

- 1. Title** : “Critical Components Identification and Verification for Real Time Complex Systems Using Artificial Bee Colony Based Approach”
- 2. PI information** : Dr.D.Jeya Mala, Associate Professor in Computer Applications, TCE
- 3. Project Duration and cost:** 3 years (2011-2014); Rs.10,09,600/-
- 4. Equipment purchased and usage:** HP Server -1; HP Client Machines – 3; Sony Vaio and HP Laser Jet All in one Printer

5. Publications:

Refereed International Journals:

- [1] A Multi Agent Based Approach for Critical Components Identification and Testing, International Journal of Systems and Service-Oriented Engineering. Vol. 4, No.1, pp. 21-38, 2014.
- [2] Criticality analyzer and tester: an effective approach for critical component identification & verification using ABC, ACM SIGSOFT Software Engineering Notes archive, Vol. 38 No. 5, pp. 1-10, 2013.
- [3] Components Impact Analyzer with Genetic Algorithm, ICTACT Journal on Soft Computing 3(4), 576-586, 2013.
- [4] Critical components testing using hybrid genetic algorithm, ACM SIGSOFT Software Engineering Notes, Vol. 38, No.5, pp. 1-10 , 2013.
- [5] Early Identification of Software Defects Using OCL Predicates to Improve Software Quality, Journal of Engineering Science and Technology, Taylors University, Vol. 10, No. 3, pp.307 – 321, 2015.
- [6] Functional Testing using OCL- Predicates to Improve Software Quality, International Journal of Systems and Service-Oriented Engineering, Vol.5, No.2, pp.56-72, 2015.

Refereed Book Chapters

- [1] Criticality Analyzer and Tester – An Effective Approach for Critical Component Identification & Verification using ABC, CSI-2013, LNCS-Springer Verlag, “Advances in Intelligent Systems and Computing”, Volume 248, 2014, pp 663-670, 2014, DOI 10.1007/978-3-319-03107-1_72, Springer, 2014.
- [2] Structural Refinement: An Effective OCL-Based Testing Approach, LNCS – Springer Book on Artificial Intelligence and Evolutionary Algorithms in Engineering Systems-Advances in Intelligent Systems and Computing Volume 324, 2015, pp 765-774, Print ISBN 978-81-322-2125-8, pp 765-774, Springer, 2015.
- [3] A study on Software Development Architectures for Mobile Cloud Computing (MCC) for Green IT:A Conceptual Mobile Cloud Architecture using Artificial Bee Colony based approach in the book " Modern Software Engineering Methodologies for Mobile and Cloud Environments" - accepted - IGI Global, 2015.
- [4] Knowledge Engineering support for Intelligent Software Testing published in an International Book on “Knowledge Engineering for Software Development Life Cycles: Support Technologies and Applications”, IGI – Global, 2011.

International Conference Publications – 06 (IEEEExplore – 03; Others – 03)

6. PhD/ ME produced along with titles:

- 2 MCA students
 - “An Improved Quality Assurance Technique for Real Time Systems using ABC based Approach”
 - “Critical Components Tester – Artificial Bee Colony Based Unit and Pair-wise testing for Critical Components”
- 2 Ph.D. scholars registered and are in-progress.