

# HUSSEIN ALY JAD, PHD

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## PROFILE

Accomplished academic with a strong background in teaching pure and applied mathematics, including interdisciplinary subjects at the intersection of mathematics and computer science. I hold a Doctor of Philosophy (Ph.D.) in Mathematics from Ain Shams University. In addition to teaching, I have extensive experience supervising graduation projects in Information Technology and Cybersecurity, with a particular focus on integrating Human-Computer Interaction (HCI) principles. This involves leading students through structured ideation camps, identifying necessary training pathways, and applying key project management tools such as market research, business model canvas, and feasibility studies to develop business-ready solutions presented through the Technology Transfer Center. Furthermore, my research interests span Logic Algebras, Data Encoding, Cryptography, Health Informatics, and Technology Design in E-Learning and Cultural Heritage. Moreover, I have demonstrated leadership in academic innovation through various roles, including Head Coordinator of Graduation Projects, Director of the Training and Professional Development Center, Vice Director of the Entrepreneurship Club, and Director of the Technology and Innovation Support Center. Therefore, I bring a well-rounded portfolio of academic, research, and administrative expertise to interdisciplinary technology-driven education.

## AREAS OF EXPERTISE

**Teaching & Academic Instruction:** Proven expertise in delivering high-quality instruction in Pure and Applied Mathematics, with a focus on subjects such as Discrete Structures, Cryptographic Algorithms, Operations Research, Biostatistics, Mathematics, Physics, Mathematics for Computer Science, Human – Computer Interaction , and Smart Skills. Specialised in interdisciplinary teaching bridging Mathematics and Computer Science.

**Graduation Projects Supervision:** Proven track record in supervising a wide range of graduation projects across domains such as Information Technology and Cybersecurity.

**Entrepreneurship & Innovation:** Actively engaged in mentoring students on tech-driven and socially impactful entrepreneurial projects. Committed to bridging the gap between academia and industry by fostering innovation and supporting early-stage startup initiatives.

**Research Activities:** Research expertise spans Logic Algebras, Data Encoding, Cryptography, Health Informatics, Human-Computer Interaction (HCI), and Technology Design in eLearning and Cultural Heritage contexts.

**Leadership:** Demonstrated leadership in multiple roles including:

- Head Coordinator of the Graduation Projects Center
- Director of the Training and Professional Development Center (TPDC)
- Vice Director of the Entrepreneurship Club
- Director of the Technology and Innovation Support Center (TISC) at SRTA-City

## TEACHING EXPERIENCE

From	To	Position	Employer
2024	Present	Lecturer	Department of Computer Science, College of Computing and Information Technology, <b>Arab Academy for Science, Technology and Maritime Transport (AASTMT)</b> - <b>Courses:</b> Discrete Structures
2023	Present	Lecturer & Graduation projects Supervisor	<b>Department of Cybersecurity, Faculty of Computers and Data Science, Alexandria University</b> - <b>Courses:</b> Cryptographic Algorithms and Operations Research - Supervisor of the graduation projects in Cybersecurity Department.
2023	Present	Lecturer & Head Coordinator of Graduation Projects Center	<b>Faculty of Applied Health Science Technology, Borg Al-Arab Technological University (BATU).</b> - <b>Courses:</b> Biostatistics, Mathematics, Physics, Health Informatics Project Management , and Technical & Smart Skills. - Head Coordinator of graduation projects center at the faculty of applied health science technology including Health Information Technology Department's graduation projects.

