

Yasser Mohammad

Citizenship : Egyptian • Date of birth : 7 September 1976



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Google Scholar :

<http://scholar.google.com/citations?user=EdmGPiYAAAAJ&hl=en>

_Microsoft Academic Search:

<http://academic.research.microsoft.com/Author/3572082/yasser-f-o-mohammad>

Current Title

Assistant Professor (Lecturer), Assiut University, Egypt

Education

- | | |
|---------------------|---|
| 2006 to 2009 | PhD in Intelligence Science and Technology(Robotics) [September 2009]
Graduate School of Informatics, Kyoto University, Japan |
| 2001 to 2005 | Msc. in Electrical Engineering (Computers and Systems) [June 2005]
Faculty of Engineering, Assiut University, Egypt |
| 1993 to 1998 | Bachelor of Electrical Engineering (Computers and Systems) [July 1998]
Faculty of Engineering, Assiut University, Egypt |

Research Interests

- ✓ Nonverbal Human Robot Interaction in social contexts.
- ✓ Fluid Imitation Learning in Robotics.
- ✓ Time series analysis, data mining and causality analysis.

Publications

- ✓ Published 47 scientific papers in international journals and conferences in the past 6 years.
- ✓ Published three refereed book chapters in Springer.
- ✓ h-index = 10 as of May 16rd 2012, with 189 indexed citations (according to Google scholar).

Awards and Honors

- ✓ JSPS fellow (2012-2014).
- ✓ Best Paper Award in IEEE SII 2012 (Control) (from 248 accepted papers)
- ✓ GCOE Visiting Associate Professor, Kyoto University, Japan (July-December 2011)
- ✓ Best Paper Award in the Twenty Second International Conference Industrial, Engineering, and other applications of Applied Intelligent Systems (IEA/AIE 2009). Acceptance rate was 29% out of 286 submitted papers (ranked 46th among top 701 computer science conferences).
- ✓ Best Paper Award in the Twenty First International Conference Industrial, Engineering, and other applications of Applied Intelligent Systems (IEA/AIE 2008). Acceptance rate was 30% out of 270 submitted papers (ranked 46th among top 701 computer science conferences).
- ✓ Egyptian Government full scholarship for PhD study 2005/2009.
- ✓ Top of the Master Preliminary Year (South Valley University) in the academic year 00/01 with a grade of Distinct (There is only one courses year for the master thesis in Egypt and is called Master Preliminary Year. The thesis itself has no grade in Egypt).
- ✓ Top of the third (95/96), fourth (96/97), and graduation (97/98) years of The Electrical Engineering Department, Faculty of Engineering, Assiut University with a grade of Distinct.
- ✓ Egyptian Government award for distinguished undergraduate students 1993.

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International Recognition

- ✓ Recognized as an HRI Pioneer researchers in HRI Pioneers 2008 Workshop.
- ✓ One of 10 student presenters and a panelist in the IEEE NEWHRI workshop 2008.
- ✓ Listed in Marquis Who is Who in the World © 2009 ~ 2013 for excellence in robotics research.

Teaching Experience

Worked as a Lecturer in Assiut University since 2010 teaching the following courses (among others):

Introduction to Robotics
Robotics Engineering

Pattern Recognition (Post)
Numerical Analysis

Network/Computer Security
Database Systems

As a TA in AUN I assisted in teaching several courses including (among others):

C, C++, and C#

Computer Organization

Data Structures

Microprocessor Interfacing

Digital Design

Computer Architecture

Operating Systems

Electrical Measurements

Algorithms

Introduction to CS

Windows Programming

Database Design

Academic Work Experience

Kyoto University, Kyoto, Japan

Visiting Associate Professor

July 2011 – December 2011

- ✓ Conducting research in Applied Intelligence Dept. in collaboration with Prof. Toyooki Nishida and his laboratory.

