

Wassim ALEXAN

PERSONAL DATA

DATE OF BIRTH: 3 June 1987
ADDRESS: 50, Road 29, 2nd Neighbourhood, 3rd District,
5th Settlement, New Cairo, Egypt
PHONE: +2 010 98722183
EMAIL: wassim.joseph@guc.edu.eg, wassim.joseph@giu-uni.de
EMAIL: wassim.alexan@ieee.org, wassim.alexan@aucegypt.edu

EDUCATION

JANUARY 2025 (EXPECTED)	Doctorate in Business Administration, The German University in Cairo Major: Strategic Management Cumulative GPA as of January 2024, European system: 1.55
JUNE 2024 (EXPECTED)	Master of Arts, The American University in Cairo Educational Leadership Concentration: Higher Education Cumulative GPA as of December 2022, American system: 3.77/4.0 <i>Academic Success in First-Year Engineering Students at Private Higher Education Institutions in Egypt: Key Factors</i>
MARCH 2019	Master in Business Administration, The German University in Cairo Majors: Strategic Management and Marketing – Grade: A <i>Motivational influences on the selection of service providers: The case of undergraduate degree programs</i>
JULY 2017	Doctorate of Philosophy, The German University in Cairo Communications Engineering – Grade: A+ <i>Performance analysis for cooperative wireless networks</i>
FEBRUARY 2012	Master of Science, The German University in Cairo Communications Engineering – Grade: A <i>Developing fractal antennas for wireless networks</i> (All antennas' parameter-measurements were carried out at the Antenna Lab of Ulm University , Germany)
JULY 2010	Bachelor of Science, The German University in Cairo Communications Engineering – Courses' grade: B , Thesis' grade: A <i>Applying numerical Sinc methods to solve wave equations</i>

LANGUAGES

Arabic		Native		English		Near-Native
German		Intermediate Proficiency		Swedish		Intermediate Proficiency
French		Basic Knowledge		Italian		Basic Knowledge

WORK EXPERIENCE

<i>Present</i> OCTOBER 2023	Associate Professor <i>The German University in Cairo, Egypt</i> Attracting funds and grants; Building international research collaborations; Supervising BSc, MSc and PhD projects; Teaching various Communications, Electronics and Mathematics courses to students of Engineering both at the undergraduate and graduate levels; Supervising exams; Carrying out research and presenting the findings at international conferences; Publishing scientific articles in impacted journals; Grading exams, quizzes and assignments.
<i>Present</i> JULY 2023	Chairman of the AdA Board of Examinations <i>German-Arab Chamber of Industry and Commerce (AHK Egypt), Egypt</i> Reviewing and conducting theoretical and practical examinations for in-company trainers in TVET, in the MENA region
<i>Present</i> SEPTEMBER 2021	Freelance Trainer <i>The German University in Cairo, Egypt</i> Teaching soft skills, including business communication and presentation skills, time management and leadership skills at the Center for Continuing Education at the German University in Cairo (GUC), Egypt.
JUNE 2023 FEBRUARY 2022	AdA Examiner <i>German-Arab Chamber of Industry and Commerce (AHK Egypt), Egypt</i> Conducting practical examinations for in-company trainers in TVET, in Egypt
SEPTEMBER 2023 SEPTEMBER 2017	Assistant Professor <i>The German University in Cairo, Egypt</i> Supervising BSc, MSc and PhD projects; Teaching various Communications, Electronics and Mathematics courses to students of Engineering both at the undergraduate and graduate levels; Supervising exams; Carrying out research and presenting the findings at international conferences; Publishing scientific articles in impacted journals; Grading exams, quizzes and assignments.
<i>Present</i> SEPTEMBER 2019	Adjunct Assistant Professor <i>The German International University, Egypt</i> Supervising BSc projects; Teaching Mathematics courses to engineering, pharmaceutical engineering, computer informatics and business administration students.
SEPTEMBER 2017 OCTOBER 2012	Assistant Lecturer <i>The German University in Cairo, Egypt</i> Conducting and supervising BSc projects; Teaching various Mathematics courses to students of Engineering both at the undergraduate and graduate levels; Teaching Mathematics courses to students of Management, Pharmacy and Biotechnology at the undergraduate level; Supervising exams; Carrying out research and presenting the findings at international conferences; Publishing scientific articles in impacted journals; Grading exams, quizzes and assignments.
OCTOBER 2012 OCTOBER 2010	Teaching Assistant <i>The German University in Cairo, Egypt</i> Teaching various Mathematics courses for students of Engineering, Management, Pharmacy and Biotechnology; Proctoring exams; Carrying out research; Grading exams, quizzes and assignments.
AUGUST 2007 JULY 2007	Tekla Drafter and CNC Machine Operator <i>Moli Industries, Calgary, Canada</i> Designing various steel structures using the Japanese software Tekla; Operating a number of steel-cutting machinery.

