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## Highlights

- Education
  - BSc and MSc in Computer Engineering (Cairo University).
  - MS/PhD in Computer Science University of Massachusetts Amherst, USA, GPA of 4.0.
- Research
  - H-index of 11 with 460 citations<sup>1</sup>
  - 25+ total publications
    - 6 journal publications, 5 of which with impact factor of 1.5+
    - 10 publications in highly competitive conferences with acceptance rate less than 25%
  - Runner-up for “Best Paper Award” for work on adaptive networks (top 1.5% of all submissions)
  - Pioneering a new interdisciplinary research area that applies techniques from network analysis to analyze networks of adaptive multi-agent systems with two single-author publications.
  - 8 research grants applications.
    - Successfully completed 4 research grants
    - Secured 2 more research grants (one of which from Emirates Foundation)
- Community Service and Peer Recognition
  - Four invited talks in different international universities and conferences.
  - Co-chair of the fourth SNA-KDD Workshop on Social Network Mining and Analysis (2010).
  - Co-organized the first agent school in the Middle East (2008).
  - Senior Program Committee member of the International Joint Conference on Autonomous Agents and Multi-agent Systems, AAMAS (2011-2012).
  - Chairing sessions in the main technical program of the International Joint Conference on Autonomous Agents and Multi-agent Systems, AAMAS (2011).

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<sup>1</sup> Computed based on Google-scholar, <http://scholar.google.com/citations?user=R7ngExMAAAAJ&hl=en>

- Program committee member of AAMAS (2008, 2009, 2010, 2013) and the International Conference on Artificial Intelligence, AAAI (2008, 2010).
- Refereed articles for Journal of Machine Learning Research, Journal of Artificial Intelligence Research, ACM Transactions on Autonomous and Adaptive Systems, Journal of Autonomous Agents and Multi-Agent Systems, IEEE transactions on Systems, Man, and Cybernetics.
- Provided consultation for the Down's Syndrome Association (local) and the Ergo research and consulting firm (international).
- Teaching
  - 7 graduate-level modules and teaching assistant for 7 modules, 6 of which were undergraduate-level.
  - Designed the structure and developed the teaching material for all the graduate-level modules.
  - Consistently receiving highly-positive feedback from students both through end-of-module questionnaire and the feedback from the program annual review panel.
- Supervision
  - Successfully supervised 15 MSc students to completion (main supervisor for 9) and 1 PhD student.
- Administration
  - Lead the final accreditation of the BUiD MSc in Informatics program
  - Co-developed the MSc in Informatics program
  - Co-developed two new undergraduate degrees in computer science.
  - Head of the Informatics program (2010)
  - Dissertation coordinator & Exam coordinator of two programs (MSc in Informatics and MSc in IT management) (2007-2010)
  - Chair of website committee, secretary of the research committee, and active member of 5 university committees.

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## Awards and Honors

- Runner-up for Best Paper Award (out of 531 submitted papers) at Sixth International Joint Conference on Autonomous Agents and Multi-Agent Systems, May 2007.
- 2001-2006 MS/PhD scholarship from University of Massachusetts, Amherst, USA (offered scholarship from University of Toronto and University of McMaster but declined).
- 1998-2001 MS scholarship from Cairo University, Egypt
- 1998 Graduated with distinction with honour (ranked 3<sup>rd</sup>), Cairo University
- 1998 Egyptian Engineers Syndicate Award of Excellence
- 1993-1998 (annually awarded) Cairo University Award of Excellence

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## Education

- 2003-2006, **PhD** in Computer Science(Artificial Intelligence), **University of**

**Massachusetts, Amherst, USA. GPA 4.0**

**Thesis Topic:** "Scalable Multi-agent Reinforcement Learning"

**Committee:** Victor Lesser (Advisor), Shlomo Zilberstein, Sridhar Mahadevan, and Abhi Deshmukh.

- 2001-2003, **MS** in Computer Science(Artificial Intelligence), **University of Massachusetts, Amherst, USA. GPA 4.0**  
**Project Topic:** "Extending Q-Fabric QoS Architecture with a Learning Component"  
**Advisors:** Victor Lesser and Jim Kurose
- 1998-2001, **MS** in Computer Engineering, Cairo University, Egypt. GPA 3.6.  
**Thesis Topic:** "Monitoring and synchronization for teamwork in GPGP"  
**Advisors:** Neveen Darwish, Osman Hegazy, and Ihab Talkhan.
- 1993-1998, **BE** in Computer Engineering, **Cairo University**, Egypt. Distinction with Honour Degree (90.35%, with GPA equivalent of 3.82).  
**Graduation Project:** "JAVANET: Network Management and Monitoring Software"

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## Personal Information

- Born 2/1976, Cairo, Egypt
- Visa Status: Resident of UAE.
- Languages: English, Arabic
- Hobbies: chess (played in the Egyptian national league), squash, ping pong, and soccer.

