

## Publications and Presentations on Understanding and misunderstanding

by Dr. Tuncer Ören

updated: 2018-01-09 (y-m-d)

Some statistics

|       |              | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | total |
|-------|--------------|---|---|---|---|---|---|---|---|---|---|-------|
| 1990s | publications | 4 | 1 | 2 |   |   |   |   |   |   |   | 7     |
|       | meetings*    | 2 | 2 | 2 |   |   | 1 |   | 4 |   | 2 | 13    |
| 2000s | publications | 1 |   |   |   |   |   | 1 | 1 |   | 2 | 5     |
|       | meetings     | 2 |   |   |   |   |   | 2 |   | 1 |   | 5     |
| 2010s | publications |   | 2 | 1 | 3 | 1 | 1 | 1 |   |   |   | 9     |
|       | meetings     |   | 1 |   |   |   |   |   |   |   |   | 1     |

(scheduled)

\*without publication

|              |    |
|--------------|----|
| publications | 21 |
| meetings     | 19 |
| total        | 40 |

### Major stages:

- 1990-1995 Understanding simulation software; program understanding
- 1997-2006 Understanding systems
- 2006-2008 Systems with understanding ability and understanding agents
- 2009- Agents with ability to understand emotions; switchable understanding
- 2011- Avoidance of misunderstanding
- 2015- Enriching machine understanding paradigm
- 2016- Exploring the synergy of machine understanding and all three aspects of agent-directed simulation (ADS)
- 2017- Computational awareness

### 1990

- Ören**, T.I., Abou-Rabia, O., King, D.G., Birta, L.G., Wendt, R.N. (1990) (Plenary Paper). Reverse Engineering in Simulation Program Understanding. In: Problem Solving by Simulation, A. Jávör (ed.) Proceedings of IMACS European Simulation Meeting, Esztergom, Hungary, August 28-30, 1990, pp. 35-41.
- Ören**, T.I., Birta, L.G., Abou-Rabia, O., King, D.G., Wendt, R.N. (1990). E/Slam: A Software Understanding Environment for SLAM II Programs. In: Proceedings of European Simulation Multiconference, Erlangen-Nuremberg, Germany, June 10-13, 1990, SCS International, San Diego, CA, pp. 235-240.
- Ören**, T.I., Wendt, N.R., Abou-Rabia, O., King, D.G., Birta, L.G. (1990). A Reverse Engineering Application for Simulation Program Understanding. In: Proceedings of the Bell Canada Quality Engineering Workshop II, Montreal, PQ, October 4-5, 1990. (Participation by invitation).
- Wendt, R.N., **Ören**, T.I., Birta, L.G. (1990). Knowledge Base for Slam II Understanding System, Volume 2 - Rule Base. Technical Report (Prepared for Bell Canada). Computer Science Department, University of Ottawa, Ottawa, Ontario.

1990 May 31 - June 22, München, W. Germany

Siemens

Invited Seminars: A Program Understanding Environment for Simulation.

1990 October 3-5, Montreal, PQ

Bell Canada Quality Engineering Workshop (Participation by Invitation only),

Invited Presentations: - A Reverse Engineering Application for Simulation Program Understanding  
(with N.R. Wendt, O. Abou-Rabia, D.G. King, L.G. Birta)

## 1991

Sheng, G., **Ören**, T.I. (1991). Computer-Aided Software Understanding Systems to Enhance Confidence of Scientific Codes. In: Proceedings of the BIOMOVs (BIOSpheric MOdel Validation Study) Symposium, Stockholm, Sweden, October 8-10, 1990. Swedish Radiation Protection Institute, Stockholm, Sweden, pp. 275-286.

1991 June 3 - June 14, Istanbul, Turkey

Technical University of Istanbul (ITU)

Under the auspices of the United Nations TOKTEN Program

Invited Seminars (in Turkish) on: - Artificial Intelligence in Software Engineering:

- Program Understanding Systems and Automatic Documentation of Programs in Natural Language

1991 November 29, Istanbul, Turkey

CASE Day, Turkish Association of UNIX Users

Invited Presentation: Program Understanding and Documentation Tools: Some Examples

(In Turkish - Program Anlama ve Belgeleme Araçları: Bazı Örnekler)

## 1992

**Ören**, T.I. (1992). Towards Program Understanding Systems. (Invited Plenary Paper). In: Proceedings of the First Turkish Symposium on Artificial Intelligence and Neural Networks, K. Oflazer, V. Akman, H.A. Guvenir, U. Halici (eds.), 25-26 June, 1992, Bilkent University, Ankara, Turkey, pp. 3-12.

