Dr. Nadim K. M. Madi

Assistant Professor

Department of Information Systems...................

College of Economics, Management and Information Systems

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Time at UoN: Since 2019

Marital Status: ....

Scientific Identifications

Google Scholar

Web of Science

ResearchGate

OrcID

LinkedIn

Brief Biography

Dr. Nadim K. M. Madi is currently an assistant professor with the Department of Information Systems at the University of Nizwa. He is the head of the Information Systems Environment research cluster at the Information Systems department in UNIZWA. He received his B.Sc. degree in Information Technology, major of Computer Networks from Universiti Utara Malaysia, in 2010. He finished the MSc degree of Computer Science, majoring of Distributed Computing from University Putra Malaysia, in 2012. He has been awarded the MS.c. in First-Class with honors. In 2018, He accomplished the Ph.D. in field of Radio Resource Management and QoS enhancements in mobile networks from the same institution. His research experience started in early 2011. His

research themes include IoT technologies, emerging and ubiquitous mobile systems, mobile radio resource management, network QoS performance analysis, network modeling, and algorithm analysis. Dr. Nadim is an active researcher with a recognized record of publication in many reputed international journals. He has been awarded the best conference paper presentation. Also, he is actively involved as a reviewer for some merit international peer-reviewed journals from IEEE, and Springer. His publication contributed to several fields such as IoT technologies, 5G systems, radio resource allocation, Quality of Service analysis, Network modeling, and cloud computing security.

Academic Qualifications

Doctor of Philosophy , University Putra Malaysia, 2018

MSc. Computer Science, University Putra Malaysia, 2012

BSc. Information Technology, University Utara Malaysia, 2010

Teaching Activities

Problem Solving and Programming, This course introduces the students to think creatively in solving Problems using Programming. This course focuses on providing fundamental knowledge in Problem solving and Programming principles. The topics include Program structure, Language syntax, Control structures and Statements, Scope of Variables, Data types, Operators, Expressions, Arrays, Functions and Storage classes. The mathematical and scientific problems will be solved using programming practices., 1 year

Web Security Service , This Course provides a comprehensive guide to security for Web services and SOA. It cover in detail all recent standards that address Web service security, including XML Encryption, XML Signature, WS-Security, and WS-Secure Conversation, as well as recent research on access control for simple and conversation-based Web services, advanced digital identity management techniques, and access control for Web-based workflows. It explains how these implement means for identification, authentication, and authorization with respect to security aspects such as integrity, confidentiality, and availability., 1 year

Web Administration, This course provides an overview of what is required to build a Web site, including server administration, security, user interactivity and database integration.

The students will plan a server, develop user and file security policies, design the server configuration, and understand the server interaction with search engines. The students will develop scripting programs that implement the appropriate business logic and interpret the user's input in order to access the database., 1 year

INFS455 Graduation project, The students of Information Systems/Web Design and Information Security major must choose this Graduation Project. This is the course to be completed in two (2) regular semesters and must demonstrate individual's academic knowledge and abilities learnt during their undergraduate courses. They will work on a self-defined project supervised by a faculty member. The students will be trained in software development process to perform professionally in their professional career. They will be involved in developing computer problem's solutions, analysis, and synthesis. Also, students will improve their communication skills through the presentations and preparing final documentation/report on their realized work. , Fall 2021 - now

INFS205 Introduction to Computer Security / Information Security, The course provides students with the necessary knowledge of information security concepts in order to secure networks, design secure protocols, and manage security risks. There will be a lot of hands-on experience with networking tools, Summer 2021, Summer 2022

INFS303 Data Structures & Algorithm Design, This course is a survey course on the fundamental concepts and principles that underlies current and emerging methods, tools, and techniques for the cost-effective engineering of high-quality software systems. It is concerned with different aspects of the software development, from system specification to maintaining the system after it has gone into use. This includes technical processes of software development and the development of tools, methods, and theories to support software development. The course focuses on surveying some of the critical aspects of software engineering such as identifying appropriate design techniques, employing effective verification and validation strategies throughout the software development lifecycle, software maintenance, and software project management, Summer 2023

INFS-407 Disaster Recovery and Risk Management, In this course students will learn Disaster recovery fundamentals, set of policies, tools and procedures to enable the recovery or continuation of vital technology infrastructure and systems following a natural or human-induced disaster. Students will learn to focuses on the IT or technology systems supporting critical business functions, which is opposed to business continuity, which involves keeping all essential aspects of a business functioning despite significant disruptive events, Fall 2023, Spring 2024

