

CURRICULUM VITAE

Prof. M. Firas Al-Hinnawi, Ph.D.



A professor of biomedical engineering and engineering consultant with specialist experience in medical instrumentation and hospital design

Academic positions:

- Chairman of the Biomedical Engineering Department, Damascus University, Syria, September 2009 – Sept. 2013;
- Head of the Biomedical Engineering and Pharmaceutical Science Department, Arabic Encyclopedia, Syria, 2010 – Sept. 2013;
- Full Professor at the Biomedical Engineering Department, Damascus University, Syria, 2012 – present.
- Dean of FMEE, Damascus University Sept 2018- July/2020.
- Damascus University Vice President, for Scientific Research and Post Graduate Studies July2020- Now.

Education

	Mechanical Engineering (Mechanical Power), Faculty of Mechanical and Electrical Engineering, Damascus University, 1979-1984.
B.Sc	Graduated 7 th in a class of 60 students. Thesis: Designing an Air-Conditioning Network System for Arabic Engineer Home.
	Bioengineering, 1986 – 1987, University of Strathclyde, Glasgow, U.K.
M.Sc Course	The course provided a rigorous foundation of the different subjects that conform biomedical engineering.
	Bioengineering Instrumentation, 1987-1991, University of Strathclyde, Glasgow, U.K.
Ph.D	Thesis: Mechanical Assessment of the Extraocular Muscles.

Academic Experience

1. Academic positions

Assistant Professor	Damascus University 1993-2001.
Associate Professor	Damascus University, 2001-2011.
Full Professor	Damascus University, from 2012.

2. Publications

1. **Al-Hinnawi M.F**, Barbenel J, Al-Qurainy I.A, Dutton G.N, (1991) "Quantitative mechanical assessment of the extraocular muscles" Journal of Engineering in Medicine, 205: 101-108.
2. **Al-Hinnawi M.F** (1991) "Mechanical Assessment of the Extra-ocular Muscles". Ph.D. Thesis, Bioengineering Unit, University of Strathclyde, Glasgow, U.K.
3. **Al-Hinnawi M.F**, Barbanel J, Al-Qurainy I.A, Dutton G.N (1991) "New design for carrying-out forced duction and force generation tests", Annual Congress of the College of Ophthalmologists (poster), Glasgow, U.K.
4. **Al-Hinnawi M.F**, "Computer-aided duction and generation tests" (1993) The 2nd International Congress of the Pan-Arab Society of Ophthalmology, Damascus, Syria.
5. **Al-Hinnawi M.F**, "Low Temperature Sterilization Technologies Past, Present and Future" (2002) Damascus University Journal for Engineering Sciences, V18 – No. (1) 17-25, a refereed research journal.
6. Zarka N, **Al-Hinnawi M.F**, Dardari A, Tayyan M.A, (2004) "'Patient Keeper': medical application on mobile phone" The 1st International Conference on Information and Communication Technologies: from theory to applications – ICTTA 04, 37 – 38.
7. **Al-Hinnawi M.F**, (2009) "Using a mobile phone while driving could become a criminal act" Damascus University Journal for Engineering Sciences, Vol. (25) - No. (1):23-38, a refereed research journal.
8. **Al-Hinnawi M.F**, (2009) "Can 'Patient Keeper' help in-patients?" Telemedicine and E-Health, Vol. 15, No. 5: 484-489.
9. **Al-Hinnawi M.F**, (2009) "Relation Between GD Ration and Diplopia" Damascus University Journal for Engineering Sciences, Vol. (25) - No. (2):81-94, a refereed research journal.
10. **Al-Hinnawi M.F**, (2010) "Ventilation of operating rooms' parameters and their different flow types" Damascus University Journal for Engineering Sciences, Vol. (26) - No. (2):73-86, a refereed research journal.
11. **Al-Kayal A Al-Hinnawi, M,F, Abu Aisa N, (2013)**, Ultraviolet usage efficiency in supporting particulate filters to disinfect re-circulated air in both ICU and O.R rooms. Damascus University Journal for Engineering Sciences. 29 (1), 173-184
12. **Haddad Z., Alhinnawi M. F., Berro Y., (2020)**, "Thermal imaging for early detection of breast cancer ", albaath University engineering Journal, vol. 42, pages 83-130.

