

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Omar Reyad Mohamed**
Address(es) College of Computing and Information Technology, Shaqra University, Saudi Arabia
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Nationality Egyptian
Date of birth 24-02-1980
Gender Male

Desired employment / Occupational field

Number of publications: 43 Citations: 638 h-index: 16

<https://scholar.google.com/citations?user=cK0jBnEAAAAJ&hl=en&oi=sra>

Work experience

Dates	<u>February 2019 until Now</u>
Occupation or position held	Assistant Professor of Information Systems: Full time
Main activities and responsibilities	<ul style="list-style-type: none"> - Teaching courses for undergraduate students. - Supervision of students during their Master and research projects. - Teaching courses for post-graduate students.
Name and address of employer	Shaqra University, Shaqra City, Saudi Arabia
Type of business or sector	Governmental University of Higher Education
Dates	<u>March 2017 until January 2019</u>
Occupation or position held	Lecturer of Computer Science: Full time
Main activities and responsibilities	<ul style="list-style-type: none"> - Teaching courses for undergraduate students. - Supervision of students during their Master and research projects. - Teaching courses for post-graduate students.
Name and address of employer	Sohag University, Sohag City, Egypt
Type of business or sector	Governmental University of Higher Education
Dates	<u>October 2008 until September 2012</u>
Occupation or position held	Assistant Lecturer: Full time
Main activities and responsibilities	<ul style="list-style-type: none"> - Teaching some courses for undergraduate students. - Sharing some of my students during their research projects. - Training employers during the information and communication technology project (ICTP).
Name and address of employer	Sohag University, Sohag City, Egypt

Type of business or sector	Governmental University of Higher Education
Dates	<u>May, 2002 to September 2008</u>
Occupation or position held	Demonstrator: Full time
Main activities and responsibilities	- Teaching some courses for undergraduate students. - Sharing some of my students during their research projects.
Name and address of employer	Sohag University, Sohag City, Egypt
Type of business or sector	Governmental University of Higher Education

Education and training

Dates	<u>From October 2012 to February 2017</u>
Title of qualification awarded	PhD student at Department of Computer Networks and Switching, Cryptology and Information Security Group, Faculty of Electronics and Information Technology, Warsaw University of Technology, Poland
Principal subjects/occupational skills Covered	Thesis Title: "New Constructions of Elliptic Curves-based Pseudo-random Number generators"
Name and type of organisation providing education and training	Warsaw University of Technology, Warsaw City, Poland
Level in national or international classification	World Ranking: 686
Dates	<u>May 2004 to September 2008</u>
Title of qualification awarded	Master (M.Sc) in Computer Science (awarded by thesis only)
Principal subjects/occupational skills covered	Thesis Title: "Some Aspects of Cryptography and Information Theory"
Name and type of organisation providing education and training	Sohag University, Sohag City, Egypt
Level in national or international classification	National: 22
Dates	<u>September 2002 to October 2003</u>
Title of qualification awarded	Pre-Master Diploma in Computer Science, Pass (68.57%) degree
Principal subjects/occupational skills covered	A wide range of courses: Postgraduate courses
Name and type of organisation providing education and training	Sohag University, Sohag City, Egypt
Dates	<u>September 1997 to May 2001</u>
Title of qualification awarded	B. Sc. in Computer Science, Very Good (76.34%) degree
Principal subjects/occupational skills covered	A wide range of courses: undergraduate courses

Name and type of organisation providing education and training | Sohag University, Sohag City, Egypt

Personal skills and competences

Mother tongue(s) | **Arabic**

Other language(s)

Self-assessment
European level ()*

English

French

Polish

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C2	Proficient user	C1	Proficient user	B2	Independent user	B2	Independent user
A2	Basic user	A2	Basic user	A1	Basic user	A1	Basic user	A1	Basic user
A2	Basic user	B2	Basic user	A1	Basic user	A1	Basic user	A1	Basic user

(*) [Common European Framework of Reference for Languages](#)

- Passed an institutional TOEFL test held at Sohag ESP Center with a total score of 567.
- Passed Internet-Based TOEFL (IBT) score of 81 (553) from *MASRYA, Sohag, Egypt*.

Social skills and competences

- Team work: I have worked in various types of teams.
- Mediating skills: I work on the borders between young people, youth trainers and researchers, for example training a 4 day ICTP modules and my continued work on youth training programs.