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## Affiliations

- **Associate Professor, 2011 –present** *British University in Dubai, Institute of Informatics, Dubai, United Arab Emirates*
- **Assistant Professor, 2006 –2011** *British University in Dubai, Institute of Informatics, Dubai, United Arab Emirates*
- **Honorary Fellow, 2006 – present** *University of Edinburgh, Institute of Informatics, UK*
- **Research Assistant, 2001 - 2006** *University of Mass., Department of Computer Science, MAS Lab, USA*
- **Teaching Assistant, 2006 - 2006,** *University of Mass., Department of Computer Science, USA*
- **Assistant Lecturer, 2001 - present** *Cairo University, Faculty of Computers and Information, Egypt*

- **Teaching Assistant, 1998 – 2001** *Cairo University, Faculty of Computers and Information, Egypt*
- **Course Instructor, 1998 - 1999** *Cairo University, Faculty of Engineering, Egypt*
- **Independent Developer, 1998 – 2001** *Egypt*

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## Teaching

Course	University	Dates
Research methods	British University in Dubai	Fall 2010, Fall 2011, Fall 2012
Knowledge Engineering	British University in Dubai	Spring 2010
IT Project Management	British University in Dubai	Spring 2012, Spring 2013
Data Mining	British University in Dubai	Spring 2007, Spring 2008, Fall 2009, Spring 2011, Spring 2012, Spring 2013
Learning from Data	British University in Dubai	Fall 2006, Fall 2007, Fall 2008, Spring 2010, Summer 2011, Summer 2012
Web Design Project	British University in Dubai	Summer 2012
Knowledge Representation	British University in Dubai	Spring 2009
Multi Agent Systems (teaching assistant)	University of Massachusetts, Amherst, US	Fall 2005
Java (instructor) Database Systems (teaching assistant) Operating Systems (teaching assistant) Computer Architecture (teaching assistant)	Cairo University, Egypt	Spring 2001
Programming Languages (teaching assistant) Artificial Intelligence (teaching assistant) Expert Systems (teaching assistant)	Cairo University, Egypt	Fall 2000

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## Research Funding

### Completed

Date	Source	Grant Title	Role	Awarded Fund
1/2010	British University in Dubai	An Experimental Platform for Argumentation	Co-PI	47000 AED
6/2009	University of Massachusetts	International Expert Travel Grant	PI	30,000 AED
6/2009	British University in Dubai	Multi-agent Learning in a Self-Organizing Network	PI	37,000 AED

01/2008	Int. Foundation of Autonomous Agents and Multi Agent Systems	Dubai Agent-based Systems School (DASS)	Co-PI	30,000 AED
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### Secured

Date	Source	Grant Title	Role	Awarded Fund
1/2011	Emirates Foundation	Applying graph Data Mining Techniques to Self-Organizing Network of Agents	PI	295,000 AED
6/2012	British University in Dubai	Comparative Study of Multi-agent Learning in Networks Using Network Analysis	PI	44,000 AED

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## Academic Service and Activities

### Administration and Leadership

- Led the final accreditation of the IT program at the British University in Dubai.
- Co-developed two new undergraduate degrees in computer science.
- Currently the chair of website committee, the secretary of the research committee, and an active member of: board of studies, learning and teaching committee, library and learning resources forum, the scientific conference committee, and the annual program review panel for Sustainable Design of the Built Environment program.

### Supervision

- Supervised 16 MSc students to completion (main supervisor for 12 of them) and one PhD student. Currently supervising 8 MSc students (main supervisor) and one PhD student.

### Conference/Workshop Organization

- Fourth SNA-KDD Workshop on Social Network Mining and Analysis (Co-chair), 2010
- First agent school in the Middle East, 2008 (Co-organizer)

### Senior Program Committee

- International Joint Conference on Autonomous Agents and Multi-agent Systems, AAMAS (2011-2012)

### Program Committee

- International Joint Conference on Autonomous Agents and Multi-agent Systems, AAMAS (2008-2010, 2013)
- International Conference on Artificial Intelligence (AAAI 2008, 2010)

- Workshop on Multi-Agent Systems: Theory and Applications
- Workshop on Adaptive and Learning Agents (AAMAS 2010)

### Refereeing

- Journal of Machine Learning Research
- Journal of Artificial Intelligence Research
- ACM Transactions on Autonomous and Adaptive Systems
- Journal of Autonomous Agents and Multi-Agent Systems
- IEEE transactions on Systems, Man, and Cybernetics
- Journal of Social Network Analysis and Mining