13. **Alturifi S, Al Hinnawi M.F, Khaddam A, Al Khaddour A**, (2021), “Effect of Low-Intensity Pulsed Ultrasound on Ischaemic Heart Disease Patients (Novel Technique)”, *World Journal of Cardiovascular Surgery* 11 (3), 21-28.
14. Zaarour B., **Al Hinnawi M.F**, May (2022), “A comprehensive review on branched nanofibers: Preparations, strategies, and applications”. *Journal of Industrial Textiles* <https://doi.org/10.1177/15280837221083031>. Online.
15. Asood A., Shahriari-Khalaji M, Wang Y, Balilonda A, **Al Hinnawi M.F, Yang Shengyuan (2022)**, “Functionalization of Aminoalkylsilane-Grafted Cotton for Antibacterial, Thermal, and Wettability Properties”, *RSC advances*, Issue 32.
16. Husein R, Almadi N, Abu Haileh H, Masri M, Al Hinnawi M.F (2022), “**3D Printed Upper Limb Prosthetics: Ambition & Reality**”, *Damascus University Journal for Engineering Sciences*. 38(2), 135-144.
17. **Haddad Z., Alhinnawi M. F., Berro Y.**, (2023), "Computer aided detection of breast cancer in colored thermal images", *Damascus engineering Journal*, In press.

3. Books

1. **Al-Hinnawi M.F**, Sabouni, A (2011), “Medical Equipment II for 4th year Biomedical Engineering Program” Damascus University.
2. **Al-Hinnawi M.F**, Wazeh, M, (2002) “Telemedicine and telehealth principles, policies, performance and pitfalls” Arab Center of Arabization, translation into Arabic of the book originally written by Adam Darkins and Margaret Cary.

4. Book revision

1. Chan. A. “Medical Technology Management Practice” (2003) published by Charles C. Thomas, translated by King Saud University Translation Center.
2. Panichello J. “X-ray repair” (2004) published by Charles C. Thomas, translated by King Saud University Translation Center.
3. Abu Aisa. N. “Medical Rays Physics” (2002) Damascus University Press.
4. Ammar. M. “ Medical Image Procesing” (2012) Damascus University Press.

5. Membership of examining committees

Research project title	Examiner	Degree	Date	Place
Study and development of electronic system based on videoculogram (VOG) for disabled people	External examiner	M.Sc.	2009	Aleppo University
Design of sound-based system for disabled people to control their environment	External examiner	M.Sc.	2010	Aleppo University
Development and simulation of textile-based sensors and system used for long-term health monitoring	External examiner	M.Sc.	2010	Aleppo University
Using digital imaging processing for identifying treated skin lesions by intensified pulsed light	Internal examiner	M.Sc.	2010	Damascus University
Objective evaluation of the amendments conducted by computer in rhinoplasty surgery	External examiner	Ph.D.	2012	Damascus University

Member of examining committee (internal examiner) for M.Sc. students supervised by myself and other ones.

6. Subjects taught

Subject	Year	Department	University	Duration
Medical instrumentation 1	4 th Year	Biomedical Engineering	Damascus University	1992-1996 1999 - now
Medical instrumentation 2	5 th year	Biomedical Engineering	Damascus University	1992-1996 1999 - now
Medical instrumentation 3	5 th year	Biomedical Engineering	Damascus University	1992-1996 1999 - now
Occupational safety in hospitals	5 th year	Biomedical Engineering	Damascus University	2002 - now
Rehabilitation instrumentation	Postgraduate diploma	Biomedical Engineering	Damascus University	2003-2006
Introduction to biomedical engineering	4 th year	Electronic Engineering	International University for Science and Technology, Damascus	2006-2008

Telemedicine and E-Health	M.Sc. Course	Biomedical Engineering	Damascus University	2008 - now
Health Care Facility Design	5 th Year	Biomedical Engineering	Damascus University	1998-2013
Innovation in Biomedical Engineering	M.Sc. Course	Biomedical Engineering	Damascus University	2015-2016