Organisational skills and competences

- Whilst working for Sohag University, I act as an organize member in ICMIS09 and ICMIS11, 1st and 2nd International Conference on Mathematics and Information Sciences, Sohag, Egypt.
- During my PhD, I organized a seminar series on research methods.
- Co-founder of the Master of Science Program in Cybersecurity and Assurance at Shaqra University.

Computer skills and competences

- Competent with most Microsoft Office programmes
- General computer and LMS skills
- Computer Languages: Fortran, Pascal, C/C++, Java, SQL, Python and Matlab
- Completed the Oracle University course (10g)
- Computer based statistics: SPSS, Mathematica and Maple.

Projects and grants

- Full-time Ph.D Scholarship from October 2012 to January 2017, Ministry of Higher Education and Scientific Research, Egypt and Warsaw University of Technology, Poland.
- BaSoTi 2014 summer school from July 2014 to August 2014, DAAD Universitat Rostock, Riga, Latvia.
- Supporting Educational Initiatives of Warsaw University of Technology training from February 2015 to April 2015, University of Luxembourg, Luxembourg.
- Real-world crypto and privacy summer school, June 5-10, 2016, Sibenik, Croatia.
- The ATHENS programme, Universidad Politecnica de Madrid, November 11-18, 2016, Madrid, Spain.
- The Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia through the project number (UB-26-1442).
- The Deputyship for Research & Innovation, Ministry of Education in Saudi Arabia through the project number (IFP2021-043).

Research areas

- Information Security
- IoT Security
- Elliptic Curve Cryptography
- Cybersecurity
- Cryptographic Protocols

Conferences:

- 1 - O. Reyad, E. Zanaty and M. Abdel-Aty, "An Introduction to Cryptography and Data Security", 1st Arab Scientific Conference on Electronic Culture in the Arab Environment, Sohag, Egypt, July 2005.
- 2 - O. Reyad "Pseudo-random Number Generators Based on Elliptic Curves and Chaotic Systems", Seminar on Cryptology and Information Security, 6th June, 2014, WEiTi, Poland.
- 3 - O. Reyad, Z.Kotulski, "Pseudo-random Number Generators Based on Multiplicative Elliptic Curves", Baltic Young PhD Conference, 28-29 July, 2014, Riga, Latvia.
- 4 - O. Reyad, Z.Kotulski, "Statistical Analysis of The Chaos-Driven Elliptic Curve Pseudo-random Number Generators", 3rd Conference on Cryptography and Security Systems, 22-24 September 2014, Lublin, Poland (Springer CCIS, vol.448, pp. 38-48, 2014).
- 5 - M. Khfagy, WA. Elhafiez, O. Reyad, "Image Encryption Using Pseudo-random Number Generator Based on Chebyshev Map Neural Model", 1st International Conference on Pure and Applied Sciences, March 2015, Luxor, Egypt.
- 6 - O. Reyad, Z.Kotulski, "Image Encryption Using Koblitz's Encoding and New Mapping Method Based on Elliptic Curve Random Number Generator", 8th International Conference on Multimedia Communications, Services and Security, 24 November 2015, Kraków, Poland (Springer CCIS, vol.566, pp. 34-45, 2015).
- 7 - O. Reyad, Z.Kotulski, "Pseudo-random Sequence Generation from Elliptic Curves over a Finite Field of Characteristic 2, FedCSIS 2016, IEEE Digital Library.
- 8 - M. Khfagy, Y. AbdelSatar, O. Reyad, N.Omran, "An Integrated Smoothing Method For Fingerprint Recognition Enhancement", 2nd International Conference on Advanced Intelligent Systems and Informatics, Egypt (Springer CCIS, vol.533, pp. 407-416, 2016).
- 9 - O. Reyad, M. Mofaddel, WA. Elhafiez, M. Fathy, "A Novel Image Encryption Scheme Based on Different Block Sizes for Grayscale and Color Images", 12th IEEE International Conference on Computer Engineering and Systems (ICCES 2017), Cairo, Egypt, IEEE Digital Library.
- 10 - M. Khfagy, O. Reyad, Y. AbdelSatar, N.Omran, "Multi-filter Score-level Fusion for Fingerprint Verification", International Conference on Advanced Machine Learning Technologies and Applications (AMLTA), Cairo, Egypt, February 2018, AISC Springer Series.
- 11 - O. Reyad, "A modified Blum Blum Shub Generator Using Elliptic Curve Cryptography", 7th International Conference on Mathematics and Information Sciences, Sohag, Egypt, February 2018.
- 12- Basma Abd El-Rahiem, M. Khfagy, O. Reyad, Hani Abd El-Rahaman, Mohamed Amin, Fathi Abd El-Samie, "An Efficient Deep Convolutional Neural Network for Visual Image Classification", The 4th International Conference on Advanced Machine Learning Technologies and Applications (AMLTA), Cairo, Egypt, March 2019, AISC Springer Series.
- 13 - W. A. Elhafiez, O. Reyad, M. Mofaddel, M. Fathy, "Image Encryption Based on Multimapping Image Pixel Methodology", The 4th International Conference on Advanced Machine Learning Technologies and Applications (AMLTA), Cairo, Egypt, March 2019, AISC Springer Series.
- 14 - O. Reyad, M. Karar, K. Hamed, "Random Bit Generator Mechanism Based on Elliptic Curves and Secure Hash Function", International Conference on Advances in the Emerging Computing Technologies (AECT), Al Madinah Al Munnawarah, KSA, 10 February 2020, AECT IEEE Digital Library.
- 15 - M. Karar, O. Reyad, HI Shehata, AA Abdelhamid, S Alotaibi, "A New Intelligent System for Performance Enhancement of Dual-Sensor Cardiac Pacemakers Using Iterative Learning Control", International Conference on Data Science and Machine Learning Applications (CDMA), Riyadh, KSA, 4 March 2020, CDMA IEEE Digital Library.

