The Twelfth International Conference on Computational Logics, Algebras, Programming, Tools, and Benchmarking
COMPUTATION TOOLS 2021
April 18 - 21, 2021 - Porto, Portugal

Important deadlines:
- Submission (full paper): February 8, 2021
- Notification: February 28, 2021
- Registration: March 11, 2021
- Camera ready: March 16, 2021

Tracks:

**Trends on computation**
- Assertion-based analysis
- Conditional transformation systems
- Generalized learned constraints
- Constraint propagation
- Stable-unstable semantics
- Abstract compilation
- Semantic code browsing
- Pointer analysis
- Minimal entailment
- Infinitary formulas
- Static profiling of parametric resource usage
- Rewriting optimization statements
- Algebraic effect handlers
- Non-ground rules
- Resource-based answer set semantics
- Local domain symmetry
- Knowledge patterns
- Knowledge representation
- Grounded fixpoints
- Supersafe rules
- Qualitative spatio-temporal reasoning
- Reasoning about truthfulness
- Cause-effect relations
- Higher-order logics
- Models expansion
- Optimal stable models
- Intelligent instantiations
- Answer set programming
- Non-monotonic cause-effect relations
- Paraconsistency
- Active integrity constraints

**Logics**
- Reasoning logics
- Fuzzy logics
- Semantic logics
- Temporal logics
- Emotion logics
- Ambiant logics
- Modal logics
- Description logics
- Computational tree logic
- Computational logics and constraints
- Quantum computational logics
- Executable computational logics
- Monadic computational logics
- Many-valued computational logics
- Computability logic

**Algebras**
- Computational algebras
- K-theories, C*-algebras
- Index theory
- Algebraic and topological K-theory
- Geometric group theory and group C*-algebras
- Noncommutative geometry and topology
- Pseudodifferential operators on singular manifolds
- Topological invariants of non-simply connected manifolds
- Deformation quantization
- Lambda calculus
- Relation algebra
- Algebras for symbolic computation
- Constructive algebras

**Advanced computation techniques**
- Machine learning
- Fuzzy theory/computation/logic
- (Artificial) neuronal networks
- Distributed artificial intelligence
- Genetic algorithms
- Analytic tableaux
- Autonomous agent-based techniques
- Knowledge-based systems and automated reasoning
- Logical issues in knowledge representation
- Non-monotonic reasoning
- Dempster-Shafer theory
- Concurrent computation and planning
- Deduction and reasoning

**Specialized programming languages**
- Logic programming
- Specialized computation languages
- Real-time computation languages
- Embedded-computing languages
- Programming semantics
- Content-driven programming
- Multimedia-oriented programming
- Context-driven programming
- Service-oriented programming
- Pattern-oriented programming
- Regenerative programming
- Progressive programming
- Sensing-oriented programming
- Mobile-ubiquity-oriented computing
- Compilation issues

**Tools for distributed computation**
- Platforms for distributed computing
- Specification and verification of programs and systems
- Techniques for cloud computing
- On-request resource allocation mechanisms
- Security and privacy techniques
- Computational benchmarking metrics, criteria and methodologies
- Distributed debug and on-fly repairing
- Inference of schemas, integrity constraints in computational applications
- Real-world applications, experiments, projects