

MUHSINCAN SESEN

RESEARCH ASSOCIATE

@ muhsincansesen@gmail.com

✉ 7 Springvalley Terrace,

Edinburgh, EH10 4QB,

UK

📞 +44 7486 668 216

BIOGRAPHY

I'm an extraordinary researcher pursuing an academic career for over 10 years. My strong expertise in designing biomedical microdevices using microfluidics and microfabrication generated 1 patent, 16 journal publications, 300 citations and an h-index of 11 so far.

Specialising in two-phase microflows and electroactuation methods, reinforced by strong collaboration in life sciences, I am the lead developer of custom microfluidic solutions for projects including reversing ageing, organ regeneration and kidney stone treatment.

[in](#) /muhsincan-sesen-b53240132

[m](#) muhsincansesen.com

[t](#) @muhsincansesen

[R^G](#) /profile/muhsincan_sesen

EXPERIENCE

RESEARCH

- Research Associate
Heriot-Watt University | Mar 17 - Current
Isolating rare cell populations via imaging & machine learning
- Research Associate
Monash University | Mar 16 - Mar 17
- Post-Graduate Researcher
Monash University | Sep 12 - Mar 16
Droplet, particle & cell manipulation technologies for biomedical applications using Surface Acoustic Waves and passive methods
- Research Assistant
Sabanci University | Jul 11 - Jul 12
- Post-Graduate Researcher
Sabanci University | Jul 09 - Jul 11
Cavitation induced erosion for biomedical applications

TEACHING

- Demonstrator | Heriot-Watt Uni. | Sep 17 - Jun 18
Investigative Methods | Applied Physics
- Demonstrator | Monash Uni. | Sep 12 - Dec 15
Eng. Dynamics | Thermodynamics | Mechanics of Materials
Micro/Nano Solid&Fluid Mec. | Adv. Dynamics | Fluid Mechanics
- Demonstrator | Sabanci Uni. | Feb 09 - Jul 11
Mechanics | Calculus | Computing (C++) | Project (ACV&Sub)

FREELANCING

- Author | MWorld | Jul 13 - Sep 13
Educative Stories for the Young

EDUCATION

PH.D DEGREE

- Monash University | Sep 12 - Mar 16
Mechanical and Aerospace Engineering
Specialising in Droplet Microfluidics and Surface Acoustic Waves

MASTER'S DEGREE

- Sabanci University | Jul 09 - Jul 11
Mechatronics Engineering
Specialising in Micro Flows & Heat Transfer in Nanostructured Surfaces

BACHELOR'S DEGREE

- Sabanci University | Sep 05 - Jul 09
Mechatronics Engineering & Mathematics (Minor)
Specialising in Fluid Mechanics and Heat Transfer

AWARDS & HONOURS

BRITISH COUNCIL

- Newton-Celebi Award | Cellular Imaging Workshop | 2017

MONASH UNIVERSITY

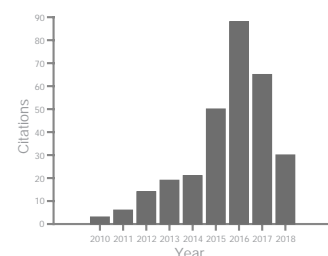
- Exceptional Thesis Merit (Top 5%) | 2016
- Post Publications Award | 2016
- Ph.D Scholarship | 2012

SABANCI UNIVERSITY

- Full Tuition Scholarship | 2009
- 2/3 Tuition Scholarship | 2005

SKILLS

Efficient design-to-prototyping and strong analysis skills using various experimental and numerical tools with the ability to lead groundbreaking research.