2022	2023	Lecturer	<b>Mathematics Department, Matrouh University</b> <b>Courses:</b> Logical algebra, Linear Algebra, Fluids Mechanic, Analytical Geometry, Applied Mathematics (1), Applied Mathematics (3), Applied Mathematics (4), Probability Theory, Statistical Methods, Topology and Mechanics
2020	2020	Visiting Lecturer	CELL Architecture and Urban School, <b>Goethe Institute and Robert Bosch Cultural Managers</b> , Luxor
2012	2013	Lecturer	<b>Informatics Research Institute (IRI)</b> , City of Scientific Research and Technological Applications (SRTA-City), New Borg El Arab City, Alexandria <b>Course:</b> Mathematics for Computer Science
2017	2018	Teaching Assistant	Basic Science Department, <b>Faculty of Engineering, University of Pharos</b> , Alexandria <b>Courses:</b> Linear Algebra, Mathematics (3) and Mathematics (4)
2015	2016	Teaching Assistant	<b>Higher Institute of Engineering and Technology (HIET)</b> , New Borg El Arab City, Alexandria <b>Course:</b> Mathematics(1)
2014	2015	Teaching Assistant	Basic Science Department, <b>Faculty of Engineering, University of Pharos</b> , Egypt <b>Courses:</b> Mathematics (1), Mathematics (2) and Mathematics (3)
2009	2012	Teaching Assistant	<b>Higher Institute for Optics Technology, Culture and Science City</b> , Egypt <b>Courses:</b> Pure Mathematics, Applied Mathematics, Statistics and Operation Research, Financial Mathematics, Insurance Mathematics and Introduction to Computer.

## ACADEMIC & INNOVATION LEADERSHIP EXPERIENCE

### Head Coordinator of Graduation Projects Center, Faculty of Applied Health Science Technology, Borg Al-Arab Technological University (BATU) | 10/2025 – Present

- Guide students in selecting innovative, feasible, and interdisciplinary graduation project topics.
- Develop standardized documentation templates, progress reporting tools, and comprehensive assessment rubrics.
- Coordinated internal review panels and prepared selected projects for participation in national exhibitions, startup competitions, and academic conferences.
- Foster collaboration among students, faculty, industry experts, and healthcare institutions

### Vice – Director, Enterpeneurship club, BATU | 10/2025 - Present

- Instruct students on conducting business ideas, market research, tailored Business Model Canvases, and feasibility studies to identify demand, competitive landscape, and user needs within the healthcare sector.
- Organise workshops, competitions, and mentorship programs to promote entrepreneurial thinking among students across all faculties.
- Facilitate participation in national and international innovation events, hackathons, and startup accelerators.
- Collaborate with industry partners, incubators, and governmental initiatives to provide students with real-world exposure and startup support.

### Director, Training and Professional Development Center (TPDC), Faculty of Applied Health Science Technology, BATU | 10/2025 – Present

- Facilitate student internships, practical training, and job shadowing opportunities.
- Promote joint training programs with national and international organizations.
- Build partnerships with hospitals, healthcare facilities, pharmaceutical industries, and technology companies.
- Coordinate with academic departments and external experts to ensure relevant and up-to-date content.
- Provide technical assistance and mentorship for graduation projects and prototypes.
- Organize health Expos, hackathons, and innovation challenges.

### Director, Technology and Innovation Support Center, City of Scientific Research and Technological Applications (SRTA - City) | 01/2022 – Present

- Provide guidance to researchers, faculty, and innovators on IP rights, patent filing, and protection strategies.
- Coordinate with the Egyptian Patent Office and WIPO for IP registration and capacity building.

- Identify commercially viable research outputs and support their transfer to industry.
- Facilitate licensing agreements, joint ventures, and startup creation based on innovations.
- Organize regular workshops, seminars, and training sessions on intellectual property rights, innovation management, and commercialization strategies

## MULTIDISCIPLINARY PROJECTS LEADERSHIP & SUPERVISION

*In collaboration with the **Faculty of Computers and Data Science under the supervision of Prof. Magda Madboly, Dean of the Faculty, Alexandria University, Through the academic year 2024-2025, I am supervising the following project.***

**Project: Montura:** Focuses on strengthening wireless network security by integrating machine learning and deep learning techniques with Moving Target Defense (MTD) strategies. The system proactively detects and mitigates threats in real time, dynamically adapting to emerging attack patterns.

*In collaboration with. **Prof. Rania El-Sharkawy, Dean of the Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University, through the academic year 2024-2025, we cooperatively supervised the following projects in Health Information Technology Department***

**Project No.1 : ISIS (Women Health):** Mobile application focuses on developing a comprehensive women's health app empowers users with essential tools for tracking, managing, and improving their well-being with specific features such as mental health support, pregnancy guidance, , lifestyle recommendations, and access to expert consultations.

**Project No.2 : WellNet:** A health - focused social platform designed to connect breast cancer patients with others facing similar health challenges.

