# Modeling and Simulation of Complexity in Intelligent, Adaptive and Autonomous Systems 2017 (MSCIAAS 2017)

2017 Spring Simulation Multi-Conference (SpringSim'17)

Simulation Series Volume 49 Number 8

Virginia Beach, Virginia, USA 23 – 26 April 2017

**Editors:** 

Saurabh Mittal Jose Luis Risco Martin

ISBN: 978-1-5108-4030-0

#### Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 www.proceedings.com



Some format issues inherent in the e-media version may also appear in this print version.

### © 2017 SIMULATION COUNCILS, INC.

Responsibility for the accuracy of all statement in each paper rests solely with the author(s). Statements are not necessarily representative of, nor endorsed by, The Society for Modeling and Simulation International.

Printed by Curran Associates, Inc. (2017)

Permission is granted to photocopy portions of this publication for personal use and for the use of students provided credit is given to the conference and publication. Permission does not extend to other types of reproduction nor to copying for incorporation into commercial advertising nor for any other profit-making purpose. Other publications are encouraged to include 300- to 500-word abstracts or excerpts from any paper contained in this book, provided credits are given to the author and the conference. For permission to publish a complete paper write: The Society for Modeling and Simulation International (SCS), 2598 Fortune Way, Suite I, San Diego, CA 92081, USA.

#### Additional copies of the Proceedings are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 <u>curran@proceedings.com</u> www.proceedings.com/0128.html

or

The Society for Modeling and Simulation International 2598 Fortune Way, Ste I Vista, CA 92081 USA <u>www.scs.org</u>

## ISBN: 978-1-5108-4030-0 PRINTED IN THE UNITED STATES

# TABLE OF CONTENTS

| VERIFICATION AND VALIDATION OF ETHICAL DECISION-MAKING IN AUTONOMOUS   |   |
|--|---|
| SYSTEMS  | 1 |
| L. Yilmaz  |   |
| INTEGRATION OF A PHYSICAL SYSTEM, MACHINE LEARNING, SIMULATION,        |   |
| VALIDATION AND CONTROL SYSTEMS TOWARDS SYMBIOTIC MODEL ENGINEERING     |   |
| S. Bohlmann, V. Klinger, H. Szczerbicka                                |   |
| DETECTION AND CLASSIFICATION OF EMERGENT BEHAVIORS USING MULTI-AGENT   |   |
| SIMULATION FRAMEWORK (WIP)   |   |
| S. Singh, S. Lu, P. Kogut  |   |
| TACKLING THE COMPLEXITY OF SIMULATION SCENARIO DEVELOPMENT IN          |   |
| AVIATION   |   |
| S. Jafer, U. Durak   |   |
| EMERGENCE OF HUMAN LANGUAGE: A DEVS-BASED SYSTEMS APPROACH             |   |
| B. Zeigler   |   |
| INVESTIGATING THE USE OF REAL-TIME DATA IN NUDGING PATIENTS' EMERGENCY |   |
| DEPARTMENT (ED) ATTENDANCE BEHAVIOUR                                   |   |
| N. Mustafee, S. Martin, J. Powell, A. Fordyce, A. Harper               |   |
|  |   |

Author Index