

Curriculum Vitae

Ihab AbdelWahab AbdelGawad Ali

I. Personal

Name: **Ihab AbdelWahab AbdelGawad Ali**

Current Job: Associate Professor, Communications and Electronics Eng. Dept., Helwan University.

II. Education

Ph.D., Communications and Electronics Eng., Helwan University, Helwan, Cairo, Egypt, July 1997 (**Under Joint-Supervision Channel, Helwan University/Queen's University, Canada**).

Thesis title, “**Fast Switching for Broadband ISDN: Routing in Asynchronous Transfer Mode**”

M.Sc., Communications and Electronics Eng., Helwan University, Helwan, Cairo, Egypt, July 1991.

Thesis title, “**Transmission of Scrambled Voice over Bandlimited Channels**”

B.Sc., Communications and Electronics Eng., Helwan University, Helwan, Cairo, Egypt, May 1985. Grade: Excellent (87.82%). Rank: First on a class of 186 students. Project grade: Excellent.

Project title “**Realization of Digital Filters through their Polar Curves**”

III. Other Qualifications

1. Successfully passed “Credit Hour System Workshop,” Helwan University.
2. Successfully passed “Strategic Planning Workshop,” Helwan University.
3. Successfully passed “Managing Research Team Workshop,” Helwan University.
4. Successfully passed “Competitive Research Projects Workshop,” Helwan University.
5. Successfully passed “Time and Conference Management Workshop,” Helwan University.
6. Successfully passed “Active Presentation Workshop,” Helwan University.
7. Successfully passed International Computer Driving License (ICDL) exams at Umm Al-Qura University Computer Centre.
8. Successfully passed an E-Learning course titled “**Black Board**” at Umm Al-Qura University Computer Centre.
9. Successfully passed two training courses offered by Motorola University; a course titled “ **Operation of Van Guard Devices** ” and a course titled “ **Simple Network Management Protocol** ”.
10. Successfully passed a training course given by **US AID** in “**Y2K Readiness Processes, Procedures and Techniques**” at the **Egyptian High Tec Association (EHITA)**.
11. Successfully passed “Faculty Member Preparation Workshop,” Helwan University.

IV. Awards

1. Egyptian Government Scholarship, Ph.D. Co-Supervision Program, Helwan University, Egypt -- Queen's University, Canada, Oct. 1994-Feb. 1997.
2. Excellence Award, Helwan University, 1982-85. I stood first on my class for those three undergraduate years with grade Excellent.

V. Employments

1. Associate Professor, Communications, Electronics and Computer Eng. Dept., Helwan University, Egypt since April 2004.
2. Co-ordinator, Communications and Information Technology Special Program, Faculty of Engineering at Helwan, Helwan University, Egypt since February 2010.
3. Assistant Professor, Electrical Eng. Dept., Umm Al-Qura University, Makkah, Saudi Arabia, September 2002-July 2009.
4. Assistant Professor, Computer Eng. Dept., October 6 University, October 2001 – September 2002.
5. Assistant Professor, Communications and Electronics Eng. Dept., Helwan University, Egypt Oct. 1997 – April 2004.
6. Visiting Professor, United Arab Emirates University, Al-E-Ain, UAE, March-June 2000.
7. Visiting Scholar, Electrical and Computer Eng. Dept., Queen's University, Canada, Oct. 1994-Feb. 1997.
8. Assistant Lecturer, Communications and Electronics Eng. Dept., Helwan University, Egypt, Oct. 1991-Oct. 1997.
9. Instructor, Communications and Electronics Eng. Dept., Helwan University, Egypt, March 1986-Oct. 1991.

VI. Computer Experience

1. I joined a teamwork developing a Network Simulation Tool software package called QUARTS at Queen's University. My contribution was the development of the Routing Module. For more details about that project please refer to reference [27] in publications' section below. I've supervised projects to add support of multicasting and mobility to the simulator now called MobiATROS at Helwan University (see references [1,24] below).
2. Programming in C in both DOS/Windows and UNIX platforms.