**Project No.3 : NutriBot (Health Nutrition):** The project involves developing a smart system that delivers a personalized treatment plan based on a combination of proper nutrition and vitamin supplements (in pill form), tailored to each user's specific needs according to their recorded health data.

**Project No.4 : DrugFocus:** Develop a digital platform that helps users reduce their medication costs by identifying the most affordable options containing the same active ingredients.

*In collaboration with. **Prof. Rania El-Sharkawy, Dean of the Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University, through the academic year 2023-2024, we cooperatively supervised the following projects in Health Information Technology Department***

**Project No.1 : Smart Ambulance:** The project aimed to develop web application to facilitate road accident victims' reception and treatment process at hospitals.

**Project No.2 : Forsa:** A website to support individuals in the early and middle stages of addiction recovery.

**Project No.3 : Al-Rafik:**The project developed a website to simplify the process of selecting Companions for the elderly and individuals with special needs.

**Project No.4 : MediMap:** Website connects hospitals and provides with real-time information and statistics on the availability of beds in Intensive Care Units (ICUs) and Neonatal Intensive Care Units (NICUs).

**Project No.5: Nurse Calling System (M3ak):** Digital nurse calling system that provides a more effective way for patients to request help from nursing staff.

**Project No.6: Crowd Organizing Pathway:** Mobile advance booking application that allows patients to schedule their appointments in advance via their smartphones.

**Project No.7: MECPHA:** Platform works on the inventory and collection of spare parts of manufacturing machines for pharmaceutical factories, medical supplies factories and cosmetics.

In collaboration with Idea Space Company, Silicon Oasis, New Borg Al-Arab City, Alexandria, Through the academic year 2023-2024, I organized an Internship Program focused on User Experience (UX) design for the students of Egypt-Japan University of Science and Technology (E-JUST) and Alexandria University from Jan. 27 to Feb. 8, 2024. The key outcomes is the following project.

**Project Title:** AI-Powered Educational Game for Enhancing Arabic Writing Skills in Elementary Students

**Description:** The project introduced an AI-powered educational game designed to enhance Arabic writing skills among elementary school students. The game identifies and analyzes common writing errors using artificial intelligence, providing personalized feedback and adaptive exercises to address individual learning needs.

## COLLABORATIVE RESEARCH PROJECTS

In collaboration with Assoc. Prof. Shaimaa Lazem, International Collaboration Officer at the Science, Technology & Innovation Funding Authority (STDF) & General Chair of Fifth African Conference on Human-Computer Interaction (AfriCHI), we accomplished the following projects.

**Project No.1 :** The Hilali Network: Exploring Lived Cultural Heritage Through Design in Higher Education, in partnership with University of Kingston in London | April 2017 to October 2018.

The project funded by the **Egyptian-English Partnership Program (Newton-Mosharafa)**. The Hilali Network project focused on integrating lived cultural heritage into higher education through innovative design approaches. The project explored how cultural practices and traditions could be preserved and reimagined within educational frameworks.

**Project No.2:** Exploring the Value of Digital Educational Games in Rural Egypt, Internship Program, SRTA-City | April 2016

The project explored the extent to which digital technology could motivate primary students to collaboratively learn a challenging topic in the National Mathematics Curriculum.

**Project No.3 :** Digital Educational Game for Multiplication Facts, Internship Program, SRTA-City | 15 July 2020

**Description:** The project aimed to design and research an online educational game to enhance students' ability to memorize multiplication facts.