**Ören**, T.I., Wendt, R.N., King, D.G., Abou-Rabia, O., Birta, L.G. (1992). A Template-Oriented Approach for Simulation Program Understanding. *Mathematics and Computers in Simulation*, 34: 219-229.

1992 June 25-27, Ankara, Turkey

Bilkent University, First Turkish Symposium on Artificial Intelligence and Neural Nets

Invited Paper: Towards Program Understanding Systems

1992 December 28, Istanbul, Turkey

Tübitak (Turkish Scientific and Technical Research Institute) Marmara Research Centre

Invited Seminar: Research Topics in Program Understanding

## 1995

1995 Sept. 27 - Oct. 1, Istanbul, Turkey

Informatics'95 (In Turkish: Bilisim'95), Turkish Informatics Society

Presentations: Program Understanding

## 1997

1997 January 9-11, San Marcos, Texas

2nd Workshop of the International Institute for General Systems Studies

Southwest Texas State University

Member of the International Program Committee

Invited Plenary Presentation: Understanding Systems: Systems Theoretic Foundations and Architectures

1997 January 16, Ottawa, Ontario, Canada  
 Master's Program in Systems Science, University of Ottawa  
 Invited Seminar: Computerized Understanding Systems: A Taxonomy and Performance Factors

1997 July 4, Gölçük, Turkey  
 Software Engineering Center of the Gölçük Naval Base  
 Presentation: Program Documentation and Program Understanding Systems

1997 September 9-18, Istanbul, Turkey  
 Summer School on Advanced Topics in Software Engineering  
 Sponsor: Tübitak - (Turkish Science and Technical Research Council), MRC (Marmara Research Center) with the Support of Bogazici University  
 Lectures on: Program Understanding (September 18), ...

## 1999

1999 October 18-20, Kusadasi, Izmir, Turkey  
 14<sup>th</sup> International Symposium on Computer and Information Sciences (ISCIS 14)  
 Organized by Ege University, <http://www.ege.edu.tr/iscis99>  
 Invited Presentation: Understanding Systems: Foundations and Performance Factors

1999 November 29, Paris, France  
 University Paris Dauphine  
 CERIA (Centre d'ETude et de Recherche en Informatique)  
[Invited Seminar](#): A Basis for Computer-Aided Understanding: A Classification and Performance Factors

## 2000

**Ören**, T.I. (2000 – Invited Opening Paper). [Understanding: A Taxonomy and Performance Factors](#). In: D. Thiel (ed.) Proc. of FOODSIM'2000, June 26-27, 2000, Nantes, France. SCS, San Diego, CA, pp. 3-10.

2000 May 13-20, Istanbul Turkey  
 ICAMES 2000 (International Cultural and Academic meeting of Engineering Students)  
 Bogazici University  
 Invited Presentation: Understanding

2000 July 3, Gebze-Kocaeli, Turkey  
 TÜBİTAK - Marmara Research Center (MRC),  
 Information Technologies Research Institute (ITRI), Multimedia Group  
 Presentations: (In Turkish)  
 - Computer-Aided Understanding: Types and Performance Factors

## 2006

**Ören**, T.I. (2006). Systems with Understanding Ability. (In Turkish: [Anlama Yetenekli Dizgeler](#)) ([terimler](#)) In: Informatics Encyclopedia of Turkey (In Turkish: Türkiye Bilisim Ansiklopedisi), Papatya Yayıncılık, Istanbul, Turkey, pp. 91-95.

2006 September 13, Ottawa, Ontario, Canada  
[Ottawa Student Chapter](#) of [SCS - Carleton University](#)  
 Invited Seminar: Systems with Understanding Ability: Toward Advanced Agents

2006 September 22 - October 23, Barcelona, Spain  
 University of Barcelona (Universitat Autònoma de Barcelona)  
 A series of [invited doctoral lectures](#) (Barcelona Lectures) including:  
 Lecture 6 - [Systems with understanding ability and understanding agents](#)

## 2007

Ören, T.I., Ghasem-Aghaee, N., and L. Yilmaz (2007). [An Ontology-Based Dictionary of Understanding as a Basis for Software Agents with Understanding Abilities](#). Proceedings of the Spring Simulation Multiconference ([SpringSim'07](#)). Norfolk, VA, March 25-29, 2007, pp. 19-27. (ISBN: 1-56555-313-6) ([presentation](#))

## 2008

2008 October 4 - October 10, Ankara, Turkey

ODTÜ-TSK MODSIMMER [Modeling and Simulation Research and Development Center](#)

Under the sponsorship of [TÜBİTAK](#) (The Scientific and Technological Research Council of Turkey)

A series of [invited research lectures](#) (Ankara Lectures - in Turkish) including:

Lecture 6 - Anlama yetenekli dizge ve etmenlerinin temelleri ve ileri uygulamaları  
(Systems and agents with understanding: Foundations and advanced applications)

## 2009

Kazemifard, M., N. Ghasem-Aghaee, and T.I. Ören (2009). Agents with Ability to Understand Emotions. In: Simulation Series, vol. 41, no. 3, Proceedings of the Summer Computer Simulation Conference, July 13-16, 2009, Istanbul, Turkey. SCS, Dan Diego, CA, pp. 254-260.