INTERNATIONAL EXPERIENCE

MAY 2024	IEEE EDUCON'2024, Kos, Greece Presenting an accepted papers at the conference
MARCH 2024	IEEE PACET'2024, Thessaloniki, Greece Presenting 2 accepted papers at the conference
JANUARY 2024 DECEMBER 2023	Courses Instruction, Berlin, Germany Teaching Electric Circuits and Mathematics courses at GIU-Berlin
SEPTEMBER 2023	AHK Exams, Amman, Jordan Conducting theoretical and practical TVET examinations
SEPTEMBER 2023	IEEE SPA'2023, Poznan, Poland Presenting accepted papers at the conference
NOVEMBER 2019	IEEE ISAECT'2019, Rome, Italy Presenting an accepted paper at the conference
APRIL 2019	DjangoCon Europe 2019, Copenhagen, Denmark Attendance and participation in the conference
OCTOBER 2018	Polyglot Conference, Ljubljana, Slovenia Attendance of the conference
OCTOBER 2018	IEEE GIIS'2018, Thessaloniki, Greece Presenting accepted papers
NOVEMBER 2017	IEEE RTUWO'2017, Riga, Latvia Presenting accepted papers at the conference
OCTOBER 2016	Polyglot Conference, Thessaloniki, Greece Attendance and participation in the conference
JULY 2016 AUGUST 2016	UISS'2016, Uppsala, Sweden Took part in a Swedish language course at the CEFR level of B2
SEPTEMBER 2015	IEEE SPA'2015, Poznan, Poland Presenting accepted papers at the conference
JULY 2016 AUGUST 2016	Folkuniversitetet, Stockholm, Sweden Took part in a Swedish language course at the CEFR level of B1
SEPTEMBER 2014	IEEE SPA'2014, Poznan, Poland Presenting an accepted paper at the conference
AUGUST 2014	IEEE ISWCS'2014, Barcelona, Spain Presenting an accepted paper at the conference
MAY 2014	Wolfram Technology Conference, Frankfurt am Main, Germany Giving a presentation about the use of Wolfram Mathematica in Wireless Relaying Networks Modelling

INTERNATIONAL EXPERIENCE – CONTINUED

AUGUST 2011	Research Stay, Ulm, Germany <i>Measuring various antenna elements' parameters at the Antenna Measurements and Design Lab</i>
AUGUST 2007 JULY 2007	Internship at Molly Industries, Inc., Calgary, Canada Operating various metal-working CNC machines

RESEARCH SCORES AND DATA

NO. OF CITATIONS:	2314
H-INDEX:	29
I10-INDEX:	52
RG RESEARCH INTEREST SCORE:	1569
ORCID:	0000-0001-6159-4971

AWARDS, FELLOWSHIPS, SCHOLARSHIPS AND CERTIFICATES

SEPTEMBER 2023	A Best Paper Award at the 26 th IEEE Conference on Signal Processing Algorithms, Architectures, Arrangements and Applications Poznan, Poland
SEPTEMBER 2022	DBA Fellowship The German University in Cairo, Egypt
JULY 2021	SMIEEE Grade Elevation to a Senior Member of the IEEE
OCTOBER 2020	A Best Poster Award at the 37 th IEEE National Radio Science Conference, Cairo, Egypt
MAY 2020	AEG Writer of the Year Award The American University in Cairo, Egypt
SEPTEMBER 2019	MA Fellowship The American University in Cairo, Egypt
JULY 2016	The Uppsala International Summer Session (UISS) Scholarship UISS, Uppsala, Sweden
SEPTEMBER 2015	A Best Paper Award at the 19 th IEEE Conference on Signal Processing Algorithms, Architectures, Arrangements and Applications Poznan, Poland
NOVEMBER 2014	Wolfram Mathematica® Technology Associate Certification
OCTOBER 2012	PhD Fellowship The German University in Cairo, Egypt
JUNE 2012	MBA Fellowship The German University in Cairo, Egypt
OCTOBER 2010	MSc Fellowship The German University in Cairo, Egypt

SKILLS AND ABILITIES

Proven track record of **planning, organizing, managing** and **evaluating** teaching modules, projects and seminars, with over 10 years of experience in academia.

Possessing an excellent ability to **communicate ideas** and views, both **verbally** and **in writing** to a large audience, gained through experience in teaching, authoring scientific publications and giving talks at international conferences.

