

## **CURRICULUM VITAE**

Yu Chin Cheng

Dept. of Computer Science and Information Engineering

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### **EDUCATION**

- PhD School of Computer Science, University of Oklahoma, Norman, OK  
(A New Method for Quadratic Curve Detection Using K-RANSAC with Acceleration Techniques; Advisor: Samuel C. Lee). 1993.
- MSE Dept. of Computer Science, Johns Hopkins University, Baltimore, MD.  
1990.
- Diploma National Taipei Institute of Technology, Taiwan. 1985.

### **PROFESSIONAL EXPERIENCE**

- Aug 2007 ~ present Professor, Dept. of Computer Science and Information Engineering, National Taipei University of Technology, Taiwan
- July 2011 ~ present Director of the Board of Governors, Software Engineering Association of Taiwan
- Aug 2000 ~ Jul 2007 Associate Professor, Dept. of Computer Science and Information Engineering, National Taipei University of Technology, Taiwan
- Aug 2002 ~ Jul 2004 Chair, Dept. of Computer Science and Information Engineering, National Taipei University of Technology, Taiwan
- Dec 1993 ~ Jul 2000 Associate Professor, Dept. of Electronic Engineering, National Taipei University of Technology, Taiwan
- Aug 1993 ~ Dec 1993 Lecturer, Dept. of Electronic Engineering, National Taipei University of Technology, Taiwan

### **RESEARCH INTERESTS**

Agile Software Development  
Software Architecture and Design  
Software Testing  
Pattern Languages  
Pattern Analysis

## HONORS AND AWARDS

Distinguished Teaching Award, College of Mechanical and Electrical Engineering, National Taipei University of Technology, Taiwan, 2006

## RECENT COURSES

Undergraduate level:

Object-Oriented Programming (C++)

Artificial Intelligence (with Prolog)

Graduate level:

Software Architecture

Software Lifecycle Management (Scrum)

Design Patterns

Object-Oriented Design and Analysis

## RECENT GRANTS

P-1 Integrated Cloud Testing: Platform and Service Development, 2012/8~2013/7, National Science Council, Taiwan.

P-2 Jumpstarting Scrum and Software Engineering Best Practices for ICT/CE Product Developments: a Three-year Project; 2009/12~2012/11, Ministry of Economic Affairs, Taiwan.

P-3 Achieving Software Fault Tolerance and Diagnosability with Exception Handling: Pattern Language, Object-Oriented Design, and Diagnosis Tool, 2009/8~2012/7, National Science Council, Taiwan.

P-4 A New Approach for Supporting Design by Contract in the Java Language, 2006/8~2009/7, National Science Council, Taiwan.

## SELECTED RECENT PUBLICATIONS

Journal papers:

J-1 Jung-Sing Jwo, Tien-Song Hsu, and Yu Chin Cheng, "Jumpstarting Application Lifecycle Management: a New Approach with Tool Support, " scheduled for publication in Journal of Information Science and Engineering, 29(3). May 2013.

J-2 Jonathan Lee and Yu Chin Cheng, "Change the Face of Software Engineering Education: a Field Report from Taiwan," Information and Software Technology 53 (2011) 51–57.

J-3 Jung-Sing Jwo and Yu Chin Cheng, "Pseudo Software: a Mediating Instrument for Modeling Software Requirements," Journal of Systems

and Software, 83 (2010) 599–608.