Ören, T.I., L. Yilmaz, M. Kazemifard, and N. Ghasem-Aghaee (2009). [Multi-understanding: A Basis for Switchable Understanding for Agents](#). In: Simulation Series, vol. 41, no. 3, Proceedings of the Summer Computer Simulation Conference, July 13-16, 2009, Istanbul, Turkey. SCS, Dan Diego, CA, pp. 395-402

## 2011

Kazemifard, M., N. Ghasem-Aghaee, B. Koenig, and T.I. Ören (2011). [Toward Effective Emotional Intelligence Simulation: Modeling Understanding Ability for Emotive Agents](#). Proc. of 4th International Conference of Cognitive Science (ICCS), 2011 May 10-12, Tehran, Iran, pp. 154 (abstract).

Ören, T.I. and L. Yilmaz (2011). [Semantic Agents with Understanding Abilities and Factors Affecting Misunderstanding](#). In: A. Elci, M.T. Traore, and M.A. Orgun (eds.) Semantic Agent Systems: Foundations and Applications, Springer-Verlag. pp. 295-313.

2011 September 16-22, Changsha, China

Invited seminars: [Agents with understanding abilities and ways to avoid misunderstanding](#)

## 2012

Ören, T.I. (2012). [Evolution of the Discontinuity Concept in Modeling and Simulation: From Original Idea to Model Switching, Switchable Understanding, and Beyond](#). Special Issue of Simulation –The Transactions of SCS. Vol. 88, issue 9, Sept. 2012, pp. 1072-1079. DOI: 10.1177/0037549712458013

## 2013

*Kazemifard, M., Ghasem-Aghaee, N., Koenig, B.L. and T.I. Ören (2013). An Emotion Understanding Framework for Intelligent Agents based on Episodic and Semantic Memories. Journal of Autonomous Agents and Multi-Agent Systems. (DOI) 10.1007/s10458-012-9214-9 ([Online first articles](#)) (not included in the statistics). Published in 2014.*

Kazemifard, M. and T.I. Ören (2013). Toward Agents with Switchable Emotion Understanding Ability. (extended abstract). ICCS 2013 - Fifth International Conference of Cognitive Science, May 7-9, Tehran, Iran.

Ören, T.I. (2013). Makine Anlamasının 80'e Yakın Türü: İngilizce-Türkçe ve Türkçe-İngilizce Terimler (Glossary of Turkish and English "Machine Understanding" Terms), Bilişim: Türkiye Bilişim Derneği Dergisi, yıl 41, sayı 152, Mart 2013, s. [134-143](#).

**Ören**, T.I., Kazemifard, M. and Yilmaz, L. (2013). Machine understanding and avoidance of misunderstanding in agent-directed simulation and in emotional intelligence. Proceedings of SIMULTECH 2013, 3<sup>rd</sup> International Conf. on Simulation and Modeling Methodologies, Technologies and Applications. July 29-31, Reykjavik, Iceland. pp. 318-327.

#### 2014

Kazemifard, M., Ghasem-Aghaee, N., Koenig, B.L. and T.I. **Ören** (2014). [An Emotion Understanding Framework for Intelligent Agents based on Episodic and Semantic Memories](#). Journal of Autonomous Agents and Multi-Agent Systems. January 2014, Volume 28, [Issue 1](#), pp 126-153. (DOI) 10.1007/s10458-012-9214-9 (Prepublication was in 2013 January – 2013-01)

#### 2015

**Ören**, T.I., M. Kazemifard, and F. Noori (2015-[Feature article](#)). Agents with four categories of understanding abilities and their role in two-stage (deep) emotional intelligence simulation. International Journal of Modeling, Simulation, and Scientific Computing ([IJMSSC](#)), vol. 6, issue 3 (September), pp: 1-16, DOI: 10.1142/S1793962315400036.

#### 2016

**Ören**, T., L. Yilmaz, N. Ghasem-Aghaee, M. Kazemifard, and F. Noori (2016 – Keynote presentation) Machine understanding in agent-directed simulation: State-of-the-art and research directions, 2016 Modeling and Simulation of Complexity in Intelligent, Adaptive and Autonomous Systems ([MSCIAAS](#)) Symposium within the SpringSim Conference, Pasadena, California, April 3-5, 2016.