### Invited Talks

- “Multi-agent Reinforcement Learning”, Nagoya Institute of Technology, Japan, 2009, part of PRIMA’09 agent school
- “Mining a network of adaptive agents”, Cairo University, Egypt, 2009
- "To PhD and Beyond", part of the international doctoral mentoring program in the 6<sup>th</sup> International Joint Conference on Autonomous Agents and Multi-agent Systems, U.S.A., 2007
- "Coordination and Negotiation using GPGP", Universidade Federal do Rio Grande do Sul, Brazil, 2002

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## Publications

### Journals and Book Chapters

- [1] S. Abdallah. *Analyzing the Learning Dynamics of Agent Networks Using Data Mining* (under review)
- [2] S. D'Souza, Y. Gal, P. Pasquier, S. Abdallah, and I. Rahwan (in press). *Reasoning about Goal Revelation in Human Negotiation*. **IEEE Intelligent Systems**. **Impact Factor = 2.15**
- [3] S. Abdallah. *A New Methodology for Generalizing Unweighted Network Measures* (2011). **Social Network Analysis and Mining**. **Volume 1, Issue 4, pages 255-269**
- [4] Rahwan, M. I. Madakkatel, J. F. Bonnefon, R. N. Awan and S. Abdallah (2010). *Behavioural Experiments for Assessing the Abstract Argumentation Semantics of Reinstatement*. **Cognitive Science**. **Volume 34, Issue 8, pages 1483–1502**. **Impact Factor = 2.383**
- [5] Rahwan, B. Banihashemi, C. Reed, D. Walton and S. Abdallah (2010). *Representing and Classifying Arguments on the Semantic Web*. **The Knowledge Engineering Review**. **Impact Factor = 1.588**

- [6] S. Abdallah and V. Lesser (2008) "A *Multiagent Reinforcement Learning Algorithm with Non-linear Dynamics*". **Journal of Artificial Intelligence Research, Volume 33, pages 521-549. Impact Factor = 1.79**
- [7] XiaoQin Zhang, Victor Lesser, Sherief Abdallah. *Efficient Management of Multi-Linked Negotiation Based on a Formalized Model*. **Journal of Autonomous Agents and Multi-Agent Systems, Volume 10, Number 2, March 2005. Impact Factor = 2.125**
- [8] S. Abdallah and Victor Lesser. *Learning Scalable Coalition Formation in an Organizational Context*. **Book chapter in "Challenges in the Coordination of Large Scale Multiagent Systems", published by Springer. 2005**

### Refereed Conferences and Workshops

- [9] Abdallah, S., Kaisers, M., (2013). Addressing the Policy-bias of Q-learning by Repeating Updates. In the proceedings of the Twelfth International Conference on Autonomous Agents and Multiagent Systems, AAMAS (*acceptance rate 23%*)
- [10] Abdallah, S., Shaalan, K., Shoaib, M., (2012) Integrating Rule-based System with Classification for Arabic Named Entity Recognition, In the Proceedings of The 13th International Conference on Intelligent Text Processing and Computational Linguistics (CICLing), March 11–17, New Delhi, India, Springer Lecture Notes in Computer Science.
- [11] S. Abdallah. (2012) Using a hierarchy of coordinators to overcome the frontier effect in social learning. In the proceedings of the Eleventh International Conference on Autonomous Agents and Multiagent Systems, AAMAS (extended abstract)
- [12] S. Abdallah (2010). Using *Graph Analysis to Study Networks of Adaptive Agents*. In: Proceedings of 9th International Conference on Autonomous Agents and Multiagent Systems (AAMAS) (*acceptance rate 23%*)
- [13] I. Rahwan, F. Jahedpari and S. Abdallah (2010). *The Dynamics of Two Cognitive Heuristics for Coordination on Networks*. In: Proceedings of the 2nd IEEE International Conference on Social Computing (SocialCom), Symposium on Social Intelligence and Networking (SIN), Minneapolis, USA.
- [14] C. Zhang, S. Abdallah, and V. Lesser (2010). *Self-Organization for Coordinating Decentralized Reinforcement Learning*. In: Proceedings of 9th International Conference on Autonomous Agents and Multiagent Systems (AAMAS) (*acceptance rate 23%*)
- [15] S. Abdallah. *Generalizing Unweighted Network Measures Using the Effective Cardinality*. Proceedings of the 3rd workshop on Social Network Mining and Analysis (SNA), International Conference on Knowledge Discovery and Data Mining, 2009 (*acceptance rate 29%*)
- [16] C. Zhang, Sherief Abdallah, and Victor Lesser (2009). *Integrating Organizational Control into Multi-Agent Learning*. In: Proceedings of 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS) (*acceptance rate 22%*)
- [17] A. Alshamsi, S. Abdallah and I. Rahwan (2009). *Multiagent Self-Organization for a Taxi Dispatch System*. In: Proceedings of the 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS) (industrial track)