16 - O. Reyad, W. Dukhan, M.H. Marghny, E. Zanaty, "Genetic K-Means Adaption Algorithm for Clustering Stakeholders in System Requirements", The 6th International Conference on Advanced Machine Learning Technologies and Applications (AMLTA), Cairo, Egypt, March 2021, AISC 1339, Springer Series.

17 - O. Reyad, H. Mansour, M. Heshmat, E. Zanaty, "Key-Based Enhancement of Data Encryption Standard for Text Security", National Computing Colleges Conference (NCCC), Taif University, KSA, 27 March 2021, NCCC IEEE Digital Library.

Journals:

18- **O. Reyad**, Z.Kotulski, "On Pseudo-Random Number Generators Using Elliptic Curves and Chaotic Systems", Applied Mathematics & Information Sciences, vol.9, no.1, pp. 31-38, 2015.

19 - O. Reyad, Z.Kotulski, WA. Elhafiez, "Image Encryption Using Chaos-Driven Elliptic Curve Pseudo- random Number Generators", Applied Mathematics & Information Sciences, vol.10, no.4, pp. 1283-1292, 2016.

20 - O. Reyad, "Text Message Encoding Based on Elliptic Curve Cryptography and a Mapping Methodology", Information Sciences Letters, vol.7, no.1, pp. 9-13, 2018.

21 - F. Nife, Z. Kotulski, O. Reyad, "New SDN-Oriented Distributed Network Security System", Applied Mathematics & Information Sciences, vol.12, no.4, pp. 673-683, 2018.

22 - O. Reyad, H. S. Khalifa, R. Kharabsheh, "Image Pixel Permutation Operation Based on Elliptic Curve Cryptography", Applied Mathematics & Information Sciences, vol.13, no. S1, pp. 183-189, 2019.

23 - Z. F. Khan, O. Reyad, "Application of Intelligent Multi Agent Based Systems For E-Healthcare Security", Information Sciences Letters, vol.8, no.2, pp. 67-72, 2019.

24 - O. Reyad, " Novel Coronavirus COVID-19 Strike on Arab Countries and Territories: A Situation Report I ", arXiv:2003.09501, 2020.

25 - M. E. Karar, M. F. Al-Rasheed, A. F. Al-Rasheed and O. Reyad, "IoT and Neural Network-Based Water Pumping Control System for Smart Irrigation", Information Sciences Letters, vol.9, no.2, pp. 107-112, 2020.

26- M. E. Karar, A. M. Al-Masaad and O. Reyad, "GASDUINO-Wireless Air Quality Monitoring System Using Internet of Things", Information Sciences Letters, vol.9, no.2, pp. 113-117, 2020.

27 - O. Reyad, K. Hamed and M. E. Karar, "Hash-enhanced elliptic curve bit-string generator for medical image encryption", Journal of Intelligent & Fuzzy Systems 39(5), 7795-7806, 2020.