Professional Experience

Duration	Roles
From 1995 to 1996	<p>Consultant in Biomedical Engineering (Instrumentation and Hospital Engineering) for the following Hospital in Damascuss:</p> <ul style="list-style-type: none"> • Dermatology Hospital (100 Beds) • Cardiovascular Surgery Center (80 Beds) • Hospital of the Dental School - Damascus University (50 Beds) • Al-Muwasa Hospital (300 Beds) • Tishreen Hospital (200 beds).
From 1996 to 1997	<p>Consultant for the Ministry of Health - Saudi Arabia. Hael Maternity and Children Hospital. The job involved carrying out whole hospital studies such as: room listing, medical equipment and furniture specification, consolidate list, bills of quantity, equipment layout, pre-installation requirements. Other duties such as: bid technical and financial analysis submitted to furnish the hospital, receiving installed equipment, attending testing and commissioning. Member of the Central Maintenance Ministry of Health Project Committee.</p>
From 1997 to 1999	<p>Consultant to Specialized Medical Company. The job included preparing: room listing, medical equipment and furniture specifications, consolidate list, bills of quantity, equipment layout, re-planning the architectural layout to fit the requirements of the new technology, pre-installation requirements (for example, specific air-conditioning requirements to match the equipment heat dissipation, electricity and safety for both patients and practitioners, special filters required for certain areas, operating room layout, wall finishes, ceiling materials, etc), asking for quotations, technical specification analysis, drafting contracts, Site finishing supervision, supervising equipment installation, testing and commissioning, coordination of staff training. Setting-up of the necessary forms for the biomedical engineering department to carry out maintenance.</p>
	<p>Consultant (part-time) for the following projects:</p>

- Arar Hospital, Ministry of Health (100-bed general hospital) Al-Mazroa Consultants & Engineers.
The job involved revising and updating room listing, equipment specification, equipment layout, bills of quantity, consolidate list.
- Al-Kharj Hospital (100-bed hospital of the Dar Jana – Al-Mutabagani Group). Al-Mazroa Consultants & Engineers.
Creating room listing, equipment specification and layout, bills of quantity, consolidate list.
- Al-Razi Hospital (100-bed private hospital) in Al-Ehsaa city.
Creating room listing, equipment specification and layout, bills of quantity, consolidate list, generating layout using AutoCAD.
- Al-Hujailan Hospital (100-bed hospital in Hafer Al-Batin). Al-Majaz Medical Planners.
Creating room listing, equipment specification and layout, bills of quantity, consolidate list, translating all documents into Arabic to fulfill the requirements of the Ministry of Finance for credit purposes.

Consultant at the Consulting Clinic, Beirut, Lebanon.

The job involved:

- 1) Reviewing, upgrading and updating all documents prepared for the hospital plans and medical equipment specifications
- 2) Purchasing and planning for installation, testing and commissioning for the whole project.

The hospital consists of 11000 m², comprising X-ray imaging, sterilization, operating room, recovery, clinical laboratory, various medical speciality clinics, in-patient rooms, kitchen facilities, etc.

Consultant to the remodelling of the Maternity Hospital in Raqa, Syria
The hospital, located in the east of Syria, was remodeled to accommodate 150 beds instead of 50, which required both horizontal and vertical expansion. A complete implementation was undertaken.

Consultancy to Kudsia General Hospital, Damascus, Syria.

General and medical design and layout of a 50-bed, public hospital, located in Kudsia, an area in Damascus, creating room listing, equipment specification and layout, bills of quantity, consolidated list and generating the final layout using AutoCAD.

Consultancy to Kutaifa General Hospital, Damascus, Syria.

General and medical design and layout of a 50-bed public hospital located at the major Homs highway, creating room listing, equipment specification and layout, bills of quantity, consolidated list and generating the final layout using AutoCAD.

Consultancy to Al-Salam Hospital, Damascus, Syria.