MUHSINCAN SESEN

RESEARCH ASSOCIATE

@ muhsincansesen@gmail.com

✉ 7 Springvalley Terrace,

Edinburgh, EH10 4QB,

UK

☎ +44 7486 668 216

SELECT PUBLICATIONS & PATENTS

- [1] **Sesen, M.**, Alan, T., and Neild, A., Droplet control technologies for microfluidic high throughput screening (μ HTS), Lab on a Chip, 2017, Vol. 17, pp. 2372-2394. (Impact Factor: 6).
- [2] **Sesen, M.**, Devendran, C., Malikides, S., Alan, T., and Neild, A., Surface acoustic wave enabled pipette on a chip, Lab on a Chip, 2017, Vol. 17, Iss. 3, pp. 438-447. (Impact Factor: 6) (Citations: 3).
- [3] **Sesen, M.**, Alan, T., and Neild, A., Microfluidic plug steering using surface acoustic waves, Lab on a Chip, 2015, Vol. 15, Iss. 14, pp. 3030-3038. (Impact Factor: 6) (Citations: 23).
- [4] **Sesen, M.**, Alan, T., and Neild, A., Microfluidic on-demand droplet merging using surface acoustic waves, Lab on a Chip, 2014, Vol. 14, Iss. 17, pp. 3325-3333. (Impact Factor: 6) (Citations: 42).
- [5] Sivanantha, N., Ma, C., Collins, D. J., **Sesen, M.**, Brenker, J., Coppel, R. L., Neild, A., and Alan, T., Characterization of adhesive properties of red blood cells using SAW induced flows for rapid diagnostics, APL, 2014, Vol. 105, 103704. (Impact Factor: 3.4) (Citations: 18).
- [6] **Sesen, M.**, Demir, E., Izci, T., Khudhayer, W., Karabacak, T., Kosar, A., Submerged Jet Impingement Cooling using Nanostructured Plates, International Journal of Heat and Mass Transfer, 2013, Vol. 59, pp. 414 -422. (Impact Factor: 3.458) (Citations: 18).
- [7] Kurtoglu, E., Bilgin, A., **Sesen, M.**, Misirlioglu, B., Yildiz, M., Yagci, H. F., Kosar, A., Ferrofluid Actuation with Varying Magnetic Fields for Micropumping Applications, Microfluidics and Nanofluidics, 2012, Vol. 13, Iss. 4, pp. 683-694. (Impact Factor: 2.344) (Citations: 27).
- [8] **Sesen, M.**, Teksen, M., Sendur, K., Menguc, M. P., Ozturk, H., Yagci, H. F., Kosar, A., Heat transfer enhancement with actuation of magnetic nanoparticles suspended in a base fluid, Journal of Applied Physics, 2011, Vol. 112, Iss. 6, 064320. (Citations: 10).
- [9] Kosar, A., **Sesen, M.**, Oral, O., Itah, Z., Gozuacik, D., Bubbly Cavitating Flow Generation and Investigation of its Erosional Nature for Biomedical Applications, IEEE Transactions on Biomedical Engineering, 2011, Vol. 58, Iss. 5, pp. 1337-1346. (Citations: 10).
- [10] PATENT - AU2015902085 - Controlled plug splitting, droplet production and manipulation using surface acoustic waves.

FULL LIST OF PUBLICATIONS:  orcid.org/0000-0002-0690-0988  tinyurl.com/muhsincansesen

TECHNICAL

MICROFABRICATION

Lithography | Wet & Dry Etching | PDMS
Chemical & Physical Vapour Deposition
Mask Writing | Wafer Dicing & Bonding

PROGRAMMING

MATLAB | Python | Android | Linux | HTML
C++ | Java | Visual Basic | LabView

FINITE ELEMENT ANALYSIS

COMSOL Multiphysics | SolidWorks

CHARACTERISATION

Fluorescence Microscopy | Image Analysis
Laser Doppler Vibrometry | Video Processing

PERSONAL

- Focus on Health and Wellbeing
- Author @ Blog | MWorld | Quora
- Focus on publicity
- Questioner | Quick learner

REFERENCES

- Available upon request

DISSEMINATION

- Public Lecture | Pint of Science, UK 
- Invited Talk | University of Glasgow, UK
- ANZNMF 2016 | Brisbane, Australia
- ANZNMF 2015 | Melbourne, Australia
- MicroTAS 2014 | San Antonio, USA
- ICNMM 2010 | Montreal, Canada
- IHTC 2010 | Washington, USA
- ESDA 2010 | Istanbul, Turkey
- NANO TR VI | Izmir, Turkey
- IMECE 2009 | Orlando, USA

DESIGN

- Adobe Photoshop | Illustrator
- Layout Editor | Solidworks
- Google Sketchup | VRay

INTERESTS

- AcroYoga
- Beach Volleyball
- Cycling
- Basketball

