

# Mohamed Ibrahim Hamed (Mohamed I. Hamed)

**Teaching Assistant**  
Faculty of Engineering at Shoubra  
**Benha University**  
**Egypt**

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**Nationality:** Egyptian

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## **Biography:**

Mohamed I. Hamed was born in 1992. He received his BSc. in Electronics and Communication Engineering, with honors in 2014. He also holds the position of a Teaching Assistant at the Electrical Engineering Department, Faculty of Engineering at Shoubra, Benha University, Egypt. He was responsible for IT Department at Faculty Of Engineering at Shoubra and Benha University. His research interests include Software-Defined Networking (SDN), Resource Management and Utilization, Network Function Virtualization and OpenFlow, Server Load balancing algorithms in Computer Networking, wireless Communication, 5G networks, and IoT.

## **Education:**

### **M.Sc.:**

- ✓ Master in Electrical Engineering (Oct 2014- Feb 2018)
  - ✓ Faculty of Engineering at Shoubra, Benha University, Egypt.
  - ✓ Thesis Title: "Resource Management of 5G Heterogeneous Networks Using Software-Defined Networking".
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### **B.Sc.:**

- ✓ B.Sc. in "Electrical Engineering" (Electronics & Telecommunications) (Sep 2009- Aug 2014).
- ✓ Faculty of Engineering at Shoubra, Benha University, Egypt.
- ✓ Major Communications Engineering
- ✓ Grade Excellent with honor 89.8 % (ranked the 2<sup>nd</sup> among his batch)
- ✓ All my studies are in English.
- ✓ Graduation Project: "Securing Wireless Local Area Network".

## Online Courses:

Course Title	Organization/University
Software-Defined Networking (SDN)	INE
Computer Networking Course + SDN	Yonsei University
Software-Defined Networking (SDN) Fundamentals	GNS3 Academy
Applied Data Science with Python	Michigan University
Python for Every Body	Coursera
Academic English: Writing	California University, Irvine
how-to-become-a-good-speaker	Udemy
Python Programming for Network Engineers	Udemy
CCNA (Cisco Certified Network Associate)	Cisco Certification
CCNP Routing knowledge	Self-Study

## Teaching Experience:

### 1. Undergraduate Courses

<ul style="list-style-type: none"><li>❖ Computer networks Fundamentals</li><li>❖ Computer networks Advanced</li><li>❖ Computer Architecture</li><li>❖ Network Labs and Implementations</li><li>❖ Programming Language (C++, Java, Python)</li></ul>	<ul style="list-style-type: none"><li>❖ Electronic Measurements</li><li>❖ Electronics and Communication Laboratory</li><li>❖ Electro Magnetic field course</li><li>❖ Electronic Circuits Fundamentals</li></ul>
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## Activities:

- ❖ Participating in ACM (Association of computing machinery) Programming local Contest as a contestant in 2012.
- ❖ Programming instructor volunteer and supporting workshops at different places like: Resala Charity Association (RCA).

## Projects:

- Software-Defined Networking projects such as Server load balancing and switching applications using Open Vswitch, Zodiac fx, and Raspberry Pi OpenFlow switches.
- Network Projects Such as Network Security using RADIUS and MikroTik Servers.
- Network infrastructure for Faculty of Engineering at Shoubra, Benha University.
- Many python projects such as GUI Desktop Applications.
- Java projects for university student registration using OOP.
- Simple Web design projects.
- Multi-function robot.
- Microcontroller and Arduino projects.

## Skills:

- Network Engineering
- Mininet SDN emulator
- Ubuntu
- OpenFlow application programming using Ryu and POX controllers.
- Virtualization (VMWare and VirtualBox)
- Computer science
- Load balancing algorithms
- Research
- Wireless networking
- Solving problems by using programming.
- Python Professional (Fundamentals, GUI, Networking, and Database)
- C / C++
- Java
- OOP
- Desktop Applications
- Latex
- Smart Draw 2013
- Lecturing
- MATLAB
- Communication skills.

## Publications:

[1] Mohamed I. Hamed, Basem M. ElHalawany, Mostafa M. Fouda, and Adly S. Tag Eldien. **“A New Approach for Server-based Load Balancing using Software-Defined Networking”** In proceedings of the [8th IEEE International Conference on Intelligent Computing and Information Systems \(ICICIS 2017\)](#) , Cairo, Egypt, Dec. 2017.

[2] Mohamed I. Hamed, Basem M. ElHalawany, Mostafa M. Fouda, and Adly S. Tag Eldien. **“A Novel Approach for Resource Utilization and Management in SDN”**. In proceedings of the [13th IEEE International Computer Engineering Conference \(ICENCO 2017\)](#) , Cairo, Egypt, Dec. 2017.

[3] Mohamed I. Hamed, Basem M. ElHalawany, Mostafa M. Fouda, and Adly S. Tag Eldien. **“Performance analysis of applying load balancing strategies on different SDN environments”** , In proceedings of the [2nd International Sino-Egyptian Congress on Agriculture, Veterinary Sciences and Engineering Conference \( 2nd ISEC-AVE 2017\)](#) , Cairo, Egypt, Oct. 2017.

## References:

**1. Assoc. Prof . Adly Tag Eldien,**

Department of Electrical Engineering, Faculty of Engineering at Shoubra, Benha University, Cairo, Egypt. ([adlytag@feng.bu.edu.eg](mailto:adlytag@feng.bu.edu.eg)).

**2. Assoc. Prof. Mostafa Fouda,**

Department of Electrical Engineering, Faculty of Engineering at Shoubra, Benha University, Cairo, Egypt. ([mfouda@feng.bu.edu.eg](mailto:mfouda@feng.bu.edu.eg)).

**3. Assistant Professor. Basem ElHalawany,**

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