Publisher, pp. 63-71.

Thai, C. N. 1993. Modeling quality characteristics. Chapter 8. pp. 167-185. IN: [R. L. Shewfelt and S. E. Prussia, Editors] *Postharvest Handling: A Systems Approach*. Academic Press, Inc.; Orlando, FL.

Thai, C. N., J. N. Pease and R. L. Shewfelt. 1990. A decision support system for delivering optimal quality peach and tomato. IN: [J. C. Giarratano and C. Culbert, Editors] *Proceedings of the First CLIPS Users' Group Conference; NASA Report No. CP 10049(1):386-396*.

### **Journal Articles (in print or accepted):**

C. N. Thai, B. L. Upchurch and T. Wang. 2001. Student Remote Access to Machine Vision Laboratory Using NetMeeting Software. ASAE Technical Paper No. 013027, presented at the ASAE Annual International Meeting in Sacramento, California, July 30-August 1, 2001.

B. L. Upchurch and C. N. Thai. 2001. Interactive Classroom for Teaching Engineering in the 21<sup>st</sup> Century. ASAE Technical Paper No. 013142, presented at the ASAE Annual International Meeting in Sacramento, California, July 30-August 1, 2001.

C. N. Thai. 2000. Influence of Canopy Types on Spectral Evaluation of Stresses in Plants. ASAE Technical Paper No. 003020, presented at the ASAE Annual International Meeting in Milwaukee, Wisconsin, July 9-12, 2000.

B. L. Upchurch and C. N. Thai. 2000. Spectral Characterization of Pecan Weevil Larvae and Pecan Nutmeat Using Multispectral Imaging. ASAE Technical Paper No. 006119, presented at the ASAE Annual International Meeting in Milwaukee, Wisconsin, July 9-12, 2000.

C. N. Thai, M. D. Evans, and G. C. Greene. 1999. Integration of a personal liquid crystal monitor to a field spectral imaging system. ASAE Technical Paper No. 993053, presented at the ASAE Annual International Meeting in Toronto, Canada, July 18-21, 1999.

- C. N. Thai, M. D. Evans, and A. C. Schuerger. 1999. Spectral imaging of bahia grass grown under different zinc and copper treatments. ASAE Technical Paper No. 993171, presented at the ASAE Annual International Meeting in Toronto, Canada, July 18-21, 1999.
- Evans, M.D., Thai, C. N., and Grant, J. C. 1998. Development of a Spectral Imaging System Based on a Liquid Crystal Tunable Filter. Transactions of the ASAE Vol. 41 (6): pp 1845-1852.
- Ogawa, Y, Morita, K., Tanaka, S., Setoguchi, M., and Thai, C.N. 1998. Application of X-Ray CT for Detection of Physical Foreign Materials in Foods. *Transactions of the ASAE*, Vol. 41(1): 157-162.
- Ogawa, Y, Morita, K., Tanaka, S., and Thai, C.N. 1998. X-ray Spectral Analysis with CdTe Sensor for Detection of Foreign Materials in Food. *Journal of The Japanese Society for Food Science and Technology*, Vol. 45(1): 21-27.