This 120-bed hospital facility established ground-breaking health care standards for the Syrian capital. Hinnawi Planners & Consultants (HPC), where I am a partner and project manager, partnered in the architectural and electro-mechanical design for the facility. HPC also handled all medical equipment specifications, design, purchasing, and installation supervision.

Consultancy to Al- Hanan Hospital, Nabek, Syria

A 100-bed hospital located on a main highway between Damascus and Homs in Nabek. This hospital opened in 2010. Re-designing of this facility was necessary to fulfill the requirements for Richard Wolf, GmbH, as its training centre in the Middle East. A complete development was undertaken with the finest medical equipment. I managed the project management and also offered specialist advice.

Consultancy to the Emergency Department, Damascus Hospital, Damascus.

From 2009
to present

One of its kind in the Middle East, consisting of an area of 4200 m². Designed as state of the art for its functionality. The department is composed of 33 individual rooms for trauma care, and five intensive care beds.

Consultancy to the Cardiac Intensive Care Unit, Damascus Hospital, Damascus.

Consisting of 13 individual cardiac intensive care rooms and four surgery intensive care rooms in a total area of 1100 m².

Consultant for the design and executing Dr Rami Hamed's Centre – one day surgery centre located in Dubai Health Care City.

OR turn key projects, design and executing Al Balsam Hospital -UAE

Personal information

Full Name: Mohamad Firas Al-Hinnawi
Date of Birth: September 7th 1961
Place of Birth: Damascus, Syria
Marital Status: Married with two children
Mobile: +963 944284898
E-mail: drmfh61@yahoo.com,
Languages: Arabic: native language
English: fluent.
Address: New Cham Island 10C- Arabic Club Building- Damascus-Syria.

The underneath list are the most important articles and interviews during carrying out my duties as a Dean and Vice president.

1- 12/7/1992/ — Bioengineering Unit: Mohammad **Firas Al-Hinnawi**;
Amanda Clare

[/https://www.heraldsotland.com/news/12641729.strathclyde-university-graduations](https://www.heraldsotland.com/news/12641729.strathclyde-university-graduations)

2- تأسيس معرض مشاريع كلية الهندسة الميكانيكية والكهربائية.

<https://fb.watch/kD4jjQwfuz/?mibextid=Nif5oz>

3- أبحاث ومشاريع تطبيقية لخدمة الأعمار

معرض كلية الهندسة الميكانيكية والكهربائية بجامعة دمشق

ضيوف الحلقة: عميد كلية الهندسة الميكانيكية والكهربائية بجامعة دمشق د. محمد فراس الحناوي

https://www.ortas.online/Covid19/index.php?d=programs&a=show_part&id=75955

4- د. الحناوي للبعث ميديا جامعة دمشق تنظم عمل مجلات جامعتها من خلال التخلي عن المراسلات الورقية

<http://albaathmedia.sy/2021/02/17/%D8%AF-%D8%A7%D9%84%D8%AD%D9%86%D8%A7%D9%88%D9%8A-%D9%84%D9%84%D8%A8%D8%B9%D8%AB-%D9%85%D9%8A%D8%AF%D9%8A%D8%A7-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%AF%D9%85%D8%B4%D9%82-%D8%AA%D9%86%D8%B8%D9%85-%D8%B9/>

5- 60 بالمئة نسبة إنجاز رسائل الماجستير والدكتوراه.. وإجراءات لرفع تصنيف جامعة دمشق (عالمياً)

<https://damas2day.com/print/details/22/538>

6- جامعة دمشق تخصص مكتب لطلاب الدراسات العليا في كل كلية

<https://almoulen.com/archives/1930>

7- قرارات التعليم العالي وجامعة دمشق وتأثيرها على البحث العلمي

<https://youtu.be/pfkJ3vn98w8>

8- نائب رئيس جامعة دمشق: طالب الدكتوراه في الخارج راتبه قليل ولا يعطى مكافأة على النشر الخارجي

