

AGERE! @ SPLASH 2012

2nd International Workshop on Programming based on
Actors, Agents, and Decentralized Control

2nd DAY



Oct 21-22
Tucson, Arizona - US

BRIEF RECAP OF THE 1st DAY

Invited talk by Philippe Haller

“Integration of the actor model into mainstream technologies”



experience and challenges about using the Scala Actors Library at Typesafe

- > tackling the complexity of complex real-work applications

very recent transition to Akka implementation

- > higher performance, simplified fault-tolerance, transparent remoting

future & promises of scala actors

- > facing asynchronous programming complexity

- > hot optimizations (Doug Lea behinds the scene), scaling and scaling

- > fully embracing Erlang's "let it crash" philosophy

BRIEF RECAP OF THE 1st DAY

FIRST ACTOR SESSION

"Domains: Safe sharing among actors"

by Joeri De Koster, Tom Van Cutsem and Theo D'Hondt
Vrije Universiteit (Belgium)

Soter: An Automatic Safety Verifier for Erlang

by Emanuele D'Oswaldo, Jonathan Kochems and Luke Ong
Oxford University (United Kingdom)

Leveraging Actors for Privacy Compliance

by Jeffery Von Ronne
The University of Texas at San Antonio (United States)

BRIEF RECAP OF THE 1st DAY

Invited talk by Birna van Riemsdijk

*“20 years of Agent-Oriented Programming
in Distributed AI: History and Outlook”*



key aspects of the first two decades of agent oriented programming as developed in Distributed AI

perspectives for the fore-coming third decade

- > importance of fruitful interactions between agent / programming community (not to re-invent wheels)

BRIEF RECAP OF THE 1st DAY

AGENT SESSION

“Adding Distribution and Fault Tolerance to Jason”

by Alvaro Fernandez Diaz, Clara Benac Earle and Lars-Ake Fredlund
Universidad Politecnica de Madrid (Spain)

Programming Abstractions for Integrating Autonomous and Reactive
Behavior: An Agent-Oriented Approach

by Alessandro Ricci, Andrea Santi – University of Bologna (Italy)

Empirical Software Engineering for Agent Programming

by Birna Van Riemsdijk – TU Delft (The Netherlands)

Messages with Implicit Destinations as Mobile Agents

by Ahmad Ahmad-Kassem, Stephane Grumbach and Stephane Ubda
INRIA INSA Lyon, INRIA (France)

TODAY

- 8:30 9:00 Welcome
 - Brief summary of the first day and agenda of the second day. Preparation for the panel discussion.
- 9:00 10:00 Invited Talk

Agents, Concurrent Objects, and High Performance Computing
by Akinori Yonezawa University of Tokyo, Japan
- 10:00 10:30 Coffee Break
- 10:30 12:00 Research Paper Session III Decentralized control programming with Behavioral Abstractions
- Introduction by Assaf Marron
 - *A Decentralized Approach for Programming Interactive Applications with JavaScript and Blockly*
Assaf Marron, Gera Weiss and Guy Wiener – Weizmann Institute of Science, Ben Gurion University, HP Labs (Israel)
 - *Optimized Distributed Implementation of Multiparty Interactions with Observation*
Saddek Bensalem, Marius Bozga, Jean Quilbeuf and Joseph Sifakis – VERIMAG, VERIMAG/CNRS (France)
 - *Distributed Priority Synthesis using Knowledge*
Chih-Hong Cheng, Rongjie Yan, Harald Ruess and Saddek Bensalem – Fortiss (Germany), State Key Laboratory of Computer Science Institute of Software (China), VERIMAG (France)
- 12:00 13:30 Lunch time

TODAY

- 13:30 15:00 Research Paper Session IV Actors
 - *Parallel Gesture Recognition with Soft Real-Time Guarantees*
Thierry Renaux, Lode Hoste, Stefan Marr and Wolfgang De Meuter
– Vrije Universiteit (Belgium)
 - *A Relational Trace Logic for Simple Hierarchical Actor-Based Component Systems*
Ilham W. Kurnia and Arnd Poetzsch-Heffter – University of Kaiserslautern (Germany)
 - *Timed-Rebeca Schedulability and Deadlock-Freedom Analysis Using Floating-Time Transition System*
Ehsan Khamespanah, Zeynab Sabahi Kaviani, Ramtin Khosravi, Marjan Sirjani and Mohammad-Javad Izadi – Tehran University (Iran), Reykjavik University (Iceland)
- 15:00 15:30 Coffee Break
- 15:30 17:00 Research Paper V and Discussion Session
 - *Actor Idioms*
Dale Schumacher – United States
 - Research directions for Agent, Actor and Decentralized Control: panel and open discussion
- 17:00 SPLASH Poster session with one poster about AGERE! summary & contributions

INVITED TALK:

AKINORI YONEZAWA

“Agents, Concurrent Objects, and High Performance Computing”

Akinori Yonezawa

- Professor at Department of Computer Science, University of Tokyo.
- Ph.D. in Computer Science from the Massachusetts Institute of Technology in 1977.
- ACM Fellow since 1999
- AITO Dahl-Nygaard Prize in 2008 for his pioneer work on the concept, theory and applications of concurrent objects
- "Medal of Honour with a Purple Ribbon of Japan (Shiju-housho)" at Imperial Palace in 2009
- heavily involved in the Japanese National Supercomputer Project since 2007, he is member of the executive board of the national high performance computing infrastructure



He is author of several books, including:

"Object-Oriented Concurrent Programming", MIT Press, 1987.

"ABCL: an Object-Oriented Concurrent System", MIT Press 1990.

"Research Directions in Concurrent Object-oriented Programming", MIT Press, 1993.

ENJOY

CONTRIBUTE