## SCIENTIFIC PUBLICATIONS

- Hyper BCK-hashing algorithm: employing encoding system based on logical algebra in enhancing the secure hash algorithms, Jad, H.A., Mostafa, S.M., Naby, M.A.A., ...Kashkoush, M.S., Taha, A.A., Italian Journal of Pure and Applied Mathematics, 2023, 49, pp. 462–481
- Algorithm for encoding N-ary block codes by using the hyper function, Mostafa, S.M., Abd-Elnaby, M.A., Youssef, B.A.B., Jad, H.A., Advances in Mathematics: Scientific Journal, 2021, 10(1), pp. 339–351
- Efficient Algorithm for Constructing KU-algebras from Block Codes, Mostafa, S. M., B. A. B. Youssef, H. A. Jad, International Journal of Engineering Science Invention, 2016, 5(5), 32-43.
- Coding theory applied to KU-algebras, Mostafa, S. M., Youssef, B., Jad, H. A., Journal of New Theory, 2015, (6), 43-53.
- Intersectional  $(\alpha, A)$ -soft new-Ideals In pu-algebras, Mostafa, S. M., Kareem, F. F., Jad, H. A., Journal of New Theory, 2016,(13), 38-48.
- Brief review of soft sets and its application in coding theory, Mostafa, S. M., KAREEM, F. F., Jad, H. A., Journal of New Theory, 2020, (33), 95-106.

- We play we learn: Exploring the value of digital educational games in Rural Egypt, Lazem, S., Jad, H.A., Conference on Human Factors in Computing Systems - Proceedings, 2017, 2017-May, pp. 2782–2791

## AWARDS

### RoboRAVE Egypt 2025, Egypt-Japan University of Science and Technology (E-JUST) | July 4–5, 2025

Outstanding Participation of Students from the Faculty of Applied Health Sciences Technology in the RoboRAVE Egypt 2025 competition, held at E-JUST. The event was honored by the presence of H.E. Mrs. Leonora Rueda Gutiérrez, Ambassador of Mexico to Egypt, Dr. Chen Zhengrong, Director of RoboRAVE China, and Eng. Reem Radwan, Director of RoboRAVE Egypt.

- **First Place:** Team **BurnaCure** from the Pharmaceutical Production Technology program, awarded a cash prize of 5,000 EGP.
- **Second Place:** Team **NeuroBed** from the Healthcare Technology program, awarded a cash prize of 3,000 EGP.
- **Third Place:** Team **ISIS** from the Health Informatics Technology program, awarded a cash prize of 2,000 EGP.

The winning teams have been officially qualified to compete in the international finals scheduled to take place in China on August 25, 2025.

### IEEE-YESIST12\_2025 competition, Arab Academy for Science, Technology & Maritime Transport (AASTMT) | May 8–9, 2025

Participated in IEEE-YESIST12\_2025 competition at the Arab Academy for Science, Technology & Maritime Transport (AASTMT) with four teams from the faculty of Applied Health Science Technology at BATU. Team **ISIS** achieved **Second Place in the Special Track** and **qualified for the international finals in Malaysia**, scheduled for August 2025, under the auspices of the IEEE Global Organization.

### Startup Olympics 2024, Innovators Support Fund (ISF) | January 17, 2025

Participated in the Startup Olympics, an initiative supporting university students in Egypt in innovation and entrepreneurship. The event served as a gateway to the **GEN Z** Program Competition, where the **Smart Ambulance** team from the faculty of Applied Health Science Technology at BATU was awarded **EGP 600,000** and granted access to university hospitals for project implementation.

### Entrepreneurship and Innovation Bootcamp, BATU | May 14, 2025

Participated in the Entrepreneurship and Innovation Bootcamp held at Borg El Arab Technological University, competing among 171 students from Alexandria University and BATU. The **MEDIHUB** team, faculty of Applied Health Science Technology at BATU, **won First Place and a cash prize of EGP 5,000**.

### Applied Health Sciences Forum Projects Competition, BATU | May 7, 2025

Participated in the competition with 6 teams from the Faculty of Applied Health Sciences Technology. Among 22 graduation projects from prestigious universities—including October Technological University, New Assiut Technological University, Misr University for Science and Technology, and Beni Suf University - **two teams** from our faculty achieved **First and Second Place**.

### Arab Youth Forum of Entrepreneurship, Institute of Graduate Studies and Research, Alexandria University | December 16, 2024

Participated in the Arab Youth Forum for Entrepreneurship, held at the Institute of Graduate Studies and Research, Alexandria University, where the graduation project "Al-Rafik" won **Third Place**.

## **COMPETITIONS & INNOVATION ENGAGEMENTS**

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### **Third Scientific Research and Innovation Forum (Entelaga 3), Egyptian Space Agency | June 22,2025**

Participation of Students from the Faculty of Applied Health Sciences Technology in the at the Egyptian Space Agency, alongside representatives from 11 universities and technological institutes across the Arab Republic of Egypt.