Assiut University, Assiut, Egypt

Assistant Professor (Lecturer)

January 2010 – NOW

- ✓ Teaching courses in Electrical Engineering Dept., Faculty of Informatics, Mechatronics and Robotics Dept.
- ✓ Conducting research in the area of applied intelligence and robotics (AIR)

Teaching Associate

June 2005 – December 2009

- ✓ Assisting in teaching courses to students of Electrical Engineering, Mechanical Engineering and introductory Engineering courses.
- ✓ Supervising graduation-projects

Teaching Assistant

April 2000 – June 2005

- ✓ Assisting in teaching courses to students of Electrical Engineering, Mechanical Engineering and introductory Engineering courses.
- ✓ Supervising graduation-projects

Developer –Software and Computers Technology Unit (SCTU)

April 2004 – October 2005

- ✓ Developing Assiut University Information Systems Internet Portal
- ✓ Designing and developing software for university automation

South Valley University, Aswan, Egypt

Teaching Associate

September 1999 – April 2000

- ✓ Assisting in teaching courses to students of Electrical Engineering, Mechanical Engineering and introductory Engineering courses.
- ✓ Supervising graduation-projects

Industrial Work Experience

Technical Executive Officer, Ayonix Inc. Japan (www.ayonix.com)

January 2007 – March 2009

- ✓ Developed the complete first version of Ayofa SDK (A face detection/recognition SDK).
- ✓ Managed the development team of all products in the company including a face recognition SDK (Ayofa), an embedded system for automatic recognition of road signs for cars, several applications.

Freelancer Software Developer (Sample Projects)

January 1999 – October 2005

- ✓ Aswan Water Billing System (2001): Aswan Province Water Authority Billing System and Customer Tracking used during the period 06/00 to 10/02 (a project of CarlPro International funded by Danish International Development Aid),
- ✓ Assiut University Information Systems (2003): Includes designing and implementing databases for employees, students, and teaching staff. I was the technical manager and system designer of the project.,
- ✓ Integrated Hotel Manager (1999-2004): Design and implementation of a full hotel automation system for Reem hotel that is still in use today.
- ✓ Dar Albenaa Automation System (2005): A customer tracking, billing, accounting and store management system for a leading contractor in Egypt (Dar Albenaa for Building). The system is still in use

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Funded Projects

Grounded Action Segmentation and Association

November 2008 – March 2009

Role Principal Investigator

Sponsor Global Center of Excellence (GCOE) Young Researcher Program – Kyoto University

Goal To build and evaluate an unsupervised algorithm for learning interactive behavior both in implicit and explicit nonverbal communication settings using a novel technique that combines constrained motif discovery and probabilistic networks.

Results

- ✓ A novel algorithm for constrained motif discovery and its application to learning gesture interface during guided robot navigation.
- ✓ One international conference publication (IEEE IROS 2009).
- ✓ Exhibited in Kyoto University ICT Innovation Fair 2009. Kyoto University, Clock Tower, February 19th 2009.

Natural Listening for a Humanoid Robot

December 2007 – March 2008

Role Principal Investigator

Sponsor Global Center of Excellence (GCOE) Young Researcher Program – Kyoto University

Goal Designing and implementing a learning system that can help the robot achieve natural listening behavior in an automatic way.

Results

- ✓ A novel algorithm for learning and adapting hierarchies of dynamical systems representing interaction protocols.
- ✓ Four international conference and journal publications
- ✓ Exhibited in Kyoto University ICT Innovation Fair 2008. Kyoto University, Clock Tower, February 19th 2008.

Activities and Memberships

- ✓ Member of the reviewing/editorial board of Applied Intelligence and International Journal On Advances in Intelligent Systems.
- ✓ Reviewer of the following international journals (among others):
 - Social Robotics, New Generation Computing, AI & Society, Journal of Intelligent Learning Systems and Applications, ...
- ✓ Program committee member of the following international conferences (among others):
 - ISIEA2012, PECON2012, ACHI 2012, ICCCI 2011, ICAS 2007-2011, KUI 2007, ...
- ✓ Co-chair of the Special Session on Social and Cultural Interaction, 2011th International conference on Granular Computing, Kaohsiung, Taiwan
- ✓ Chaired pattern recognition session in IEEE ICIA conference 2008.
- ✓ Served as reviewer for the following international journals and conferences: IEEE RO-MAN 2009, IEEE HRI 2008-2012, KUI 2007, ICAS 2008-2012, etc.
- ✓ Member of the following societies:
IEEE, IEEE RAS, ACM, ISAI (International Society of Applied Intelligence), ICASE (Institute of Control and System Engineering) , RSJ (Robotics Society of Japan)

Languages

Arabic (native)

English (fluent, TOEFL 667 in 2005)

Japanese (basics)

References

Available upon request.