Having a keen **eye for detail** with an excellent ability at **evaluating** students' and projects' performance and feasibility.

Acquired excellent **analytic abilities** in dealing with large volumes of data, skimming, scanning and quickly finding relevant/needed information from within the data, developed through years of research in different fields (Mathematics, Engineering, Marketing, Strategic Management and Education).

Gifted with an innate **thirst for knowledge** and the need for **constant learning** and self-development, as exemplified by the various postgraduate studies carried out, conferences attended and languages learnt.

Having a clear understanding of team dynamics, knowing when to be an **effective team player** and promptly realizing the need for **leadership** and stepping forward, as soon there seems to be such a need.

Proudly **representing** my **employer** (The German University in Cairo) at various international events and conferences.

PUBLICATIONS

i. Journal Articles

Unraveling Solitons Dynamics in System of Dispersive NLSE with Kudryashov's Law of Non-linearity Using Improved Modified Extended Tanh Function Method

Alexandria Engineering Journal, vol. 9, pp. 419-428, 2024.

Islam Samir, Eman Salah, Emad Abo El-Dahab, Hamdy M. Ahmed, Medhat Ammar, Wassim Alexan, and Hisham H. Hussein

Image Encryption Based on Fourier-DNA Coding for Hyperchaotic Chen System, Chen-Based Binary Quantization S-box, and Variable-Base Modulo Operation

IEEE Access, vol. 12, pp. 21092-21113, 2024.

Wassim Alexan, Dina El-Damak, and Mohamed Gabr

Abundant solitons for highly dispersive nonlinear Schrödinger equation with sextic-power law refractive index using modified extended direct algebraic method

Alexandria Engineering Journal, vol. 86, pp. 680-689, 2024.

Wafaa B. Rabie, Hisham H. Hussein, Hamdy M. Ahmed, Mahmoud Alnahhass, and Wassim Alexan

Analytical Soliton Solutions for Cubic-quartic Perturbations of the Lakshmanan-Porsezian-Daniel Equation Using the Modified Extended Tanh Function Method

Ain Shams Engineering Journal, vol. 15, no. 3, 102513, 2024.

Hisham H. Hussein, Hamdy M. Ahmed, and Wassim Alexan

***R3*–Rescale, Rotate and Randomize: A Novel Image Cryptosystem Utilizing Chaotic and hyper-chaotic Systems**

IEEE Access, vol. 11, pp. 119284-119312, 2023.

Mohamed Gabr, Yousef Korayem, Yn-Lin Chen, Por Lip Yee, Chin Soon Ku, and Wassim Alexan

AntEater: When Arnold's Cat Meets Langton's Ant to Encrypt Images

IEEE Access, vol. 11, pp. 106249-106276, 2023.

Wassim Alexan, Yousef Korayem, Mohamed Gabr, Minar El-Aasser, Engy Aly Maher, Dina El-Damak, and Amr Aboshousha

Color Image Cryptosystem Based on Sine Chaotic Map, 4D Chen Hyperchaotic Map of Fractional-Order and Hybrid DNA Coding

IEEE Access, vol. 11, pp. 54928-54956, 2023.

Wassim Alexan, Mohamed Gabr, Eyad Mamdouh, Rimon Elias and Amr Aboshousha

Hyperchaotic Maps and the Single Neuron Model: A Novel Framework for Chaos-Based Image Encryption

Symmetry, vol. 15, no. 5, 1081, 2023.

Wassim Alexan, Yen-Lin Chen, Lip Yee Por and Mohamed Gabr

Multiple Layer Image Encryption Utilizing Fractional-Order Chen Hyperchaotic Map and Cryptographically-Secure PRNGs

Fractal and Fractional, vol. 7, no. 4, 287, 2023.

Wassim Alexan, Nader Alexan and Mohamed Gabr

Color Image Encryption Through Chaos and KAA Map

IEEE Access, vol. 11, pp. 11541-11554, 2023.

Wassim Alexan, Marwa El Kandoz, Maggie Mashaly, Eman Azab and Amr Aboshousha

Application of DNA Coding, the Lorenz Differential Equations and a Variation of the Logistic Map in a Multi-Stage Cryptosystem

Symmetry, vol. 14, no. 2559, 2022.

Mohamed Gabr, Hana Younis, Marwa Ibrahim, Sara Alajmy, Ijaz Khalid, Eman Azab, Rimon Elias and Wassim Alexan

RGB Image Encryption Through Cellular Automata, S-Box and the Lorenz System

Symmetry, vol. 14, no. 3, 443, 2022.