### **Gen. Start. Vol.2 competition, Egypt-Japan University of Science and Technology (E-JUST) | March 23,2025**

Thirty-eight students from the Faculty of Applied Health Sciences Technology participated in the activities of the Gen. Start. Vol.2 competition, organized by the IEEE E-JUST team at the Egypt-Japan University of Science and Technology (E-JUST), in collaboration with Alamein International University.

### **Competition of 2nd International Conference on Technological Education |April 8-10,2025**

Twenty-four students from the Faculty of Applied Health Sciences Technology participated in the competition held as part of the 2nd International Conference on Technological Education, which took place at the Royal Kempinski Hotel – New Cairo.

### **Entrepreneurship Rally, Academy of Scientific Research and Technology (ASRT)| Dec 8, 2024**

Twenty-six students from the Faculty of Applied Health Sciences Technology participated in the Entrepreneurship Rally, organized by the Academy of Scientific Research and Technology (ASRT) across Egyptian universities, with student teams achieving notable success in the competition. The MECFA team from the faculty successfully qualified for the finals

### **“It’s a time to be an entrepreneur” Competition, SRTA-City | March 7-8, 2023**

In cooperation with the Academy of Scientific Research and Technology and the company of Mentors' Business community for development and entrepreneurship, I participated in organizing the competition that was an opportunity to acquire the necessary skills and experience to launch emerging projects through practical ideas from research and prototypes.

### **IRI Hackathon 2020 Competition, University of Kingston in London | Jan 2020 - Feb 2020**

The competition targeted students from computer sciences/engineering backgrounds and engineering and information technology students.

The main objectives: -

- Development of a culture heritage mobile application
- Practice hands on experience in mobile apps programming tools
- Direct graduates towards startups and small business.
- Present examples and success stories to encourage youth.

## **JUDGING & REVIEW ROLES IN COMPETITIONS AND INNOVATION EVENTS**

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### **Reviewer – ITC-Egypt 2025, Egyptian Military Academy| 28–31 July 2025**

Served as a project reviewer at the International Telecommunication Conference (ITC-Egypt 2025), held at the Egyptian Military Academy in the New Capital, Cairo. Evaluated innovative student and research projects aligned with cutting-edge trends in communications technologies, as part of a high-level technical program featuring international experts, industry panels, and emerging technology tracks.

**Head of Judging Committee – Entrepreneurship Projects, RoboRAVE Egypt 2025, Egypt-Japan University of Science and Technology (E-JUST) | 4–5 July 2025**

Led the evaluation panel for entrepreneurship-focused student projects during RoboRAVE Egypt 2025. Oversaw the judging process, coordinated with industry experts and academic evaluators, and ensured fair, criteria-based assessment of innovative solutions presented by competing teams.

**Judge – Maker Fair Track, IEEE YESIST12, Arab Academy for Science, Technology and Maritime Transport (AASTMT) | 8–9 May 2025**

Served as a judge for the Maker Fair Track at IEEE YESIST12 (Youth Endeavors for Social Innovation Using Sustainable Technology). The event provided a global platform for students and young professionals to present innovative, tech-based solutions to pressing humanitarian and social challenges. Assessed projects based on creativity, social impact, and alignment with ethical, service-oriented engineering principles.

**Head of Judging Committee – Second Applied Health Sciences Forum Competition in Arab Republic of Egypt, Borg Al-Arab Technological University | 4–10 May 2025**

Served as the Head of the Judging Committee for the Second Applied Health Sciences Forum Competition, held at Tolip Golden Plaza Hotel – Heliopolis, Cairo. The forum was held under the theme of "Towards Future Visions for Educational Tourism and the Internationalization of the Technological Health Sector." The event brought together leading technological and scientific universities, including 6th of October Technological University, Assiut Technological University, Misr University for Science and Technology, and Beni Suef University. Among the forum's highlights was the signing of several Memoranda of Understanding (MoUs) between the Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University, and a number of international universities, aiming to strengthen academic and research collaboration and open new pathways for cross-border education.