VII. Teaching and Training Experience

1. From March 1986 to Oct. 1994, I've been assisting in teaching many courses such as: Communications Theory and Systems, Data Communications and Computer Networks, Mobile Communications, Broadband Communications, Information Theory and Coding, Electronic Devices, Analog and Digital Electronic Circuits, Circuit Theory, Antennas and Wave Propagation.
2. Since Oct. 1997, I've been teaching courses in the area of Communications and Networking for both Undergraduate and Postgraduate students at Helwan University, October 6 University, United Arab Emirates University and Umm Al-Qura University. Courses I've been teaching include: Data Processing, Analog and Digital Communications , Measurements and Lab, Data Encryption and Security, Digital Television, Computer Network and Network Security, Wave Propagation, Signals and Systems, Electronic Circuits, Electric Circuits, Information Theory and Coding, Fundamentals of Electrical Engineering and Seminars in Electrical Engineering. I've lately used Blackboard E-Learning utility at Umm Al-Qura University as a means of teaching and examining my students in small groups.
3. Supervising many graduation Projects; Including, Development of Network Simulation Tools, Data Communication over Power Lines, Secure Multimedia Communications, Public and Symmetric Key Encryption Implementation and Voice Transmission over Slotted Ring LANs.

4. Technical Training at Mansoura University Computing Center in 1997. I've been teaching its Engineering Staff Computer Networking and ATM.
5. Technical Reader (1999-2000) at "Systems Engineering of Egypt (SEE)"; a leading networking company in Egypt that sells, builds and maintains networking devices for the leading vendors all over the world. My job responsibility was to update the Engineers at SEE with the newest technologies and products.
6. Technical Training at the Egyptian Cabinet's Information Technology Institute (1998-2000). I've been lecturing Computer Networks , High-speed networking (Frame Relay, ATM, etc.) and Network Security.

VIII. Publications

1. Ahmed M. Abd El-Haleem, **Ihab A. Ali**, Ibrahim I. Ibrahim, Abdel Rahman H. El-Sawy, "Trust Model for TRIDNT Trust Based Routing Protocol," Accepted by the 2nd International Conference on Computer Technology and Development (ICCTD 2010) to be held on November 2-4, 2010, Cairo, Egypt.
2. Ahmed M. Abd El-Haleem, **Ihab A. Ali**, Ibrahim I. Ibrahim , Abdel Rahman H. El-Sawy, "TRIDNT: Isolating Dropper nodes with some degree of Selfishness in MANET," submitted to Wireless Communications and Mobile Computing (under review).
3. Ahmed M. Abd El-Haleem, **Ihab A. Ali**, Ibrahim I. Ibrahim, Abdel Rahman H. El-Sawy, "TRIUMF: Trust-Based Routing Protocol with controlled degree of Selfishness for Securing MANET against Packet Dropping Attack," submitted to International Journal of Communication Systems (under review).

