



الجمعية العلمية السعودية للهندسة الطبية
Saudi Scientific Society for Biomedical
Engineering

Chair: Nazeeh Sh Alothmany, Phd

Consultant for Deputy Minister of Planning, Health Economics, MOH
Assistant Professor, Electrical and Computer Engineering (Biomedical Option)

King Abdulaziz University

<http://sssbe.kau.edu.sa>

Eng.sssbe@kau.edu.sa



Biomedical Engineering in Saudi

- Several institute around the kingdom provide programs in Biomedical Engineering:
 - King Abdulaziz University, College of Engineering, Electrical and Computer Engineering Department (Biomedical Option).
 - King Saud University, Applied Medical Sciences.
 - University of Dammam (Girls only), College of Engineering, Biomedical Engineering.
 - King Faisal University (coming soon), College of Engineering, Biomedical Engineering.
 - Several institute have two year diploma programs for biomedical technicians.

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History of SSSBE



- Several attempts were made to establish the Biomedical Society starting from the 90s.
- King Abdulaziz University Council approved the establishment of the society in 2003.
- The society is registered under the college of Engineering, KAU.
- The society follows the regulations of scientific societies under the ministry of Higher Education, Saudi Arabia.

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SSSBE Strategic Plan

Vision

Health environment of quality in the region

Mission

Collaborate with parties around the world working towards quality and effective health care in all areas related or concerned with Biomedical Engineering



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SSSBE Goals



1. Advancing and promoting professionalism in the area of Biomedical Engineering.
2. Enhancing scientific and professional exchange of experience between the members of the society.
3. Providing scientific, practical and theoretical consultations in Biomedical Engineering.
4. Promoting Arabic Language in the area
5. Enhancing the performance of Biomedical Engineers
6. Promoting the exchange of experiences between groups and other societies inside and outside the kingdom of Saudi Arabia
7. Acting as a bridge between the university and other organizations, institutes and groups working in the area.



SSSBE Elected Board



- SSSBE Board with Diverse Backgrounds
 - Chair: Nazeeh Sh Alothmany, Phd, King Abdulaziz University
 - Vice Chair: Ahmed Albarrak, PhD, King Saud University,
 - Treasurer: Eng. Rafat Salaamah, Saudi Health Services
 - Trustee: Eng Sameer Abulooze, Alsalehiya Establishment
 - Educational Activities Chair: Ibrahim Andijani, PhD, Riyadh Military Hospital
 - Member: Abdulhameed Alkhateeb, PhD, King Abdulaziz University
 - Member: Sarah Hagi, PhD, King Abdulaziz University
 - Member: Eng. Mahmoud Maqsoud Shah, King Fahad Hospital
 - Member: Eng. Ahmed Qashqari, GE Medical Systems
 - Member: Eng Noran Baik, King Abdulaziz University Hospital.
 - Member: Eng Abdullah Alkhateeb, CBAHI

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SSSBME Activities since



- Social:
 - 3 Annual Ramadan Iftars (20)
- Scientific Meetings
 - Kidneys and Dialysis Machines (110)
 - Medical Navigation Systems (70)
 - Breast Cancer Detection Devices (90)
 - Special Topics in BME (Nano, Tissue Eng, Stem cells) (120)
 - Sterilization Machines (90)
 - Radio Therapy (Linear Accelerators) (110)

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Activities with KAU-BME

- Providing Summer Training Opportunities for KAU-BME students
- Coordinating a regular training with Alfaisaliya/Brain Lab company for BME students (10 students went to Germany sponsored by Alfaisaliya)
- Coordinating Training with Alsalehiya Medical to send 10 students for training in different parts of the world
- Participating in KAU Engineering Day and Ministry of Higher Education Ibda conference with student senior projects:
 - Economic Home based ECG Monitor
 - ECG based Motor Control
 - Automatic ECG Arrhythmia detector using Time frequency Analysis

Large Scale Biomedical

- 2011 Biomedical Summit in Jeddah chamber of Commerce
- 2012 Biomedical Symposium in Riyadh Military Hospital
- 2013 Biomedical Summit in conjunction with Saudi Health in Riyadh
- Workshop series during MedExpo 2012, 2013
- Workshops on Troubleshooting medical devices, patent applications, design of devices and more.

Next week Seminar

 imagination at work	SSSBE invites you to	
الجمعية العلمية السعودية للهندسة الطبية تدعوكم لحضور		
Principles of Mobile X-Ray Technology (تكنولوجيا أجهزة الأشعة المتنقلة) 6 CME hrs		
Thursday, Nov 21 st , 6:30-10:30PM King Faisal Exhibit Hall, King Abdulaziz University, Jeddah قاعة الملك فيصل للمؤتمرات بجامعة الملك عبدالعزيز بجدة		
Eng. Sabih Zaman MSc, Electrical engineering, USA Wisconsin. 17 years of Experience with GE that includes 9 years in equipment design, 6 years in commercial operations, project Management, and 2 years in Marketing	م. صبيح زمان ماجستير هندسة كهربائية من جامعة ماديسون ويسكونسن الأمريكية خبرة ١٧ سنة في جنرال الكترك شملت ٩ سنوات في تصميم واختيار الأجهزة الطبية، ٦ سنوات في إدارة المشاريع وسنتين في التسويق	
Topics Include: Basics of Radiology Basics of X-Ray devices Mobile XR System Architecture Mobile XR Design Considerations Commercialization Specifications	مواضيع الدورة: أساسيات الأشعة أساسيات أجهزة التصوير بالأشعة مخطط جهاز الأشعة المتنقل معايير لتصميم أجهزة الأشعة المتنقلة تحويل التصميم لمنتج تجاري المواصفات الرئيسية لأجهزة الأشعة المتنقلة	
Fee: <ul style="list-style-type: none">• SSSBE Members: Free• Non Members: 100 SR	الرسوم: <ul style="list-style-type: none">• أعضاء جمعية الهندسة الطبية: مجاناً• غير الأعضاء: ١٠٠ ريال	
Please visit Society website to register http://sssbe.kau.edu.sa For more info email eng.sssbe@kau.edu.sa or call 0543517772	يرجى زيارة موقع الجمعية للتسجيل وللמיד من http://sssbe.kau.edu.sa المعلومات يرجى مراسلة او الاتصال ب eng.sssbe@kau.edu.sa ٠٥٤٣٥١٧٧٧٢	