**Judge – GEN Start Vol. 2 Pitching Competition, IEEE Region 8 Entrepreneurship Week, New Borg Al Arab Technology Park | 25 February 2025**

Served as a judge for student-led innovation projects at GEN Start Vol. 2, as part of IEEE Region 8 Entrepreneurship Week in Egypt-Japan University of Science and Technology (E-JUST). Evaluated startup pitches based on creativity, feasibility, and entrepreneurial potential. The event aimed to promote an entrepreneurial mindset among students and provided a platform for showcasing impactful, tech-driven ideas.

**Judge – STEM Borg El Arab School Projects (ISEF Preparation) | Academic Year 2024-2025 & 2023-2024**

Served as a judge for student research projects at STEM Borg El Arab School, as part of the preparation for the International Science and Engineering Fair (ISEF). Evaluated innovative student projects to select top candidates for representing the school in this prestigious global competition.

**Judge – Entrepreneurship Bootcamp: Idea Generation, Green Innovation & Design Thinking, Entrepreneurship Club (E-Club) at Borg Al-Arab Technological University| 20-28 April 2025**

Served as a judge during the final pitching session of the Entrepreneurship Bootcamp. The camp trained 171 students in green innovation, idea generation, and design thinking, with contributions from entrepreneurship and innovation experts. Judged final presentations from 16 student teams from Borg Al-Arab Technological University and Alexandria University, evaluating the viability and creativity of early-stage entrepreneurial projects.

**Head of Judging Committee – RoboRAVE Egypt 2024, Salahaldin International School (SIS) | 8 June 2024**

Served as Head of the Judging Committee for the RoboRAVE Egypt 2024 competition. Oversaw the evaluation of student-designed robots presented in an international competitive setting that promotes innovation, hands-on learning, teamwork, and creativity among participants from Egypt and abroad.

**Judge – Robofest Competition 2023, Lawrence Technological University (hosted at Schutz American School) | May 2023**

Served as a judge for the Robofest 2023 competition, organized by Lawrence Technological University. Evaluated student projects involving autonomous robots designed and programmed by participants. The event focused on promoting STEAM education and computer science (including AI), while encouraging creativity, problem-solving, and teamwork among students through an inclusive and engaging platform.

**Head of Judging Committee – RoboRAVE Egypt 2023, SRTA-City | 9 February 2023**

Served as Head of the Judging Committee for RoboRAVE Egypt 2023. This marked Egypt as the 15th country to host the global RoboRAVE competition. Oversaw the evaluation of student-designed robots across five challenge categories, including a newly introduced track for individuals with determination, promoting inclusivity in STEM. Assessed projects from participants aged 4 to 20, emphasizing innovation, teamwork, and hands-on learning in robotics.

## **TRAINING & CAPACITY-BUILDING PROGRAMS**

**Skill4Trends Student Training, Faculty of Applied Health Sciences Technology, | 16–27 February 2025**

Organized a two-week training workshop for 24 students in collaboration with the Alexandria Businessmen Association and the Chamber of Commerce as part of the Skill4Trends initiative. The training aimed to support students in transforming their graduation projects into startups within the health technology sector, aligning their innovations with real market needs.

**Training on Innovative Graduation Projects in Health Sciences Technology | Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University (BATU) | 10 February 2025**

keynote speaker on a large-scale workshop titled "Towards Innovative and Entrepreneurial Graduation Projects in Health Sciences Technology" with the participation of 380 students. The event aimed to inspire students to adopt innovation and entrepreneurship in their graduation projects, aligning their ideas with emerging trends in health technologies.

**AI Fundamentals for Health Applications | Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University (BATU) | February 2025**



Organized and facilitated AI training sessions tailored to students of the Faculty of Applied Health Sciences Technology, focusing on the fundamentals of artificial intelligence and its applications in digital health innovation and diagnostics.

**Web Development for Health Informatics Projects | Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University (BATU) | February 2025**

Organized web development courses aimed at empowering students to design and build user-centered, responsive health-related web platforms, integrating real-world project work aligned with healthcare needs.

**Mobile App Development in Healthcare Contexts | Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University (BATU) | February 2025**

Oversaw the delivery of mobile development training, guiding students to create Android/iOS applications that address problems in health monitoring, patient communication, and digital health services.