4. **Ihab Ali**, "MobiATROS: A Network Simulator with Mobility and Multicasting Support," Proceedings of the 4th International Multiconference on Computer Science and Information Technology, College of Computer Science and Information Technology, Applied Science Private University, Amman, Jordan, 2006.
5. Ibrahim I. Ibrahim, **Ihab A. Ali**, Abd El-Rahman H. ElSawy and Mahmoud M. El-Mesalawy, "Performance Analysis for QoS Provisioning in MPLS/DiffServ-Based IP Network," Journal of Engineering Sciences (JES), Faculty of Engineering - Assiut University, vol. 33,Egypt, 2005.
6. Mahmoud M. El-Mesalawy, **Ihab A. Ali**, Ibrahim I. Ibrahim, Abd El-Rahman H. Elsayy, " QoS Enhancement in MPLS-Based IP Networks," Journal of Engineering Sciences (JES), Faculty of Engineering - Assiut University, vol. 33,Egypt, 2005 .
7. M. A. Habeib, I. I. Ibrahim, **I. A. Ali** and N. A. El-Fishawy, " Enhanced Hopfield Neural Network for Dynamic Channel Assignment," Al-Azhar Engineering Eighth International Conference, AEIC 2004, vol. 8, No. 3, pp. 124-132, Egypt, 2004.
8. Maged H. Ibrahim, **I. A. Ali** I. I. Ibrahim and A. H. El-Sawy, "Reducing the Risk of the Honest Dealer Assumption in Robust Threshold RSA Function Sharing," Proceedings of the 1st International Computer Engineering Conference, Cairo, Egypt, 2004.
9. Maged H. Ibrahim, **I. A. Ali** I. I. Ibrahim and A. H. El-Sawy, "Fast Fully Distributed and Threshold RSA Function Sharing," Proceedings, International Conference on Information Technology (ISNG 2004), pp. 11-15, Las Vegas, Nevada, USA, 2004.
10. Ali M. Allam, Ibrahim I. Ibrahim, **Ihab A. Ali** and Abdel Rahman H. El-Sawy, "The Performance of an Efficient Zero-Knowledge Identification Scheme," The 2004 International Conference on Electrical, Electronic and Computer Engineering (ICEEC'04), Cairo, Egypt, 2004.
11. Tamer Barakat, Ibrahim Ismail, **Ihab Ali** and Nabil Abdrabouh, " Optimized Security of WAP based on Modification of Encryption

Algorithm for PKQ Cryptosystem in Mobile Networks," The Ninth IEEE Symposium on Computers and Communications, Egypt, 2004.

12. Ali M. Allam, Ibrahim I. Ibrahim, **Ihab A. Ali** and Abdel Rahman H. El-Sawy, " Provably Secure Entity Authentication- The Three Party Case," The Ninth IEEE Symposium on Computers and Communications, Egypt, 2004. The paper was awarded the co-best paper award by the technical program committee of the conference. This paper has also been accepted by the 17th Annual Canadian Conference on Electrical and Computer Engineering, 2004.
13. Maged H. Ibrahim, **I. A. Ali** I. I. Ibrahim and A. H. El-Sawy, " Fully Distributed and Robust Threshold RSA Function Sharing Efficient for Small Number of Players," International Journal of Computer Researches (IJCR), New York, USA, 2004. The paper was also published as a chapter in a book titled, Embedded Cryptographic Hardware: 2004 Methodologies and Arcitectures, ISBN: 1-59454-012-8.
14. **Ihab A. Ali** and Mohammed J. Alawi, "Analysis and Design of Band-Split Audio Scrambler," The Journal of United Arab Emirates University, United Arab Emirates, 2004.
15. Maged H. Ibrahim, **I. A. Ali**, I. I. Ibrahim, A. H. El-Sawy, "Multiparty Shared Generation of RSA Keys Efficient For Large Number of Players," Accepted for publication in the proceedings of Applied Cryptography and Network Security Conference (ACNS 2004), Yellow Mountain, China, 2004 (Neither presented nor published).
16. Ahmed S. Aly, **I. A. Ali**, I. I. Ibrahim and A. H. El-Sawy, "Grouped Dynamic Multicast Tree (GDMT) Algorithm for Mobile Networks," Journal of Engineering Sciences (JES), Faculty of Engineering - Assiut University, vol. 32, no. I, 2004.
17. Ali M. Alam, **I. A. Ali**, Ibrahim I. Ibrahim and A. H. El-Sawy, "Efficient Zero-Knowledg Identification Scheme With Secret Key Exchange," The 46th IEEE International Midwest Symposium on Circuits and Systems , Nile Hilton, Cairo, Egypt, 2003.