Wassim Alexan, Mohamed ElBeltagy and Amr Aboshousha

A Robust High Capacity Gray Code Based Double Layer Security Scheme for Secure Data Embedding in 3D Objects

ITU Journal on Future and Evolving Technologies, vol. 3 (2022), no. 1, pp. 39-54, 2022.

Ghadir Mostafa and Wassim Alexan

Image Encryption Based on a Combination of Multiple Chaotic Maps

Multimedia Tools and Applications, Springer, vol. 81, 25497-25518, 2022.

Marwa Tarek and Wassim Alexan

A Comparative Study of Audio Steganography Schemes

International Journal of Computing and Digital Systems, ELSEVIER, vol. 10, no. 1 pp. 1-20, 2021.

Farah Hemeida, Wassim Alexan and Salma Sadek

Secure 3D Data Hiding Technique Based on a Mesh Traversal Algorithm

Multimedia Tools and Applications, Springer, vol. 79, no. 39, pp. 29289-29303, 2020.

Sara Farrag and Wassim Alexan

A Comparative Study Among Different Mathematical Sequences in 3D Image Steganography

International Journal of Computing and Digital Systems, ELSEVIER, vol. 9, no. 4, pp. 545-552, 2020.

Wassim Alexan, Mazen El Beheiry and Omar Islam

A Threshold-Free LLR-Based Scheme to Minimize the BER for Decode-and-Forward Relaying

Wireless Personal Communications Journal, vol. 100, pp. 787-801, 2018.

Ahmed El Mahdy and Wassim Alexan

A Comparative Study on the Performance of LLR- and SNR-Based Hybrid Relaying

Journal of Wireless Communications and Mobile Computing, Wiley, January 2017.

Wassim Alexan and Ahmed El Mahdy

ii. *International Conference Proceedings*

Enhancing Image Security Using Legacy-Based Encryption With Chaotic Tent Map and Memristor

IEEE Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA), Poznan, Poland, September 2023, pp. 124-129.

Omar Elnoamy, Mohamed Gabr, Yousef Korayem, Wassim Alexan and Minar El-Aasser

Secure Communications of Visual Data Over CF Relays

IEEE Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA), Poznan, Poland, September 2023, pp. 130-135.

Mohannad Alkotb, Mohamed Gabr, Minar El-Aasser and Wassim Alexan

Three Layered Image Encryption: An Application of Hyperchaos and Cellular Automata

IEEE International Telecommunications Conference (ITC2023), Air Defense College, Alexandria, Egypt. July 2023, pp. 615-620.

Ayten Mazen, Yousef Korayem, Mohamed Gabr and Wassim Alexan

Image Encryption Through Cellular Automata, S-Box and Tent Chaotic Map

IEEE International Telecommunications Conference (ITC2023), Air Defense College, Alexandria, Egypt. July 2023, pp. 601-606.

Salma Khaled, Mohamed Gabr, Yousef Korayem and Wassim Alexan

Cellular Automata, S-Box and DNA Coding Based SPN for Image Encryption

2023 5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA2023), Istanbul, Turkey. June 2023, pp. 1-6.

Omar Omran and Wassim Alexan

Color Image Encryption Using a Sine Variation of the Logistic Map for S-Box and Key Generation

2023 5th International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA2023), June 2023, Istanbul, Turkey. June 2023, pp. 1-6.

Yousef Korayem, Wassim Alexan and Mohamed Gabr

3D Object Encryption Through a Disruptive Rotational Symmetry Transformation

2022 IEEE 32nd International Conference on Computer Theory and Applications (ICCTA2022), December 2022, Alexandria, Egypt.

Wassim Alexan, Mohamed Gabr, Hana Younis, Marwa Ibrahim, Sara Alajmy and Amr Aboshousha

Visual Data Enciphering via DNA Encoding, S-Box, and Tent Mapping

2022 IEEE 5th International Conference on Image Processing, Applications and Systems (IPAS2022), December 2022, Genova, Italy.

Mohamed Gabr, Hana Younis, Marwa Ibrahim, Sara Alajmy and Wassim Alexan

Visual Data Security Incorporating Fibonacci Sequence, S-Box, and Chaos Theory

2022 IEEE International Conference on Smart Systems and Power Management (IC2SPM2022), November 2022, Beirut, Lebanon.

Hisham Hussein, Wassim Alexan and Amr Aboshousha

A Combination of Decimal- and Bit-Level Secure Multimedia Transmission

2022 IEEE Workshop on Microwave Theory and Techniques in Wireless Communications (MTTW2022),

November 2022, Riga, Latvia.
Mohamed Gabr, Hisham Hussein and Wassim Alexan

Image Encryption Through CA, Chaos and Lucas Sequence Based S-Box
2022 IEEE 25th Signal Processing: Algorithms, Architectures, Arrangements, and Applications (SPA2022), 2022. September 2022, Poznan, Poland.
Mohamed Gabr, Wassim Alexan and Karim Moussa

