Biography

Dr. Raouf HAMDAN, Ph.D in Computer Engineering (Computer Vision)

Personal Information

Name: Raouf HAMDAN

Nationality: Syrian,   Date of Birth: 20 March 1967

Damascus University - Faculty of Mechanical & Electrical Engineering

Department of Computer Engineering & Automation (2001 → present)

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Education:

- **Ph.D. in Computer Vision** & Digital Image Processing, January 2001, **L**aboratoire des **S**ciences de l'**I**mage, de l'**I**nformatique et de la **T**élédétection (**LSIIT**), Louis Pasteur University (Strasbourg-I University, France).
  Dissertation: Dynamic scene analysis in long Image sequence (Detection, tracking and recognition of pattern and motion using visual learning and probabilistic appearance models).
- **M.Sc. : DEA** Photonique & Image, 1996, Louis Pasteur University, France
- **B.Sc.** in Electronic Engineering, summer 1990, Damascus University, Syria

Skills

- **Programming** with practical experience in Java, C#, C/C++, Python, Matlab.
- **Internet & Web Programming**: Java, Network Application Programming, Internet Sockets, HTML, XML, PHP, MySQL, Multimedia Integration.
- **Operating systems:** UNIX, Linux, Windows, Android.
- **Languages:** Native Arabic, good English and French.

Research Experience: Computer Vision, Image Sequence Analysis, Computer Networks, Network Application Programming, Real-Time Systems, Distributed and Cloud Computing, Machine Learning, Deep Learning, Probabilistic Appearance Models, Hidden Markov Models.

Teaching Experience:

Damascus University: 2001 → present: Computer Engineering & Automation Department

Head of Department of Computer Engineering & Automation 2019 → present

Department	Courses
Master in Computer Engineering	Mobile Network Programming
Computer Engineering & Automation 5th year	Network Programming Neural Networks, Computer Vision Expert Systems
Computer Engineering & Automation 4th year	Database
Computer Engineering & Automation 2nd year	Programming II (Object-Oriented Programming)

Biomedical Engineering	Programming I , Programming II

Arab International University (Full Time: September 2010 → August 2014)
<p align="center">(Part time: September 2014 → present)</p>

Vice Dean: Faculty of Informatics & Communication Engineering (September 2011 → September 2014)

- **Courses at Arab International University:**

Wireless Systems & Networks	System Programming
Distributed Information Systems	Neural Networks
Data Communications	Fuzzy Logic
Computer Graphics	Multimedia
Virtual Reality	Computer Vision
Network Application Development	Application Development

University of Kalamoon (Full Time: September 2008 → August 2010)

Department of Computer Engineering & Department of Information Technology

- **Courses at University of Kalamoon:**

Wireless Networks	Introduction to Computer Vision
Data Communication & Computer Networks(I)	Data Communication & Computer Networks(II)
Real-Time Embedded Systems	Advanced Digital Design
Computer Interfacing	

Conferences and Workshops

- IEEE International Conference on Computer Vision & Pattern Recognition, CVPR'99, Colorado, June 1999.
- 17th Colloque GRETSI, (French Conference on signals and images etc…), Vannes, France, September 1999.
- UNESCO Advanced School in Informatics (Algorithms, Computer Networks, Programming Languages), Damascus, 11-25 April 2003
- Workshop on WiMAX Technologies organized by the Scientific Arab School (June 2007).
- International Conference on Information & Communication Technologies: From Theory to Applications – ICTTA'06**,** 24–28 April 2006, Damascus, Syria
- International Conference on Information & Communication Technologies: From Theory to Applications – ICTTA'08**,** April 2008, Damascus, Syria

Training & Practice

- Participation in the second training session for Avicenna Virtual Campus in Paris, September 2003, and in the third training session in Algeria, January 2004.
- **Technical Expert** of the Avicenna Knowledge Center (AKC) at Damascus University. (2003 → 2008) A Mediterranean project coordinated by UNESCO. The AVICENNA project is dedicated to accelerating the ICT-assisted Open Distance Learning (ODL) in 11 Mediterranean non-EU Member States.
- **Principal Instructor** for the training sessions organized by the training center at the Arab States Broadcasting Union (ASBU) about Internet Protocol Television (IPTV) and Internet TV:
    - 1st Session - Damascus July 2010
    - 2nd Session - Tunis 10 → 18 September 2012
    - Sessions broadcasted from the training center at Damascus: 2014 and Mars 2016
    - Muscat 5 → 10 august 2018 (Internet Protocol Television IPTV)
    - Evolution of Digital Television platforms (Tunis, July 2019)
- Principal Instructor for the training session organized by the Open Learning Center at Damascus University about the design of Interactive courses (19-30 March 2006).

- Tutor for the formation organized by (Campus Numérique Francophone CNF) about the creation of Dynamic web pages (December 2004).
- Tutor for the formation organized by CNF in Damascus University about the creation of Interactive courses and multimedia (26 -30 September 2004).

Supervised Master & Ph.D. Projects:
- Maneuvering Targets Detection and Tracking in Visual Videos (2008)
- Pattern Recognition using Artificial Immune System (2008)
- Reducing Handover Latency in next generation Wireless Networks Using IEEE802.21 (2012)
- Video Processing for Information Extraction (2016)
- Improving Multimedia Streaming over Software Defined Networks (Master 2019)
- Improving throughput in Software Defined Networks (Ph.D. project in progress)

Publications:
- R. Hamdan, F. Heitz and L. Thoraval. *Gesture Localization and Recognition using Probabilistic Visual Learning*. In IEEE Computer Vision & Pattern Recognition, CVPR'99, Volume 2, pp. 98 -103, Colorado, June 1999.
- R. Hamdan, F. Heitz, L. Thoraval. *Segmentation et reconnaissance du geste: une approche par MMC et modèle probabiliste d'apparence*. 17ème Colloque GRETSI, Vannes, France, September 1999.
- R. Hamdan, F. Heitz and L. Thoraval. *Modèles probabilistes d'apparence : une représentation approchée de faible complexité*. Traitement du Signal, Vol. 18, No. 3, 2001, pp. 147-160.
- R. Hamdan. *Détection, suivi et reconnaissance des formes et du mouvement par modèles probabilistes d'apparence*. Ph.D. thesis, Strasbourg-I University. Thesis advisor: F. Heitz. Referees: P. Bouthemy (IRISA Rennes), K. Tombre (LORIA Nancy), P.-L. Wendel (Strasbourg-I University), January 2001.
- R. Hamdan, F. Heitz and L. Thoraval. *A low complexity approximation of probabilistic appearance models*. Pattern Recognition, Vol. 36, No 5, May 2003, pp. 1107-1118.
- M. S. Hajar, M. K. Chahine and R. Hamdan. *An Effective Prediction Model for Generating Link Going Down Event of IEEE802.21*. Asian Journal of Information Technology, 14: 187-191. 2015