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Campaign for Quality of Diagnostic Imaging Equipment

**Saudi Scientific Society of Biomedical Engineering
Campaign for Quality of Diagnostic Imaging Equipment**

Radiation Safety in Diagnostic Radiology

Patients' radiation exposure to is dependent on equipment performance.

If the equipment is not looked after, if yearly quality control tests are not conducted, then patients' radiation exposure is your responsibility.

If you need information on how to perform these tests send us an email and we will send you the complete procedure with the necessary tools to do so.

E-mail: Rad.Safety.Kau@gmail.com

Essential Quality Tests for X-ray Equipment



- Ionising radiation is used to produce images in diagnostic radiology.
- Tracking equipment performance is crucial for safe practice.
- You are responsible for the radiation dose every patient received during their radiological examination.
- So make sure x-ray producing equipment go through the essential quality control tests every year.

Compulsory tests to be conducted every year

- Automatic Exposure Control (AEC) test.
- Kvp reproducibility and repeatability.
- Half Value Layer test.
- Alignment of collimator and x-ray field.
- Mean glandular dose test (for mammography).

Supported by



وزارة الصحة
Ministry of Health

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Saudi Scientific Society of Biomedical Engineering

KAUH
Medical Physics

**الجمعية العلمية السعودية للهندسة الطبية
حملة قياسات الجودة لأجهزة الأشعة التشخيصية**



إختبارات الجودة النوعية الأساسية لأجهزة الأشعة

- أجهزة الأشعة التشخيصية تستخدم أشعة مؤينة لتكون الصورة.
- لذا التأكد من أداء الأجهزة مهم لممارسة أمانة.
- أنت مسؤول عن الجرعة الإشعاعية التي يتعرض لها كل مريض.
- تأكد من أن أجهزة الأشعة تخضع لإختبارات معايرة وجودة كل عام.



إختبارات مهمة للإجراء كل عام

- إختبار التعرض التلقائي (AEC).
- تكرار واستنساخ ناتج الأشعة (الهدف).
- إختبار طبقة نصف القيمة الإشعاعية.
- موافقة و توافق مجال الإشعاع و المجال الضوئي.
- إختبار متوسط الجرعة (فحص الثدي بالأشعة) .

الحماية من الإشعاع في أقسام الأشعة التشخيصية

الجرعة الإشعاعية التي يتعرض لها المريض عند إجراء فحوصات في أقسام الأشعة تعدد على أداء أجهزة الأشعة و سلامتها.

إذا كنت الأجهزة مهمة ولا تخضع لقياسات جودة نوعية بشكل دوري ، فإن جرعات المرضى الإشعاعية في ذمكم و أنتم مسؤولون عنها .

إذا كنت في حاجة إلى معلومات حول كيفية إجراء هذه الإختبارات فأرسل لنا رسالة بالبريد الإلكتروني وسوف نصلك الإجراءات الكاملة مع الأدوات اللازمة للقيام بها.

البريد الإلكتروني
Rad.Safety.Kau@gmail.com

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SSSBE and SMPS

- SSSBE looks forward to collaborate with SMPS on different areas:
 - Training programs on Radiology equipment, RSO certification, policies, standards ..etc
 - Awareness Campaigns
 - Research
 - Joint Conferences

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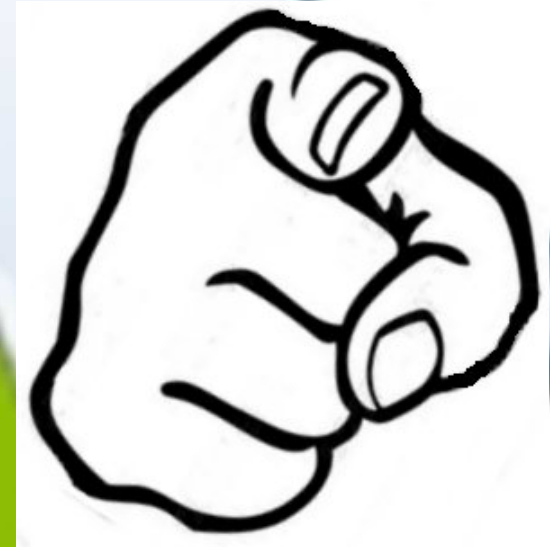




How can you help?



- This is society is yours !!!!
- Get enrolled today and fill a membership form.
- Members receive discounts on future events and activities.
- Companies can donate/sponsor trainings and activities.
- Volunteer with your ideas/time to support the activities of the society.



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