Image Encryption Through CA, Chaos and Lucas Sequence Based S-Box
IEEE 25th Signal Processing Algorithms, Architectures, Arrangements and Applications, September 2022, Poznan, Poland.
Mohamed Gabr, Wassim Alexan and Kareem Moussa

Multi-Stage RGB Image Encryption
IEEE International Telecommunications Conference (ITC2022), July 2022, Air Defense College, Alexandria, Egypt.
Mohamed Gabr, Wassim Alexan, Belal Maged and AlHussain Mezar

Image Feature-Based Watermarking
IEEE International Telecommunications Conference (ITC2022), July 2022, Air Defense College, Alexandria, Egypt.
Wassim Alexan, Eyad Mamdouh, Mohamed ElBeltagy, Fatma Hassan and Phoebe Edward

Social Engineering and Technical Security Fusion
IEEE International Telecommunications Conference (ITC2022), July 2022, Air Defense College, Alexandria, Egypt.
Wassim Alexan, Eyad Mamdouh, Mohamed ElBeltagy, Ahmed Ashraf, Mohamed Mostafa and Hashem Al-Qurashi

Identifying the Motivational Influences on Students' Choice of Engineering Major
IEEE Global Engineering Education Conference, EDUCON2022.
Wassim Alexan

Image Encryption Through Rossler System, PRNG S-Box and Recáman's Sequence
2022 IEEE 12th Annual Computing and Communication Workshop and Conference (CCWC).
Mohamed ElBeltagy, Wassim Alexan, Abdelrahman ElKhamry, Mohamed Moustafa and Hisham Hussein

Image Encryption Through Fibonacci Sequence, S-Box, and Tan Bessel Function
2022 IEEE 2nd International Conference on Information Technology and Education (ICIT&E).
Wassim Alexan, Mohamed ElBeltagy, Amr Aboshousha and Hisham Hussein

IoMT Security: SHA3-512, AES-256, RSA and LSB Steganography
2021 IEEE 8th NAFOSTED Conference on Information and Computer Science (NICS).
Wassim Alexan, Ahmed Ashraf, Eyad Mamdouh, Sarah Mohamed and Mohamed Moustafa.

Image Encryption Through Lucas Sequence, S-Box and Chaos Theory
2021 IEEE 8th NAFOSTED Conference on Information and Computer Science (NICS).
Wassim Alexan, Mohamed ElBeltagy and Amr Aboshousha.

Fractional Differential Equations With Regular Kernel to Study the Temperature Distribution Within a Spinning Satellite

International Conference on Advanced Physics and Mathematics-(ICAPHMA-22).

Hisham Hussein, Adel Naiem and Wassim Alexan

Lightweight Image Encryption: Cellular Automata and the Lorenz System

The 33rd IEEE International Conference on Microelectronics (ICM), Cairo, Egypt, December 2021.

Wassim Alexan, Mohamed ElBeltagy and Amr Aboshousha

Utilization of Corner Filters, AES and LSB Steganography for Secure Message Transmission

The 33rd IEEE International Conference on Microelectronics (ICM), Cairo, Egypt, December 2021.

Wassim Alexan, Abdelrahman Elkhateeb, Eyad Mamdouh, Fahd Al-Seba'ey, Ziad Amr and Hana Khalil

SOR Weighting Factor Optimization of AC Systems and Electrical Circuits

The 3rd IEEE International Conference on Novel Intelligent and Leading Emerging Sciences (NILES), Cairo, Egypt, October 2021.

Wassim Alexan, Ziad Amr, Abdelrahman Elkhateeb, Eyad Mamdouh, Hana Khalil and Fahd Al-Seba'ey

Securing Sensitive Data Through Corner Filters, Chaotic Maps and LSB Embedding

The 3rd IEEE International Conference on Novel Intelligent and Leading Emerging Sciences (NILES), Cairo, Egypt, October 2021.

Wassim Alexan, Eyad Mamdouh, Abdelrahman Elkhateeb, Fahd Al-Seba'ey, Ziad Amr and Hana Khalil

3D Steganography by Random Shuffling of Image Contents Using Residue Model

The 4th IEEE International Conference on Electronics, Communication and Aerospace Technology (ICECA), Coimbatore, India, November 2020.

Abeer Samir, Ahmed El-Rafei, Ramy Taki ElDin and Wassim Alexan

Message Security Through AES and LSB Embedding in Edge Detected Pixels of 3D Images

The 2nd IEEE International Novel Intelligent and Leading Emerging Sciences (NILES) Conference, Cairo, Egypt, October 2020.