INFS505 Web-Based Information Retrieval System, In this course students will learn basic and advanced techniques for text-based information systems: efficient text indexing;

Boolean and vector space retrieval models; evaluation and interface issues; Web search including crawling, link-based algorithms, and Web metadata; text/Web clustering, classification; text mining, Spring 2023

Internet Technology, The course focuses on the general structure of the Internet and the different component that constitute its building blocks. Next, most important internet service, which provide the underlying structure of today's web site; client-side scripting language-which enables web site developers to greatly enhance the end user's experience. , Fall 2022

INFS202 IT Hardware and Software, In this course the students will learn general concepts about IT hardware and software. They are going to be able to describe the mean features of different types of software. Basic and specialized application software are discussed in this course in hand with system software like Windows, Mac OS, UNIX, & Linux operating systems. Students are going to gain knowledge about different types of computer hardware including the system unit, input, output, storage, and communication devices. Practical exercises in the lab may include practicing with DOS commands; managing and controlling the computer; work with different peripheral devices: hard disks and other storage devices, video display monitors and input/output as well as installing and configuring different operating systems, Spring 2022 - Summer 2022

Research Activities
- Research Interests

4G/5G Mobile Networks

Packet Scheduling and Radio Resource Management

Communication Technology and Ubiquitous Computing

Simulation Modeling and Performance Evaluation

Networks Quality of Service Analysis

Machine Learning

IoT and Intelligent Computing

- Conference Presentations

Analysis of Downlink Scheduling to Bridge between Delay and Throughput in LTE Networks, IEEE 2020 7th International Conference on Electrical and Electronics Engineering (ICEEE), Antalya, Turkey, 04/04/2020

- Conference Attendance

Virtual International Seminar on Education Opportunities in E-Learning During COVID-19 Pandemic, Nizwa, Oman, 01/09/2021

- Publications

Article:

1. 2023 Career Counseling Model for Omani High School Students using Fuzzy Logic, Hamood Saif Hamood Al Fahdi, Mohammad Abu Kausar, Nadim K. M. Madi, Abdullah Ismail Alhasanat, ``Career Counseling Model for Omani High School Students using Fuzzy Logic``, International Journal of Engineering and Information Systems (IJEAIS), Vol. 6, Pg. 38-45, 2023

2. 2022 [Delay-Based Resource Allocation With Fairness Guarantee and Minimal Loss for eMBB in 5G Heterogeneous Networks](), N. K. M. Madi, M. M. Nasralla and Z. M. Hanapi, ``Delay-Based Resource Allocation With Fairness Guarantee and Minimal Loss for eMBB in 5G Heterogeneous Networks,`` in IEEE Access, vol. 10, pp. 75619-75636, 2022, doi: 10.1109/ACCESS.2022.3192450.

3. 2019 Delay--oriented Resource Allocation for Delay Guarantee on Different Traffic Volumes in LTE Downlink System, Alaa O. Najim, Nor A. Hamid, Nadim K. M. Madi, Zurina Hanapi, Idawaty Ahmed, "Delay--oriented Resource Allocation for Delay Guarantee on Different Traffic Volumes in LTE Downlink System," International Journal of Wireless and Mobile Computing, 2018. [Submitted]

4. 2018 Downlink Radio Resource Management to Enhance QoS of Multimedia Services in LTE Networks, Nadim K. M. Madi, "Downlink Radio Resource Management to Enhance QoS of Multimedia Services in LTE Networks," Ph.D. Thesis, Department of Communication Technology and Networks, Universiti Putra Malaysia, Selangor, October 2018. [Ph.D. Thesis]

5. 2018 Energy-aware Subchannels Power Allocation for Downlink Transmissions in OFDMA Systems, Nadim K. M. Madi, et al., "Energy-aware Subchannels Power Allocation for Downlink Transmissions in OFDMA Systems", 2018 IEEE 4th International Symposium on Telecommunication Technologies (ISTT), Selangor, Malaysia, 2018, pp. 1-6. doi:10.1109/ISTT.2018.8701723

6. 2018 Link Adaptive Power Control and Allocation for Energy-Efficient Downlink Transmissions in LTE Systems, Nadim K. M. Madi, et al., "Link Adaptive Power Control and Allocation for Energy-Efficient Downlink Transmissions in LTE Systems", IEEE ACCESS Journal, Vol. 6, Pp: 18469-18483 2018. https://doi.org/10.1109/ACCESS.2018.2821245

