

# 4th International Workshop on Combinatorial Testing IWCT 2015

13 April 2015, Graz, Austria

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The IWCT2015 is to be held in conjunction with ICST2015 focusing on **combinatorial testing**. The workshop welcomes academic research submissions, as well as industrial experience reports.

Combinatorial testing (CT) is a widely applicable generic methodology and technology for software verification and validation. In a combinatorial test plan, all interactions between parameters up to a certain level are covered. For example, in the special case of pairwise testing, for every pair of parameters, every pair of values will appear at least once. Studies show that CT is more efficient and effective than random testing and expert test selection methods.

## Call for Papers

We invite submissions of high-quality papers presenting original work on both theoretical and experimental aspects of combinatorial testing. We accept both full papers (up to 10 pages) and short papers (up to 4 pages). Topics of interest for papers or posters include, but are not limited to:

### Combinatorial testing workflow

- Modeling the input space for CT
- Efficient algorithms to generate t-way test suites, especially involving support of constraints
- Determination of expected system behavior for each test case
- Executing CT test suites
- Combinatorial testing based fault localization
- Implementation of CT with existing testing infrastructures
- Handling changes in test requirements

### Applicability of combinatorial testing

- Comparison and combination of CT with other dynamic verification methods
- Study of failure records to determine the kind of CT which may have detected faults
- Empirical studies and feedback from practical applications of CT
- Combinatorial testing for concurrent and real-time systems
- Cloud computing systems testing and use of combinatorial methods in cloud architecture
- Application of CT in other domains, e.g., gene regulation or other biotech applications
- **NEW** Combinatorial testing, feature models, and software product lines

### Combinatorial and complementing methods

- Combinatorial analysis of existing test suites
- Test plan reduction and completeness
- CT and coverage metrics – combining the two, and studying the relationship between them

## Important dates

- (Planned) Submission deadline for papers is January 15, 2015.
- (Planned) Author notification is February 7, 2015.

<http://iwct2015.unibg.it>