Yomna Moussa and Wassim Alexan

A High Capacity Gray Code Based Security Scheme for Non-Redundant Data Embedding

The IEEE International Conference on Innovative Trends in Communication and Computer Engineering (ITCE), Aswan, Egypt, February 2020.

Ahmed Seif and Wassim Alexan

AES-Secured Bit-Cycling Steganography in Sliced 3D Images

The IEEE International Conference on Innovative Trends in Communication and Computer Engineering (ITCE), Aswan, Egypt, February 2020.

Seif Yasser, Adham Hesham, Mahmoud Hassan and Wassim Alexan

LLR-Based Hybrid On-Off Relaying in Rayleigh Fading

The IEEE International Symposium on Advanced Electrical and Communication Technologies (ISAECT), Rome, Italy, November 2019.

Wassim Alexan, Refaat Mohamed, Mohamed Magdy, Mahmoud Gad and Abdullah Mohamed

Logistic Tan Map Based Audio Steganography

The IEEE International Conference on Electrical Computing Technologies and Applications (ICECTA), Cairo, Egypt, November 2019.

Marwa Tarek and Wassim Alexan

3D Image Steganography Using Sine Logistic Map and 2D Hyperchaotic Map

The IEEE International Conference on Electrical Computing Technologies and Applications (ICECTA), Cairo, Egypt, November 2019.

Marwa Tarek, Wassim Alexan and Hisham H. Hosny

Blowfish–Secured Audio Steganography

The IEEE International Conference on Novel Intelligent and Leading Emerging Sciences (NILES), Cairo, Egypt, October 2019.

Farah Hemeida, Wassim Alexan and Salma Mamdouh

Security Through Blowfish and LSB Bit–Cycling With Mathematical Sequences

The 23rd IEEE International Conference on Signal Processing, Algorithms, Architectures, Arrangements and Applications (SPA), Poznan, Poland, September 2019.

Wassim Alexan and Farah Hemeida.

Logistic Sine Map Based Image Encryption

The 23rd IEEE International Conference on Signal Processing, Algorithms, Architectures, Arrangements and Applications (SPA), Poznan, Poland, September 2019.

Hisham Hussein, Marwa Tarek and Wassim Alexan

A Multiple Layer Security Scheme Utilizing Information Matrices

The 23rd IEEE International Conference on Signal Processing, Algorithms, Architectures, Arrangements and Applications (SPA), Poznan, Poland, September 2019.

Maggie Mashaly, Ahmed El Saied, Wassim Alexan and Abeer Khalifa

A High capacity Double–Layer Gray Code Based Security Scheme for Secure Data Embedding

The IEEE International Symposium on Networks, Computers and Communications (ISNCC), Istanbul, Turkey, June 2019.

Ghadir Moustafa and Wassim Alexan

A 3DES Double–Layer Based Message Security Scheme

The 2nd IEEE International Conference on Computer Applications & Information Security (ICCAIS), Riyadh, Saudi Arabia, May 2019.

Neamah Adam, Maggie Mashaly and Wassim Alexan

Secure Message Embedding in Audio

The 2nd IEEE International Conference on Computer Applications & Information Security (ICCAIS), Riyadh, Saudi Arabia, May 2019.

Reem Taha and Wassim Alexan

Triple Layer Image Security Using a Zigzag Embedding Pattern

The IEEE International Conference on Advanced Communication Technologies and Networking (CommNet), Rabat, Morocco, April 2019.

Sara Farrag, Wassim Alexan and Hisham Hussein

Double–Layer Image Security Scheme With Aggregated Mathematical Sequences

The IEEE International Conference on Advanced Communication Technologies and Networking (CommNet), Rabat, Morocco, April 2019.

Marwa Tarek, Wassim Alexan and Hisham Hussein

A High Capacity Geometrical Domain Based 3D Image Steganography Scheme

The IEEE International Conference on Advanced Communication Technologies and Networking (CommNet), Rabat, Morocco, April 2019.

Sara Farrag and Wassim Alexan

Secure 2D Image Steganography Using Recamán's Sequence

The IEEE International Conference on Advanced Communication Technologies and Networking (CommNet), Rabat, Morocco, April 2019.

Sara Farrag and Wassim Alexan

Secure Message Embedding in 3D Images

The 2nd IEEE International Conference on Innovative Trends in Computer Engineering (ITCE), February 2019, Aswan, Egypt.

Salma Sherif, Ghadir Mostafa, Sara Farrag and Wassim Alexan

A Comparative Study of Relaying Networks: An Outage Probability Approach

The 2nd IEEE International Conference on Innovative Trends in Computer Engineering (ITCE), Aswan, Egypt, February 2019.

