

**Nebras MohammedKamal A. Sobahi***Assistant Professor, Department of Electrical and Computer Engineering, King Abdulaziz University***Education**

<i>Degree</i>	<i>Field of Study</i>	<i>Institution</i>	<i>Year</i>
Ph.D.	Electrical Engineering	Texas A&M University	2017
MS	Electrical Engineering	Texas A&M University	2014
MS	Electrical Engineering	King Abdulaziz University	2013
BS	Electrical Engineering	King Abdulaziz University	2006

**Academic Experience**

<i>From To</i>	<i>Institution</i>	<i>Rank</i>	<i>Title</i>	<i>Full or Part Time</i>
2018 Present	King Abdulaziz University		Assistant Professor	Full Time
2013 2017	Texas A&M University		Research Assistant	Full Time
2006 2008	King Abdulaziz University		Research/Teaching Assistant	Full Time

**Non-Academic Experience (Including Consultations)**

2018-2019	King Abdulaziz University	Head of HR of Development Dep. Deanship of e-learning and distance education	Full Time
2008 2013	Ministry of Interior	Circuit/System Design Engineer	Full Time

**Funded Research Projects and Patents From The Last Five Years**

1. M. Asif Hussain, **N. Sobahi (Co-PI)** and S. Ryon (Harvard University), ‘‘Graphene Oxide (GO) based Extra Cellular Matrix (ECM) for Functional Cardiac Tissue Engineering’’, Capability grant, Ministry of Education, Saudi Arabia, grant no. (accepted), **(03/01/2020-02/28/2023), \$480,000.**
2. **N. Sobahi (PI)** and A. Han (Texas A&M University), ‘‘High-throughput and label-free multi-outlet cell counting using a single pair of impedance electrodes’’, DSR grants, King Abdulaziz University, Saudi Arabia, grant no.(G-172/135/1440), **(09/01/2019-08/01/2020), \$10,666.**

**Certifications and Professional Registrations****Current Membership in Professional Societies and Organizations**

<i>Society/Organization</i>	<i>Rank</i>	<i>Since</i>
i. Vice-President of Saudi Scientific Society for Biomedical Engineering, Saudi Arabia		2018 – Present
ii. IEEE Student Member		2007 – Present
iii. Member, Saudi Council of Engineers, Saudi Arabia		2018 – Present

**Honors and Awards**

- 2017: Outstanding graduate student, Electrical and Computer Engineering, Texas A&M University.
- 2014: Excellent M.Sc. Graduation Award, Saudi Arabian Cultural Mission, USA.
- 2007: Honor Shield and certificate for one of the excellent students graduated from KAU with interest by the Prince of Makkah Region.

## Institutional and Professional Services

### Professional Experience

- 2018/05 – Present      *Assistant Professor: Dept of Electrical and Computer Engineering, King Abdulaziz Univ.*
- 2011/10 – 2018/05      *Research / Teaching Assistant: Dept. of Electrical and Computer Engineering, King Abdulaziz Univ.*
- 2013/01 – 2017/12      *Research Assistant: Nano BioSystems Lab, Department of Electrical and Computer Engineering, Texas A&M University*
- 06/2009 – 07/2009      *Visiting Research Assistant, RAND group, Rice University, USA*
- 2008-2011                *Electrical Circuit and System Design Engineer, Ministry of Interior, Saudi Arabia*
- 2006 - 2008              *Research / Teaching Assistant, Dept of Electrical and Computer Engineering, King Abdulaziz Univ.*
- 06/2007-08/2007      *Visiting Research Assistant  
Advanced Technology Institute, University of Surrey, United Kingdom*
- 05/2005-08/2005      *Trainee: BA'AD TELECOM COMPANY (BTC), Saudi Arabia*

### Technical Experience

- **Microfabrication**

Optical lithography/E-beam lithography, Thin film process (E-beam evaporation, Thermal evaporation, DC/RF Sputtering), Reactive Ion Etching (RIE), Plasma-enhanced chemical vapor deposition (PECVD), Etching Chemistry, Plasma, anodic, and Wafer and wire Bonding, PDMS/Glass and Glass/SU-8/Glass bonding, Micro Automation Dicing Saw.

- **Characterization Tools**

Impedance Spectroscopy, Florescent microscope, Optical Interferometric profiler, Stylus profiler.

- **Simulation, Programming, and Designing Tools**

COMSOL Metaphysics, Matlab, Mentor Graphics® Tools ( PADS and Layout), PC CAD Tools (OrCad and MultiSim), Labview, PSpice, C, C++, AutoCAD, Solidworks

### Principal Publications/Presentations from the Past Five Years

1. Nebras Sobahi and Arum Han, "A high-throughput and label-free multi-outlets cell counting microsystem using a single pair of impedance spectroscopy electrodes", The 21th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2017), Savannah, USA, Oct. 22-26, 2017.
2. Nebras Sobahi, Han Wang, and Arum Han, "A high-throughput and low-cost impedance spectroscopy-based microsystem for precise cell position identification", 4th Texas A&M University Eng-Life workshop 2017, Texas A&M University, Texas, USA, 2017.
3. Wang, Han<sup>‡</sup>, Nebras Sobahi<sup>‡</sup>, and Arum Han. "Impedance spectroscopy-based cell/particle position detection in microfluidic systems", Lab on a Chip 17, no. 7 (2017): 1264-1269. (<sup>‡</sup>these authors contributed equally).
4. Nebras Sobahi, Jing Dai, and Arum Han, "Discrimination of droplets containing single cultured filamentous fungal cell using impedance spectroscopy", The 20th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2016), Dublin, Ireland, Oct. 9-13, 2016.
5. Nebras Sobahi, Han Wang, and Arum Han, "A high-throughput impedance spectroscopy-based microsystem for precise cell position identification", The 20th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2016), Dublin, Ireland, Oct. 9-13, 2016.
6. H.S. Kim, S. Han , A.R. Guzman , N. Sobahi, H.R. Thapa , D. Browne , M. Tatli , S. Hsu , D.B. Stern , T.P. Devarenne , and A. Han, "Selecting high-growth/high-lipid producing microalgae from a mutant library through droplet microfluidics", The 20th International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2016), Dublin, Ireland, Oct. 9-13, 2016.
7. Kotu, Susmitha Purnima, Celal Erbay, Nebras Sobahi, Arum Han, Sam Mannan, and Arul Jayaraman. "Integration of Electrochemical Impedance Spectroscopy and Microfluidics for Investigating Microbially Influenced Corrosion using Co-Culture Biofilms." In CORROSION 2016. NACE International, 2016.
8. H. S. Kim, A. R. Guzman, N. M. Sobahi, H. R. Thapa, T. P. Devarenne, and A. Han, "High-throughput droplet-based screening system for investigating microalgae library," IEEE SENSEORS 2015, Busan, South Korea, pp. 1-4 (2015).

### Recent Professional Development Activities (Workshops, Trainings etc.)