18. Ahmed S. Aly, **Ihab A. Ali**, Ibrahim I. Ibrahim and Abdel Rahman H., El-Sawy, "Design of Soft Handover Protocol for Mobile ATM Networks" The 46th IEEE International Midwest Symposium on Circuits and Systems , Nile Hilton, Cairo, Egypt, 2003.
19. Maged H. Ibrahim, **I. A. Ali** and A. H. El-Sawy, "Robust threshold elliptic curve digital Signature providing a New Verifiable Secret Sharing Scheme," The 46th IEEE International Midwest Symposium on Circuits and Systems , Nile Hilton, Cairo, Egypt, 2003.
20. Ahmed S. Aly, **Ihab A. Ali**, I. I. Ibrahim and A. H. El-Sawy, "Fast, Optimized and Scalable Combined Re-routing Protocol based on Decision Criteria for Multimedia Communication in Mobile ATM Networks," Proceedings of Mediterranean Microwave Symposium MMS 2003, Ein Shams University, Cairo, Egypt, 2003.
21. Ahmed S. Ali, **Ihab A. Ali**, Ibrahim I. Ibrahim and Abdel Rahman H. El-Sawy, "An Effective Lossless Inter-Switch Handover Signaling Procedure for Multimedia Transmission in Wireless ATM Networks," Proceedings of Al-Azhar Engineering 7th international Conference, Cairo, 2003.
22. A. H. Moawad, **I. A. Ali**, G. A. Khalaf and A. H. El-Sawy, "Analysis and Modeling of Multi-Protocol Edge Router Carrying Voice/IP/ATM Traffic," Proceedings of 7th International Conference on Intelligent Engineering Systems INES, Assiut-Luxor, Egypt, 2003.
23. Ahmed S. Ali, **Ihab A. Ali**, Ibrahim I. Ibrahim and Abdel Rahman H. El-Sawy, "A unified Lossless Intra-Switch Handover Algorithm For Mobile ATM Networks," Proceedings of 7th International Conference on Intelligent Engineering Systems INES, Assiut-Luxor, Egypt, 2003.
24. Maged H. Ibrahim, **I. A. Ali** and A. H. El-Sawy, "Multiple Encryption – Multiple Modes with Optimal Secret Parameters," Journal of the Faculty of Engineering, Cairo University, Cairo, Egypt, 2002.

25. Nariman A. El-Salam, Tarek A. El-Mageed, **Ihab A. El-Wahab** and Hatem El-Bolock, "Non-Repudiation Using Digital Signature," Proceedings of First International Conference on Informatics and Systems, INFOS 2002, Cairo, Egypt, 2002.
26. Maged H. Ibrahim, **I. A. Ali** and A. H. El-Sawy, "Analysis of triple encryption schemes As a block cipher protection against exhaustive-key search, " Journal of the Faculty of Engineering, Cairo University, Cairo, Egypt, 2001.
27. **I. A. Ali**, "ATROS: A Simulator for the Design and Analysis of ATM Networks and Protocols," Proceedings of 17th National Radio Science Conference, Minoufya University, Egypt, 2000.
28. **I. A. Ali**, A. H. El-Sawy and H. T. Mouftah, " A New Hierarchical Routing Method for Broadband ISDN," Proceedings of 15th National Radio Science Conference, Helwan, Egypt, 1998.
29. **I. A. Ali**, H. T. Mouftah and A. H. El-Sawy, " A Dynamic Routing Protocol for Broadband Networks," Proceedings of 2nd IEEE Symposium in Computers and Communications, Alexandria, Egypt, 1997.
30. **I. A. Ali**, M. Sivabalan and H. T. Mouftah, "QUARTSII: A Simulator for the Design and Analysis of Broadband Control Architectures," Proceedings of IEEE Symposium in Planning and Design of Broadband Networks, Montebello, Canada, 1996.
31. **I. A. Ali**, H. T. Mouftah, A. H. El-Sawy and A. I. Mahdaly, " Design of Dynamic Hierarchical Routing for ATM Networks," Proceedings of 18th Biennial Symposium in Communications, Kingston, Canada, 1996.
32. **I. A. Ali**, H. T. Mouftah, A. H. El-Sawy and A. I. Mahdaly, " Performance Evaluation of Hierarchical Routing in ATM Networks," Proceedings of Canadian Conference in Electrical and Computer Engineering, Calgary, Canada, 1996.