28 - O. Reyad and M. E. Karar, "Secure CT-Image Encryption for COVID-19 Infections Using HBBS-Based Multiple Key-Streams, Arabian Journal for Science and Engineering, vol.46, pp. 3581-3593, 2021.

29 - M. E. Karar, Faris Alotaibi, Abdullah Al Rasheed and O. Reyad, "A Pilot Study of Smart Agricultural Irrigation using Unmanned Aerial Vehicles and IoT-Based Cloud System", Information Sciences Letters, vol.10, no.1, pp. 131-140, 2021.

30 - M. E. Karar, O. Reyad, M. Abd-Elnaby, A. Abdel-Aty and M. Shouman, "Lightweight Transfer Learning Models for Ultrasound-Guided Classification of COVID-19 Patients", CMC-Computers, Materials & Continua 69 (2), 2295–2312, 2021.

31 - M. E. Karar, O. Reyad, A. Abdel-Aty, S. Owyed and M.F. Hassan, "Intelligent IoT-Aided Early Sound Detection of Red Palm Weevils", CMC-Computers, Materials & Continua 69 (3), 4095–4111, 2021.

32 - M. E. Karar, A. Abdel-Aty, F. Alqarni, M.F. Hassan, M.A. Abdou and O. Reyad, "Smart IoT-based system for detecting RPW larvae in date palms using mixed depthwise convolutional networks", Alexandria Engineering Journal 61(7), 5309-5319, 2022.

- 33 - M. H. Marghny, Elnomery A. Zanaty, Wathiq H. Dukhan and O. Reyad, "A hybrid multi-objective optimization algorithm for software requirement problem", Alexandria Engineering Journal 61(9), 6991-7005, 2022.
- 34 - M. E. Karar, H. I. Shehata and O. Reyad, "A Survey of IoT-Based Fall Detection for Aiding Elderly Care: Sensors, Methods, Challenges and Future Trends", Applied Sciences 12(7), 2022.
- 35 - Wathiq H. Dukhan, M. H. Marghny, Ali A. Amer, Elnomery A. Zanaty and O. Reyad, "Software requirement selection using a combined multi-objective optimisation technique", IET Software, August 2022.
- 36 - M. E. Karar, O. Reyad and H. I. Shehata, "Deep Forest-Based Fall Detection in Internet of Medical Things Environment", Computer Systems Science & Engineering, 45(3), 2023.
- 37 - M. E. Karar, Z. F. Khan, H. Alshahrani and O. Reyad, "Smart IOMT-based segmentation of coronavirus infections using lung CT scans", Alexandria Engineering Journal 69, 571-583, 2023.
- 38 - H. Kadry, A. Farouk, E. Zanaty and O. Reyad, "Intrusion detection model using optimized quantum neural network and elliptical curve cryptography for data security", Alexandria Engineering Journal 71, 491-500, 2023.
- 39 - O. Reyad, H. I. Shehata and M. E. Karar, "Developed Fall Detection of Elderly Patients in Internet of Healthcare Things", CMC-Computers, Materials & Continua, 76(2), 2023.
- 40- O. Reyad, H. Mansour, E. Zanaty and M. Heshmat, "Medical Image Privacy Enhancement Using Key Extension of Advanced Encryption Standard", Sohag Journal of Sciences, 9(3), 2024.
- 41- M. E. Karar, A. Abdel-Aty, S. Owyed and O. Reyad, "A New Gated Recurrent Unit Network-Based Wind Turbine Power Prediction", Arabian Journal for Science and Engineering, 2024.
- 42- O. Reyad, "Secure Communication Model for Constrained Internet of Things Devices", International Journal of Intelligent Systems and Applications in Engineering, 12(3), 2024.
- 43- R. Alotaibi, O. Reyad and M. E. Karar, "Efficient Intelligent E-Learning Behavior-Based Analytics of Student's Performance Using Deep Forest Model", Computer Systems Science and Engineering, 2024.

Editorial Board

- Information Sciences Letters, International Journal (Scopus Indexed)
<https://www.naturalspublishing.com/show.asp?JorID=6&pgid=33>
- Computer Systems Science and Engineering, Special Issue, (Scopus Indexed)
https://www.techscience.com/csse/special_detail/ioht
- Intelligent Automation & Soft Computing, Special Issue, (Scopus Indexed)
https://www.techscience.com/iasc/special_detail/intelligent-control-systems

PERSONAL INTERESTS

Enjoy all sports particularly football and running. Love to travel and experience different cultures.