7. 2018 Delay-based and QoS-aware packet scheduling for RT and NRT multimedia services

in LTE downlink systems, Nadim K. M. Madi, et al., "Delay-based and QoS-aware packet scheduling for RT and NRT multimedia services in LTE downlink systems," EURASIP Journal on Wireless Communications and Networking, SpringerOpen, Springer. Vol. 2018(1), 1-21, 2018. https://doi.org/10.1186/s13638-018-1185-3

8. 2018 Energy-aware Subchannels Power Allocation for Downlink Transmissions in OFDMA Systems, Nadim K. M. Madi, et al., "Energy-aware Subchannels Power Allocation for Downlink Transmissions in OFDMA Systems", 2018 IEEE 4th International Symposium on Telecommunication Technologies (ISTT), Selangor, Malaysia, 2018, pp. 1-6. doi:10.1109/ISTT.2018.8701723

9. 2017 Two-level QoS-aware frame-based downlink resources allocation for RT/NRT services fairness in LTE networks, Nadim K. M. Madi, et al., "Two-level QoS-aware frame-based downlink resources allocation for RT/NRT services fairness in LTE networks", Telecommunication Systems, Vol. 66, Issue 3, Pp: 357-375, 2017. DOI: https://doi.org/10.1007/s11235-017-0289-0

10. 2014 On Multi-cell Packet Scheduling of LTE-A Cellular Networks: A Survey of Concepts Related Challenges and Solutions, Nadim K. M. Madi, et al., "On Multi-cell Packet Scheduling of LTE-A Cellular Networks: A Survey of Concepts Related Challenges and Solutions", American Journal of Applied Sciences, Vol. 14, Issue 20, Pp: 2422-2438, 2014. DOI: http://dx.doi.org/10.3923/jas.2014.2422.2438

11. 2012 Performance Evaluation of Service Differentiation with Sized-Oriented Queue–Management in DiffServ Networks, Nadim K. M. Madi, "Performance Evaluation of Service Differentiation with Sized-Oriented Queue–Management in DiffServ Networks," MSc Thesis, Dept. Computer. Sci. and Info. Tech., Universiti Putra Malaysia, Selangor, January 2012. [Master Thesis]

12. 2012 Implementation of Secure Email Server in Cloud Environment, Nadim K. M. Madi, et al., "Implementation of Secure Email Server in Cloud Environment," 2012 International Conference on Computer and Communication Engineering (ICCCE), Kuala Lumpur, Selangor, Malaysia, 2012, pp. 28-32. doi: 10.1109/ICCCE.2012.6271146

13. 2012 Optimizing Service Differentiation Scheme with Sized-based Queue Management in DiffServ Networks, Nadim K. M. Madi, et al., "Optimizing Service Differentiation Scheme with Sized-based Queue Management in DiffServ Networks", in Journal of Telecommunications, Vol. 14, Issue 2, June 2012

Faculty Administrative Experience

2023 - Present: Chief Editor for Voice of CEMIS Magazine - CEMIS

Managing and Adminsitrating the Editorial Team to Publish regular Voice of CEMIS issues (starting Issue 7).

2023 - Present: CEMIS Graduation Project Officer - CEMIS

Graduation Project Administration, Workshops coordination, GP Implementation and Quality Assurance

2022 - Present: Information Systems Program Coordinator - Department of Information Systems

Program Review, Program Update, Courses Syllabus enhancement, Program Quality Assurance

2019 - Present: Committee Member ABET`s Program Accreditation - Department of IS-CEMIS- University of Nizwa

On Progress

2019 - Present: Convener for Information Systems Department - University of Nizwa

Community Services

20/02/2024: Team leader for the preperation and the conduct of the General Quiz Competition during CEMIS Open Day

09/03/2022: Field Consultant at UoN Entrepreneurship Center in domain of Information Communication Technology

Consultancy Activities

Academic Advisor , College of Economics, Management & Information Systems- University of nizwa, Nizwa, 2019

Internal Supervisor - Master Program, CEMIS - University of Nizwa, Nizwa, Sultanate of Oman, 2019

Membership in Professional Bodies

2019-Present: Journal of Wireless Communication Tech. by Whioce Publishing - Editorial Board Member

2017-Present: ORCID

2017-Present: Journal of IEEE Access - Reviewer & Author

2017-Present: Springer Nature

2017-Present: IEEE Society

2012-Present: Scopus

Award and Recognitions

2012 "Dean List for excellent achievement" during Master of Computer Science Program

2009 Dean List for Excellent Achievement Bachelor of Information Technology (Semesters 5-7))

2006 Committee member at "International Students Foster Family Program" in Kedah and Malacca villages. 2006, 2007.

Google Scholar Account

Ref.: https://www.unizwa.edu.om/staff/cemis/nadim