**English for Academic and Professional Communication | Faculty of Applied Health Sciences Technology, Borg Al-Arab Technological University (BATU) | February 2025**

Organized English language workshops designed to enhance students' communication skills in academic writing, presentation delivery, and professional interactions, with a focus on the health technology domain.

**Lecturer – Matrouh Children's University | February 7, 2023**

Delivered an educational session as part of the national Children's University program organized by the Academy of Scientific Research and Technology (ASRT). The initiative targets children aged 9–15 across Egypt to foster early interest in science, research, and innovation, offering hands-on learning experiences within university settings.

**Training and Development Center, Ain Shams University | February 2021**

Completed two professional development courses focused on:

- **Scientific Writing:** Enhancing academic and research writing skills.
- **Scholarly Publishing:** Understanding publication standards, peer review, and strategies for publishing in reputable journals.

*In collaboration with Assoc. Prof. Shaimaa Lazem, International Collaboration Officer at the Science, Technology & Innovation Funding Authority (STDF) & General Chair of Fifth African Conference on Human-Computer Interaction (AfriCHI), we organized the following schools.*

**Fourth Training Summer School, University of Kingston in London and Newton-Musharafa program| 21 - 30 Aug 2017**

The fourth training school in Human – Computer Interaction (HCI) was to train 18 students from Faculty of Engineering, Alexandria University as part of Hilali Network 's activities with University of Kingston in England that funded by the Newton-Musharafa program. The theme of training was to design applications for mobile phones enable members of the Bedouin community to document their non-traditional heritage of songs, poetry and traditions to preserve it from extinction.

**Third Training Winter School, SRTA-City| 29 Jan 2017 - 9 Feb 2017**

The third training school in HCI was to train 35 students from the Faculty of Engineering, Alexandria University. The theme of training was to design technologies to serve multiple sectors of Egyptian society (academic researchers, farmers, students).

#### **Second Training Winter School, SRTA-City | 26 Jan 2014 - 10 Feb 2014**

The second training school in the field of HCI was to train 31 students from Faculty of Engineering - Alexandria University. The theme of training was to design low-cost technologies to serve the health sector in Egyptian society.

#### **First Training Winter School, SRTA-City | 27 Jan 2013 – 7 Feb 2013**

The first training school in the field of HCI was to train 52 students from Faculty of Engineering, Alexandria University. The theme of training was to design low-cost technologies to serve the educational sector in Egyptian society.

### **ACADEMIC AND PROFESSIONAL CONFERENCES**

#### **Keynote Speaker – International Conference of the Patent Contact Office in Agriculture & Food Security National Research Centre (NRC), Egypt | October 29–31, 2024**

Delivered a keynote address at an international conference organized by the NRC Patent Office, under the patronage of the Egyptian Ministries of Higher Education, Environment, and Scientific Research. The conference focused on advancing innovation, intellectual property, and green technologies to enhance food security, foster agricultural entrepreneurship, and support collaboration between academia, research centers, and industry.

#### **Attendee – 9th Annual International Conference, Ain Shams University, Cairo, Egypt | April 2021**

Participated in Ain Shams University's 9th Annual International Conference, focusing on multidisciplinary advancements in education, research, and innovation.

#### **Attendee – WIPO Global TISC Conference Online | November 29 – December 1, 2021**

Participated in the WIPO Global Technology and Innovation Support Centers (TISC) Conference, co-organized with the National Intellectual Property Administration of China (CNIPA). The conference focused on the role of TISCs in advancing technology transfer and delivering innovation-driven solutions to global socio-economic challenges. Sessions featured expert discussions on best practices, IP management, patent analytics, and community impact.

### **PROFESSIONAL AND ACADEMIC WORKSHOPS**

#### **World Intellectual Property Organization (WIPO)**

- Series of workshops about the Project of Upgrading Technology Transfer Offices in Egypt | March – July 2023  
Participated in a national project supporting the development of innovation ecosystems through the enhancement of Technology Transfer Offices in selected Egyptian academic and research institutions.
- Webinar: Chemical Searches in PATENTSCOPE | May 2022
- International Workshop: Capacity Building in IP Rights and Geographical Indications | Nov 2020  
Organized in collaboration with the National Intellectual Property Academy and the Egyptian Patent Office.