- [18] Y. Gal, S. D'souza, P. Pasquier, I. Rahwan and S. Abdallah (2009). *The Effects of Goal Revelation on Computer-Mediated Negotiation*. In: Proceedings of the Annual meeting of the Cognitive Science Society (CogSci), Amsterdam, The Netherlands.
- [19] M. I. Madakkatel, I. Rahwan, J. F. Bonnefon, R. N. Awan and S. Abdallah (2009). *Formal Argumentation and Human Reasoning: The Case of Reinstatement*. In: Proceedings of the AAAI Fall Symposium on The Uses of Computational Argumentation, Washington DC, USA.
- [20] Sherief Abdallah and Victor Lesser (2008). *Non-linear Dynamics in Multiagent Reinforcement Learning Algorithms*. In: Proceedings of 7th International Conference on Autonomous Agents and Multiagent Systems (AAMAS). Estoril, Portugal. *(acceptance rate 37%)*
- [21] Chongjie Zhang, Sherief Abdallah, and Victor Lesser (2008). *Efficient Multi-Agent Reinforcement Learning through Automated Supervision*. In: Proceedings of 7th International Conference on Autonomous Agents and Multiagent Systems (AAMAS). Estoril, Portugal. *(acceptance rate 37%)*
- [22] S. Abdallah and V. Lesser. *Multiagent Reinforcement Learning and Self-organization in a Network of Agents*. In Proceedings of 6th International Joint Conference on Autonomous Agents and Multi-agent Systems, AAMAS, 2007 *(acceptance rate 22%) Runner-up for "Best Paper Award" (top 1.5%)*.
- [23] S. Abdallah and V. Lesser. *Learning the Task Allocation Game*. In Proceedings of 5th International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS, 2006 *(acceptance rate 24%)*.
- [24] S. Abdallah and V. Lesser. *Modeling Task Allocation Using a Decision Theoretic Model*. In Proceedings of 4th International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS, 2005 *(acceptance rate 24%)*.
- [25] J. Ostwald, V. Lesser, and S. Abdallah. *Combinatorial Auctions for Resource Allocation in a Distributed Sensor Network*. In proceedings of the 26th IEEE International Real-Time Systems Symposium, (RTSS'05), IEEE Computer Society Press. December 2005 *(acceptance rate 21%)*.
- [26] M. Zink, D. Westbrook, S. Abdallah, et al. *Meteorological Command and Control: An End-to-end Architecture for a Hazardous Weather Detection Sensor Network*. Proceedings of the ACM Workshop on End-to-End, Sense-and-Respond Systems, Applications, and Services (EESR 05), pp. 37-42. June 2005.
- [27] S. Abdallah and V. Lesser. *Learning Task Allocation via Multi-Level Policy Gradient Algorithm with Dynamic Learning Rate*. Workshop on Planning and Learning in A Priori Unknown or Dynamic Domains, the International Joint Conference on Artificial Intelligence, IJCAI 2005.
- [28] S. Abdallah and V. Lesser. *Organization-Based Cooperative Coalition Formation*. In Proceedings of Intelligent Agent Technology, IAT, 2004 *(acceptance rate 16%)*.
- [29] S. Abdallah, H. Zhang, and V. Lesser. *The Role of an Agent Organization in a Grid Computing Environment*. In Proceedings of ICAPS'04 workshop on planning and scheduling for web and grid services, June 2004.
- [30] XQ Zhang; V. Lesser; and S. Abdallah. *Efficient Ordering and Parameterization of Multi-Linked Negotiation*. In Proceedings 2nd International Joint Conference on Autonomous Agents and Multiagent Systems. (Extended abstract), July, 2003. Full version available as UMASS Computer Science Tech. Report #02-42.

- [31] S. Abdallah and et al. *Monitoring and Synchronization for Teamwork*. In Proceedings of 17th ACM Symposium on Applied Computing (the Special Track of Coordination Models, Languages and Applications). March, 2002 (*acceptance rate 42%*).

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## **Selected Developed Software**

- Optimizing performance of a distributed radar network for detecting tornadoes and severe weather conditions, implemented in Java.
- First Java implementation of SOAR, a cognition programming language.
- P2P Game API written for Java-enabled PDAs. The system was tested on 4 real PDAs (Sharp Zaurus) and up to 200 simulated PDAs.
- Software controller of large LED displays, implemented in C.
- Network management software using SNMP with automatic detection of network topology and user-defined MIB objects. Implemented in Java

## **References**

Provided upon request