Yasser F. O. Mohammad

Publications since 2005

A. Invited Talks

- 1 Yasser Mohammad, "From Interaction Design to Interaction Protocol Learning", IST Seminar, Kyoto University, Japan, October 7th 2010.
- 2 Yasser Mohammad, "SSA application to motif discovery and causality analysis in robotics", Third International Conference on SSA and its applications, Beijing, China, May 17th-May 20th 2012.

B. International Journals

- 2 Yasser Mohammad and Toyoaki Nishida, Using Physiological Signals to Detect Natural Interactive Behavior, *Applied Intelligence*, 13(1) 79-92, 2010 [\[pdf\]](#)
- 3 Yasser Mohammad and Toyoaki Nishida, A Cross-Platform Robotic Architecture for Autonomous Interactive Robots, *International Journal of Applied Intelligence*, Vol. 32, No. 2, 2010, pp 148-163 [\[pdf\]](#)
- 4 Yasser Mohammad and Toyoaki Nishida, Constrained Motif Discovery in Time Series, *New Generation Computing Journal*, 27(2009)319-346 [\[pdf\]](#)
- 5 Yasser Mohammad and Toyoaki Nishida, Interaction Between Untrained Users and a Miniature Robot in a Collaborative Navigation Controlled Experiment, *International Journal of Information Acquisition*, World Scientific Publishing Company. Vol. 5, No. 4, April 2009, pp 291-308. [\[pdf\]](#)
- 6 Yasser Mohammad and Toyoaki Nishida, Towards Combining Autonomy with Interaction for Social Robots. Accepted for *AI & Society Journal*, Springer, (DOI 10.1007/s00146-009-0196-3), vol. 24, no. 1 (2009), pp 35-53 [\[pdf\]](#)
- 7 Yasser Mohammad and Toyoaki Nishida, Interactive Perception for amplification of intended behavior in complex noisy environment. *AI & Society Journal*, Springer, (DOI 10.1007/s00146-007-0137-y), vol. 23, no. 2, March 2009, pp 167-186 [\[pdf\]](#)
- 8 Toyoaki Nishida, Kazunori Terada, Takashi Tajima, Makoto Hatakeyama, Yoshiyasu Ogasawara, Xu Yong, Yasser F. O. Mohammad, Kateryna Tarasenko, Taku Ohya, and Tatsuya Hiramatsu, "Towards Robots as an Embodied Knowledge Medium", *IEICE Trans. On Inf. & Sys.*, vol E89-D, No 6, June 2006, pp: 1768-1780 [\[pdf\]](#)
- 9 Yasser Mohammad and Toyoaki Nishida, Fluid Imitation: Learning from Unplanned Demonstrations, *IJSR*, accepted with minor modification

C. Book Chapters (Refereed)

- 10 Yasser Mohammad and Toyoaki Nishida, Mining Causal Relationships in Multidimensional Time Series: Combining Constrained Motif Discovery with Granger Causality, in *Intelligent Systems for Knowledge Management*, ed. Ngoc Thanh Nguyen and Edward Szczerbicki, *Studies in Computational Intelligence*, Springer [\[pdf\]](#)
- 11 Yasser Mohammad and Toyoaki Nishida, Modeling Interaction Dynamics during Face-to-Face Interactions, in *Modeling Emotions for Realizing Intelligence*, ed. Toyoaki Nishida, Lakhmi Jain, Colette Faucher, Springer [\[pdf\]](#)
- 12 Yasser Mohammad and Toyoaki Nishida, Learning Interaction Structure using a Hierarchy of Dynamical Systems, In *Opportunities and Challenges for Next-Generation Applied Intelligence*, edited by Been-Chian Chien and Tzung-Peiong, *Studies in Computational Intelligence*, Springer, pp. 253-258 [\[pdf\]](#).