### **Technology Innovation Commercialization Office (TICO), SRTA-City**

- Keynote Speaker: "Patents and Innovation Stimulation" | Oct 24, 2022  
Delivered a lecture on intellectual property, focusing on patent criteria and their role in innovation.
- Design Thinking Bootcamp | Dec 25–29, 2022
- Design Thinking & Entrepreneurship – From Problem to Business Idea | Nov 29 – Dec 2, 2022

### **University of Kingston, United Kingdom | 15 Nov 2017**

- Self-Documentation for Intangible Cultural Heritage: From Smart Phone Applications to Cloud Computing  
I participated in organizing the workshop to gather specialists from Egyptian and foreign universities in the fields of Intangible Cultural Heritage Documentation and Computer Engineering & Information Technology Companies to help the competent authorities for documenting CH electronically with the participation of Bedouin community.

### **Egyptian Patent Office**

- Introduction to Patents | Sep 2018
- Patent Grant Procedures and Skills | Feb 2014

### **Responsible Science Center**

- How to Get a Scholarship? | Jan 2017

### **Arid Lands Cultivation Research Institute (ALCRI), SRTA-City**

- Towards a Good Research | Jan 2017
- Research Ethics: Basics and Principles | Mar 2016
- Data Analysis and Modeling Using CoStat Software | Dec 2014

### **Misr El Kheir Foundation**

- Programs and Grants Supporting Scientific Research | Nov 29, 2022

## **INSTITUTIONAL COMMITTEES AND ADVISORY ROLES**

### **Member – Website and Mobile App Development Committee, City of Scientific Research and Technological Applications (SRTA-City)**

Participated as a committee member overseeing the development of the official website and mobile application of SRTA-City. Responsibilities included content planning, enhancing user experience, and ensuring that the technologies aligned with the city's research and technological objectives.

### **Member – Data Documentation Committee, SRTA-City**

Contributed as part of a specialized committee focused on documenting research and administrative data for SRTA-City. Efforts aimed at ensuring accuracy, accessibility of information, and supporting data-driven decision-making.

### **Member – Entrepreneurship Club, SRTA-City**

Actively participated in the Entrepreneurship Club's initiatives to promote a culture of innovation and entrepreneurial skill development. Involved in organizing events, workshops, and competitions to help transform creative ideas into practical projects.

### **Member – Services and Training Council, Borg Al-Arab Technological University (BATU)**

Contributed to formulating policies and plans related to student services and training programs. Supported initiatives that enhance students' professional skills and bridge the gap between education and labor market needs through workshops, development initiatives, and industry-partnered training programs.

### **Member – Faculty Council, Faculty of Applied Health Sciences Technology, BATU**

Participated in academic policy discussions and strategic planning for the faculty. Involved in curriculum development, educational program enhancement, and improving the quality of teaching and training in the field of health sciences technology.

## **ONLINE ACADEMIC AND PROFESSIONAL PROFILES**

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**Scopus Author Profile:** <https://www.scopus.com/authid/detail.uri?authorId=57201449379>

**Google Scholar:** <https://scholar.google.com/citations?user=yRcAJzgAAAAJ&hl=en>

**LinkedIn:** <https://www.linkedin.com/in/hussein-aly-jad-phd-78997165/>

**ResearchGate:** <https://www.researchgate.net/profile/Hussein-Jad>

## **ACADEMIC QUALIFICATIONS**

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### **Doctor of Philosophy (Ph.D.) in Mathematics, Ain Shams University, Egypt**

Department of Mathematics | Conferred: April 13, 2022

Major: Algebra – Data Encoding and Cryptography

Thesis Title: Emerging Research Trends and Algorithms in Studying Coding Theory and Algebraic Structures

### **Master of Science (M.Sc.) in Mathematics, Ain Shams University, Egypt**

Department of Mathematics | Conferred: January 12, 2017

Major: Algebra – Data Encoding

Thesis Title: Codes and Some Results Based on Algebraic Structures

### **Bachelor of Science (B.Sc.) in Mathematics and Computer Science, Beni-Suef University, Egypt**

Department of Mathematics and Computer Science | Graduated: May 1, 2007

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