Wassim Alexan, Rowan Zaki and Saleh Megahed

An AES Double-Layer Based Message Security Scheme

The 2nd IEEE International Conference on Innovative Trends in Computer Engineering (ITCE), Aswan, Egypt, February 2019.

Wassim Alexan, Ahmed Hamza and Hana Medhat

Adaptive Hybrid Scheme for Cooperative Communications

The IEEE Global Information Infrastructure and Networking Symposium (GIIS), Thessaloniki, Greece, October 2018.

Youstina Megalli, Wassim Alexan and Ahmed El Mahdy

Sequence-Based Bit-Cycling in Double Layer Message Security

The IEEE Advances in Wireless and Optical Communications (RTUWO), Riga, Latvia, November 2018.

Wassim Alexan, Ahmed Hamza, Hana Abdel Hadi and Hisham Hussein

A Comparative Study on Power Allocation for Cooperative Systems Over Rayleigh Fading Channels

The 1st IEEE International Conference on Innovative Trends in Computer Engineering (ITCE), Aswan, Egypt, February 2018.

Wassim Alexan and Saleh Megahed

A Comparative Study of Hybrid Relaying Protocols for M-PSK Modulated Signals Over Rayleigh Fading Channels

The 1st IEEE International Conference on Innovative Trends in Computer Engineering (ITCE), Aswan, Egypt, February 2018.

Wassim Alexan and Youssef Beraikaa

Fixed and Adaptive Relaying Power Schemes for Underlay Cognitive Radio Networks

The 2nd IEEE conference on Advances in Wireless and Optical Communications (RTUWO), Riga, Latvia, November 2017.

Wassim Alexan and Ahmed El Mahdy

Interference Management for D2D Communications Underlay Macro-Small Cell Networks With Imperfect Channel Estimation

The 2nd IEEE conference on Advances in Wireless and Optical Communications (RTUWO), Riga, Latvia, November 2017.
Engy Maher, Wassim Alexan and Ahmed El Mahdy

Two-Way decode and forward relaying for OFDMA mobile systems

The 2nd IEEE conference on Advances in Wireless and Optical Communications (RTUWO), Riga, Latvia, November 2017.
Nouran Farouk, Wassim Alexan and Ahmed El Mahdy

A Hybrid Relaying Protocol for Wireless Cooperative Networks Based on the Log-Likelihood Ratio

The 19th IEEE SPA Conference, Poznan, Poland, September 2015.
Wassim Alexan and Ahmed El Mahdy

A Relay Selection Method for Bidirectional Wireless Cooperative Networks Based on the Log-Likelihood Ratio

The 19th IEEE SPA Conference, Poznan, Poland, September 2015.
Wassim Alexan and Ahmed El Mahdy

LLR-Based Hybrid Relaying as a Countermeasure Against an Impulsive Noise Jamming Attack

The 19th IEEE SPA Conference, Poznan, Poland, September 2015.
Wassim Alexan, Ahmed El Mahdy and Lamiaa Daoud

Performance of two way DF relaying with co-channel interference and channel estimation error

The 5th IEEE International Conference on Digital Information Processing and Communications (ICDIPC), Sierre, Switzerland, November 2015.
Ahmed El-Mahdy, Wassim Alexan and Nerin Ashraf

A Quantized Reliability-Relay Selection Method for Wireless Cooperative Communications

The 11th IEEE International Symposium on Wireless Communication Systems, Barcelona, Spain, August 2014.
Wassim Alexan and Ahmed El Mahdy

Relay Selection Based on the Log-Likelihood Ratio for Cooperative Communication Networks

The 18th IEEE SPA Conference, Poznan, Poland, September 2014.
Wassim Alexan and Ahmed El Mahdy

iii. Creative Works and Conference Presentations

Procurement Practices can obtain quality competitive advantage for real estate firms: Insights from Egypt

African Academy of Management (AFAM) 6th Biennial Conference, Cairo 2023. Muhammad Kotb and Wassim Alexan

Modeling and Simulation of a Cooperative Communication System

The European Wolfram Technology Conference, Frankfurt, Germany, May 2014.
Wassim Alexan

PROFESSIONAL REVIEW ACTIVITIES

Reviewer for the following journals:

- *IEEE Transactions on Communications*

- *IEEE Transactions on Dependable and Secure Computing*
- *IEEE Transactions on Circuits and Systems II: Express Briefs*
- *IEEE Transactions on Industrial Informatics*
- *IEEE Access*
- *Springer Journal of Frontiers of Information Technology & Electronic Engineering*
- *Springer Journal of Multimedia Tools and Applications*
- *Springer's The Visual Computer*
- *Springer's The Journal of Supercomputing*
- *Springer's Journal of Signal, Image and Video Processing*
- *Springer's Open Journal of Engineering and Applied Science*
- *SN Applied Sciences*
- *Wiley IET Information Security*
- *Wiley IET Information Security*
- *Nature Scientific Reports*
- *Elsevier Expert Systems with Applications*
- *Elsevier Engineering Science and Technology, an International Journal*
- *Elsevier International Journal of Computing and Digital Systems*
- *Elsevier Computer Science Review*
- *Elsevier Heliyon*
- *Wiley Mathematical Problems in Engineering*
- *Recent Patents on Computer Science*
- *International Journal of Electronics and Communications, AEUE*
- *Journal of Communications*
- *The Imaging Science Journal*
- *Cluster Computing*
- *International Journal of Modern Physics B*
- *Complexity*
- *MDPI Entropy*
- *MDPI Electronics*
- *MDPI Symmetry*
- *MDPI Algorithms*
- *MDPI Information*
- *MDPI Vision*
- *MDPI Photonics*
- *MDPI Remote Sensing*
- *MDPI Sensors*
- *MDPI Computers*

- *MDPI Processes*
- *ISPRS International Journal of Geo-Information*

Member of the technical program committee (TPC) of the following conferences:

- ICSPIS 2023
- ICM 2023
- Smart Cities 4.0 2023
- 3ICT 2023
- MTTW 2023
- SPA 2023
- ITCE 2023
- EDUCON 2023
- ICM 2022
- MTTW 2022
- SPA 2022
- EDUCON 2022
- SLAE 2021
- ICM 2021
- MTTW 2021
- ECONF 2020
- NRSC 2020
- ICM 2020
- SPA 2020
- JIC SC 2019
- MTTW 2019
- RAEMP 2019
- ICCAIS 2019
- ITCE 2019
- ICCNE 2018
- ICW-TELKOMNIKA 2018
- EECSI 2018
- RTUWO 2018

SUPERVISION OF MSC AND PHD PROJECTS

- PhD, Amr Ezzat Diab, "Mathematical Constructs for the Secure Transmission of Batch Visual Information", GUC, *ongoing*.
- PhD, Eyad Mamdouh, "Fractional-order Numerical Solutions of Hyperchaotic Systems and Other Physical Constructs for Multiple Image Encryption", GUC, *ongoing*.

- PhD, Mostafa Samy, "Adaptive Field of View of MIMO Imaging Radar for Hyper Angular Resolution Applications", GUC, *ongoing*.
- PhD, Mohamed Gabr, "Image Encryption Techniques Utilizing Chaos Theory and Other Mathematical Constructs", GUC, 2023.
- PhD, Sara Farrag, "UAV Assisted Mobile Communications in THz Channel", GUC, 2023.
- MSc, Ahmed Walid, "Developing an Encryption Algorithm Using Hyperchaotic Systems with Digital Watermarking for Digital Image and Engineering Blueprints for Copyright Protection", GUC, *ongoing*.
- MSc, Mohamed Yasser, "Cryptography and Steganography Schemes for Securing Cloud-Based IoT", GUC, *ongoing*.
- MSc, Eyad Mamdouh, "Chaos Based Image Processing Techniques for Secure Transmission of Information", GUC, 2023.
- MSc, Mohamed ElBeltagy, "Chaos and Cellular Automata Based Image Processing Techniques for Secure Transmission of Information", GUC, 2022.
- MSc, Marwa Tarek, "Image Processing Techniques for Secure Transmission of Information", GUC, 2021.
- MSc, Abeer Samir, "Mathematical Techniques for Multiple Layer Security Schemes", Ain Shams University, 2021.
- MSc, Ghadir Mahmoud, "Multi-user Clustering for Relay Aided Cellular MIMO Systems", GUC, 2020.
- MSc, Sara Farrag, "High Capacity 2D and 3D Reliable Image Steganography Schemes", GUC, 2019.
- MSc, Youstina Megalli, "Adaptive Transmission for Cooperative Communication Networks", GUC, 2018.

COMPUTER SKILLS

I have excellent computer skills that enable me to:

- Write scientific articles, technical papers, progress reports, exams and assignments,
- Design interactive graphics, plots and presentations,
- Convert my various ideas into computer code,
- Search and find information and scientific data.

Using:

- MS Office[®],
- Wolfram Mathematica[®],
- Mathworks Matlab[®],
- \LaTeX (Latex is a document-preparation system for high quality typesetting).

REFERENCES

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