D. Major International Conferences/Workshops

- 13 Yasser Mohammad and Toyoaki Nishida, G-SteX: Greedy Stem Extension for Free-Length Constrained Motif Discovery, IEA/AIE 2012
- 14 Yasser Mohammad and Toyoaki Nishida, Common Sensorimotor Representation for Self-Initiated Imitation Learning, IEA/AIE 2012
- 15 Yasser Mohammad and Toyoaki Nishida, CPMD: A Matlab Toolbox for Change Point and Constrained Motif Discovery, IEA/AIE 2012
- 16 Yasser Mohammad and Toyoaki Nishida, Discovering Causal Change Relationships Between Processes in Complex Systems, IEEE SII 2011, pp. 12-17 [\[pdf\]](#)
- 17 Yasser Mohammad and Toyoaki Nishida, On Comparing SSA-based Change Point Discovery Algorithms, IEEE SII 2011, 938-945 (**Best Paper Award**) [\[pdf\]](#)
- 18 Yasser Mohammad and Toyoaki Nishida, Incremental Gesture Discovery for Interactive Robots, IEEE ROBIO 2010, Tianjin, China [\[pdf\]](#)
- 19 Yasser Mohammad and Toyoaki Nishida, Learning Interaction Protocols using Augmented Bayesian Networks Applied to Guided Navigation, Taipei, Taiwan, IROS 2010 [\[pdf\]](#)
- 20 Yasser Mohammad and Toyoaki Nishida, Learning Spontaneous Nonverbal Behavior using a Three Layers Hierarchy, 10th WSEAS International Conference on Applied Computer Science, Iwate, Japan, October 2010 [\[pdf\]](#)
- 21 Yasser Mohammad and Toyoaki Nishida, Unsupervised Learning of Interactive Behavior for HRI, RSS 2010 Workshop on Learning for Human Robot Interaction Modeling, Zaragoza, Spain, June 2010 [\[pdf\]](#)
- 22 Yasser Mohammad and Toyoaki Nishida, Down-Up-Down Behavior Generation for Interactive Robots, accepted for The Twenty Third International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems

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Publications since 2005

- (IEA/AIE 2010), June 2010, Spain [\[pdf\]](#)
- 23 Yasser Mohammad, Toyooki Nishida, and Shogo Okada, Autonomous Development of Gaze Control for Natural Human-Robot Interaction, International IUI2010 workshop on Eye Gaze in Intelligent Human Machine Interaction [\[pdf\]](#)
- 24 Yasser Mohammad, Toyooki Nishida, and Okada Shogo, Unsupervised Simultaneous Learning of Gestures, Actions and their Associations for Human-Robot Interaction, accepted for IEEE IROS 2009 (October 11 to 15, MO, USA) [\[pdf\]](#)
- 25 Yasser Mohammad and Toyooki Nishida, Robust Singular Spectrum Transform, the Twenty Second International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2009), June 2009, Taiwan [\[pdf\]](#)
- 26 Yasser Mohammad and Toyooki Nishida, Measuring Naturalness During Close Encounters Using Physiological Signal Processing, accepted as a full paper for the Twenty Second International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2009), June 2009, Taiwan ([Best Paper Award](#)) [\[pdf\]](#)
- 27 Yasser Mohammad and Toyooki Nishida, Learning Interaction Structure using a Hierarchy of Dynamical Systems, accepted as a short paper for the Twenty Second International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2009), June 2009, Taiwan [\[pdf\]](#)
- 28 Yasser Mohammad, Yong Xu, Kenichi Matsumura, and Toyooki Nishida, The H³R Explanation Corpus: Human-Human and Base Human-Robot Interaction Dataset, The Fourth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), Sydney, Australia, December 2008 [\[pdf\]](#)
- 29 Yasser Mohammad and Toyooki Nishida, Constrained Motif Discovery, International Symposium on Data Mining and Statistical Science, Tokyo, Japan, September 2008, pp 16-19 [\[pdf\]](#)
- 30 Yasser Mohammad and Toyooki Nishida, Human Adaptation to a Miniature Robot: Precursors of Mutual Adaptation, In Proceedings of IEEE 17th International Symposium on Robot and Human Interactive Communication (IEEE Ro-Man 2008), Munich, Germany, pp 124-129 [\[pdf\]](#)
- 31 Yasser Mohammad and Toyooki Nishida, Getting Feedback from a Miniature Robot, In Proceedings of IEEE International Conference on Informatics in Automation (ICIA 2008), June 2008, China, 941-947 [\[pdf\]](#)
- 32 Yasser Mohammad, Mutual Intention in Human-Robot Teams (Abstract), In Proceedings of First Egyptian Japanese International Symposium on Science and Technology (EJISST 2008), June 2008, Japan, pp 122-122
- 33 Yasser Mohammad, Toward Learning Interactive Behavior, In Proceedings of IEEE ICRA NEWHRI workshop 2008 (May 2008), Pasadena, USA [\[pdf\]](#)
- 34 Yasser Mohammad and Toyooki Nishida, Reactive Gaze Control for a Humanoid Robot, In Proceedings of IEEE International Conference on Robotics and Mechatronics (RAM 2008), September 2008, China, pp 47:54 [\[pdf\]](#)
- 35 Yasser Mohammad and Toyooki Nishida, Toward Agents that can Learn Nonverbal Interactive Behavior, In Proceedings of IAPR Workshop on Cognitive Information Processing, June 2008, Greece, pp 164-169 [\[pdf\]](#)
- 36 Yasser Mohammad and Toyooki Nishida, A Cross-Platform Robotic Architecture for Autonomous Interactive Robots, New Trends in Artificial Intelligence (The Twenty First International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2008), June 2008, Poland), pp 108-117 ([Best Paper Award](#)) [\[pdf\]](#)
- 37 Yasser Mohammad and Toyooki Nishida, Intention Through Interaction: Toward Mutual Intention in Real World Interactions, New Trends in Artificial Intelligence (Proceedings of IEA/AIE 2007, Kyoto, Japan), pp: 115:125 [\[pdf\]](#)
- 38 Yasser Mohammad and Toyooki Nishida, "TWO LAYERS ACTION INTEGRATION FOR HRI, Action Integration with Attention Focusing for Interactive Robots", In Proceedings of the International Conference on Informatics in Control, Automation & Robotics (ICINCO 2008), Funchal, Madeira, Portugal, May 2008, pp 41-48 [\[pdf\]](#)
- 39 Yasser Mohammad and Toyooki Nishida, Natural Listening Robot for AAL Applications, In Proceedings of the first International Workshop on IUI for Ambient Assisted Living (IUI4AAL 2008) in conjunction with the IUI 2008 conference, Canary Islands, Spain [\[pdf\]](#)
- 40 Yasser Mohammad and Toyooki Nishida, Natural Listening for a Humanoid Robot, In Proceedings of the International Conference on Informatics Education and Research for Knowledge-Circulating Society 2008 (ICKS 2008), IEEE Press, pp 153- 156 [\[pdf\]](#)
- 41 Yasser Mohammad and Toyooki Nishida, TalkBack: Feedback from a Miniature Robot, In AI 2007: Advances in Artificial Intelligence, 20th Australian Joint Conference on Artificial Intelligence, Gold Coast, Australia, December 2007, pp 357-366 [\[pdf\]](#)
- 42 Yasser Mohammad, Taku Ohya, Tatsuya Hiramatsu, Yasuyuki Sumi, Toyooki Nishida, Embodiment of Knowledge into the Interaction and Physical Domains Using Robots, In Proceedings of the International Conference on Control, Automation and Systems, 17-20 October 2007, Seoul Korea, pp:737-744 [\[pdf\]](#)
- 43 Yasser Mohammad and Toyooki Nishida, A New, HRI Inspired, View of Intention and Intention Communication. In Proceedings of AAI-07 WS-06 Human Implications of Human-Robot Interactions Workshop, (July 22–July 28, Vancouver, Canada), 2007, pp 21-27 [\[pdf\]](#)
- 44 Yasser Mohammad and Toyooki Nishida, EICA: Combining Autonomy with Interaction for Social Robots. In Proceedings of Social Intelligence Development 2007 Workshop (SID07), (July 2–4, Trento), 2007, pp 227-236 [\[pdf\]](#)
- 45 Yasser Mohammad and Toyooki Nishida, NaturalDraw: Interactive Perception Based Drawing for Everyone. Proceedings of the 12th international conference on Intelligent user interfaces (IUI2007) (January 27-January 31, Honolulu, Hawaii, USA), 2007, pp: 251-260 [\[pdf\]](#)
- 46 Yasser Mohammad and Toyooki Nishida, Interactive Perception for amplification of intended behavior in complex noisy environment. In Proceedings of Social Intelligence Development 2006 Workshop (SID06), (March 24–March 26, Osaka, Japan), 2006, pp: 173 – 187 [\[pdf\]](#)
- 47 Yasser F. O. Mohammad, Hany M. Harb, Yousef B. Mahdy, Montaser M. Mohammed, "Overcoming Kerberos Structural Limitations", 38th Annual Conference of Statistics, Computer Sciences and Operations Research Proceedings 2003, Cairo, Egypt, pp: 172-187 [\[pdf\]](#)