- J-4 Chien-Tsun Chen, Yu Chin Cheng, Chin-Yun Hsieh, and Tien-Song Hsu, "Delivering Specification-Based Learning Processes with Service-Oriented Architecture: A Process Translation Approach", *Journal of Information Science and Engineering*, vol. 25, No. 5, pp. 1373-1389, September 2009.
- J-5 Chien-Tsun Chen, Yu Chin Cheng, Chin-Yun Hsieh, Tien-Song Hsu, "JCIS: An Open Source System for Continuous Integration with Java Technology", *Journal of Software Engineering Studies*, vol. 4 no. 1, pp. 56-65, June 2009.
- J-6 Chien-Tsun Chen, Yu Chin Cheng, Chin-Yun Hsieh, and I-Lang Wu, "Exception Handling Refactorings: Directed by Goals and Driven by Bug Fixing," *Journal of Systems and Software*, Vol. 82, No. 2, Feb 2009, pp. 333-345.
- J-7 Chien-Tsun Chen, Yu Chin Cheng, and Chin-Yun Hsieh, "Contract Specification in Java: Classification, Characterization, and a New Marker Method," *IEICE Transactions on Information and Systems*, E91-D(11), Nov 2008, pp. 2685-2692.
- J-8 W.-K. Chen and Y. C. Cheng, "Teaching Object-Oriented Programming Lab with Computer Game Programming," *IEEE Transactions on Education*, vol. 50, no. 3, pp. 197-203, Aug 2007.
- J-9 Y. C. Cheng, "The Distinctiveness of a Curve in a Parameterized Neighborhood: Extraction and Applications," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 28, no. 8, pp. 1215-1222. Aug 2006.
- J-10 Y. C. Cheng and Y.-S. Liu, "Polling an Image for Circles by Random Lines," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 25, no. 1, pp.125-130. Jan 2003.

Conference papers:

- C-1 Chin-Yun Hsieh, Yu Chin Cheng and Chien-Tsun Chen, "Emerging Patterns of Continuous Integration for Cross-Platform Software Development," *AsianPLoP 2011: 2nd Asian Conference on Pattern Languages of Programs*, Oct 5-7, 2011, Tokyo, Japan
- C-2 Jung-Sing Jwo and Yu Chin Cheng, "Performance Improvement for an SOA Based Enterprise Application Using Service Redirection," *4th IEEE International Symposium on Service-Oriented System Engineering (SOSE 2008)*, Jhongli, Taiwan, Dec 18~19, 2008.
- C-3 Y. C. Cheng, P.H. Ou, C.T. Chen, T.S. Hsu, "A Distributed System for

- Continuous Integration with JINI," 14th International Conference on Distributed Multimedia Systems Hyatt Harborside at Logan Int'l Airport, Boston, USA September 4 ~ September 6, 2008.
- C-4 Jung-Sing Jwo and Yu Chin Cheng, "Pseudo Software: a New Concept for Iterative Requirement Development and Validation," 14th Asia-Pacific Software Engineering Conference, December 5~7, 2007, Nagoya, Japan.
- C-5 Yu Chin Cheng, Chien-Tsun Chen, and Chin-Yun Hsieh, "ezContract: Using Marker Library and Bytecode Instrumentation to Support Design by Contract in Java," 14th Asia-Pacific Software Engineering Conference, December 5~7, 2007, Nagoya, Japan.
- C-6 C.-T. Chen, Y. C. Cheng, and C.-Y. Hsieh, "Towards a Pattern Language Approach to Establishing Personal Authoring Environments in E-Learning," accepted by the Sixth IASTED International Conference on Web-based Education (WBE 07), March 14-16, 2007, Chamonix, France.
- C-7 C.-T. Chen, Y. C. Cheng, and C.-Y. Hsieh, "A Scenario-Based Approach for Modeling Abnormal Behaviors of Dependable Software Systems," Proceedings of the 2006 International Computer Symposium (ICS 06), pp. 483-488, December 6-6, 2006, Taipei, Taiwan.
- C-8 Y. C. Cheng, C.-T. Chen, and J.-S. Jwo, "Exception Handling: An Architecture Model and Utility Support," Proceedings of the 12th Asia-Pacific Software Engineering Conference, Dec 15-17, 2005, pp. 359-366.
- C-9 M.-C. Chen, C.-T. Chen, Y. C. Cheng, and C.-Y. Hsieh, "On the Development and Implementation of a Sequencing Engine for IMS Learning Design Specification," 5th IEEE International Conference on Advanced Learning Technologies (ICALT 2005), July 5-8, 2005.
- C-10 C.-T. Chen and Y. C. Cheng, "A Pattern Language for Personal Authoring in E-Learning", 11th Conference on Pattern Languages of Programs (PLoP2004), Sep. 8-12, 2004.

#### **PROFESSIONAL SOCIETY MEMBERSHIPS**

IEEE Computer Society

ACM

IEICE (Japan)

Software Engineering Association of Taiwan (SEAT)