IX. Technical Presentations

1. Ihab Ali, "Join IEEE," IEEE day, EE department, Umm Al-Qura University, 2009.
2. **Ihab A. Ali**, "Handover Management in Mobile Networks," Survey paper, Associate Professor Elevation Committee, Egypt 2004.
3. **I. A. Ali**, "Flat versus Hierarchical Routing in ATM Networks," Communications Research Center (CRC), Ottawa, Canada, 1996.
4. **I. A. Ali**, "Flat versus Hierarchical Routing: A Comparative Study," NORTEL Technologies, Ottawa, Canada, 1996.
5. **I. A. Ali**, "ATHIROS: an ATM Hierarchical Routing Simulator," Technical Report, Electrical and Computer Eng. Dept., Queen's University, Kingston, Canada, Sept. 1996.

X. Technical Activities

1. Secretary/Treasurer IEEE Western Saudi Arabia Section, 2006.
2. Senior Member IEEE, since August 2006.
3. Member of IEEE (Institute of Electrical and Electronics Engineers) sine 1997.
4. Member of IEEE Communications Society since 1997.
5. Member, E-Learning Committee, Faculty of Engineering, Umm Al-Qura University, February-June 2004.
6. Member, Council of Architectural and Engineering Sciences Research Centre, Institute of Scientific Research and Revival of Islamic Heritage, Umm Al-Qura University, Makkah, Saudi Arabia, 2002-2009.
7. Team leader of the Telecommunications group in the project, "Development of Behyra Governorate Villages," Technological Development Studies and Research Centre, Helwan University, Cairo, Egypt, May-September 2002.
8. Member of Engineering Libraries Automation Committee of the Engineering Education Development Project, Egypt, 1998-2000.
9. Moderating the Library Computer system and network at the Faculty of Engineering, Helwan University, 1998-2000.
10. Shared in the preparation of both undergraduate and postgraduate syllabus, Telecommunications Eng. Dept., Helwan University.

11. Shared in the preparation of both undergraduate and postgraduate syllabus, Telecommunications Eng. Dept., Helwan University.

XI. Research Activities

My Research interests include Planning and Control of both wired and wireless Networks, Network Security and Cryptography Applications.

I've supervised the following theses:-

1. M.Sc. Thesis titled "Public Key Cryptography and its application in Digital Signature". Helwan University.
2. M.Sc. Thesis titled "Security in the Wireless Application Protocol". Helwan University.
3. M. Sc. Thesis titled "Analysis of Symmetric Key Cryptosystems," Helwan University.
4. M. Sc. Thesis titled "Internetworking IP and ATM," Helwan University.
5. Ph.D. Thesis titled "Fast Handover in Mobile Networks," Helwan University.
6. M.Sc. Thesis titled "QoS Routing Algorithms in Intra and Inter Domain," Helwan University.
7. M.Sc. Thesis titled "A Re-programmable ATM Line Terminator," Helwan University.
8. M.Sc. Thesis titled "Dynamic Channel Assignment for Mobile Networks using Neural Networks," Helwan University.
9. M.Sc. Thesis titled "Analysis of Identification Protocols," Helwan University.

XII. Languages

Arabic	Native language
English	Reading and writing: Very Good. Speaking and listening: Good. TOEFL score: 577 Marks.

References

1. Prof. A. H. El-Sawy, Communications and Electronics Eng. Dept., Helwan University, Helwan, Cairo, Egypt.
2. Prof. H. T. Mouftah, Tier 1 Canada Research Chair Distinguished University Professor, Ottawa University, Ottawa, Canada.
3. Prof. M. I. El-Adawy, Vice Dean, Student Affairs, Faculty of Engineering, Helwan University, Helwan, Cairo, Egypt.
4. Prof. Gamal AbdelFadeel, Department Head, Communications and Electronics Eng. Dept., Helwan University, Helwan, Cairo, Egypt.
5. Prof. Ibrahim I. Ibrahim, Communications and Electronics Eng. Dept., Helwan University, Helwan, Cairo, Egypt.

(Email addresses available upon request).