<https://www.youtube.com/watch?v=zW3fmNbBVX8>

9- الدكتور حناوي: جامعة دمشق وضعت شروط التقدم لدرجة الدكتوراه وسلّمتها لعمداء الكليات لمناقشتها

https://www.dampress.net/mobile/?page=show_det&category_id=31&id=107570

10- قفزة في تصنيف جامعة دمشق.. الحناوي لـ"الوطن": يرفع من سمعة الشهادة الجامعية

<https://www.alwatanonline.com/%D9%82%D9%81%D8%B2%D8%A9-%D9%81%D9%8A-%D8%AA%D8%B5%D9%86%D9%8A%D9%81-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%AF%D9%85%D8%B4%D9%82-%D8%A7%D9%84%D8%AD%D9%86%D8%A7%D9%88%D9%8A-%D9%84%D9%80%D8%A7%D9%84/>

11- عاجل نائب رئيس جامعة دمشق لشؤون البحث العلمي والدراسات العليا أ.د. محمد فراس الحناوي، لتلفزيون الخبر: جامعة دمشق تدرج 5 من مجلاتها العلمية ضمن الموقع العالمي لتصنيف المجلات "web of science"

<https://nabd.com/s/118091802-11b890/%D9%86%D8%A7%D8%A6%D8%A8-%D8%B1%D8%A6%D9%8A%D8%B3-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%AF%D9%85%D8%B4%D9%82-%D9%84%D8%B4%D8%A4%D9%88%D9%86-%D8%A7%D9%84%D8%A8%D8%AD%D8%AB-%D8%A7%D9%84%D8%B9%D9%84%D9%85%D9%8A-%D9%88%D8%A7%D9%84%D8%AF%D8%B1%D8%A7%D8%B3%D8%A7%D8%AA-%D8%A7%D9%84%D8%B9%D9%84%D9%8A%D8%A7-%D8%A3.%D8%AF-%D9%85%D8%AD%D9%85%D8%AF-%D9%81%D8%B1%D8%A7%D8%B3-%D8%A7%D9%84%D8%AD%D9%86%D8%A7%D9%88%D9%8A%D8%8C-%D9%84%D8%AA%D9%84%D9%81%D8%B2%D9%8A%D9%88%D9%86-%D8%A7%D9%84%D8%AE%D8%A8%D8%B1-%D8%AC%D8%A7%D9%85%D8%B9%D8%A9-%D8%AF%D9%85%D8%B4%D9%82-%D8%AA%D8%AF%D8%B1%D8%AC-5-%D9%85%D9%86-%D9%85%D8%AC%D9%84%D8%A7%D8%AA%D9%87%D8%A7-%D8%A7%D9%84%D8%B9%D9%84%D9%85%D9%8A%D8%A9-%D8%B6%D9%85%D9%86-%D8%A7%D9%84%D9%85%D9%88%D9%82%D8%B9-%D8%A7%D9%84%D8%B9%D8%A7%D9%84%D9%85%D9%8A-%D9%84%D8%AA%D8%B5%D9%86%D9%8A%D9%81-%D8%A7%D9%84%D9%85%D8%AC%D9%84%D8%A7%D8%AA-web-of-science>

12- الدكتور فراس الحناوي - تحضيرات المؤتمر الدولي الأول للهندسة الطبية الحيوية في سوريا

<https://youtu.be/cq6ABN66mPw>

13- حديث نائب رئيس جامعة دمشق الأستاذ الدكتور فراس الحناوي عن تحضيرات المؤتمر للدورة الثانية

<https://youtu.be/UCwJfvV0uX8>

14- د. فراس الحناوي م. نسرين الماضي م. محمد المصري - واقع الطباعة ثلاثية الأبعاد للأطراف الصناعية العلوية
<https://youtu.be/85kfeiOOtT4>

15- نائب رئيس جامعة دمشق لشؤون البحث العلمي والدراسات العليا...

<http://nuss.sy/59387.html>

16- الدكتور فراس الحناوي - S A N A – سانا

<https://www.sana.sy/?p=1604273>

17-مقابلة مع الأستاذ الدكتور محمد فراس الحناوي نائب رئيس جامعة دمشق للبحث العلمي والدراسات العليا 2023
<https://youtu.be/Muv-ylBUQks>