

Salihah Qaysi

Curriculum Vitae

Personal Information

Nationality Saudi

Employment

Mar 2023- Current **Assistant Professor**, Physics Department, *Jazan University*, Jazan, Saudi Arabia

Sep 2021- Feb 2023 **Optical Engineer**, Alcon Laboratories Company, Cork, Ireland

May 2020- Sep 2021 **Post-Doctoral Researcher**, Advanced Optical Imaging Group, School of Physics, *University College Dublin*, Ireland
Research Project: 3D optimized design of intraocular lenses

Education

2015–2020 **PhD in Physics**, *University College Dublin*, Ireland
Supervisor: Dr. Brian Vohnsen
Title: Directional Retinal Imaging using Differential Adaptive Optics Fundus Photography.

2013–2014 **MSc in Physics**, *University College Dublin*, Ireland
Title: Visualisation of Retinal Vasculature Using a Fundus Camera Designed with a sCMOS Sensor and (13°-36°) Field of View

2002–2006 **B.Sc. in Science and Education, Physics**, *Jazan University*, Saudi Arabia

Teaching experiences

2015–2021 **Teaching assistant and demonstrator**, *University College Dublin*, Ireland
Topics taught: Fields Waves and Light, Physics in Medicine, Physics for Engineers I, Physics for Ag. Science, Physics for Diagnostic Imaging and Physics for Medical Science. Teaching experience with both groups and individual students in stage 1 to stage 4 BSc.

Professional memberships and related information

Jun 2021–Current **Member of The Saudi Society of Optometry (SSO)**, Saudi Arabia

2017–Current **Early Career member of the International Society for Optics and Photonics (SPIE)**
SPIE chapter member of University College Dublin Since 2017- 2021.
SPIE chapter roles: Vice president from 01/01/2018 - 31/12/2019;
Secretary from 1/1/2020 – 30-12-2021

2016–2020 **Student member of the Association for Research in Vision and Ophthalmology (ARVO)**

2016–Current **Early Career member of the Institute of Physics (IOP)**, Ireland

2015–Current **Member of the Fighting Blindness Organization**, Ireland

2014–Current **Early Career member of the Optica (Formerly Optical Society-OSA)**
Optica chapter member of University College Dublin Since 2016-2021. Optica chapter roles: Secretary from 07/01/2018 - 31/12/2019;
President from 1/1/2020 – 30-12-2021
Serve as reviewer for the following journal: **Optics Letters**

Languages

Arabic Mother tongue

English Fluent

Computer skills

Labview	Advanced
Zemax	Advanced
Matlab	Intermediate

Publications

- 2018 **S. Qaysi**, D. Valente and B. Vohnsen, “Differential detection of retinal directionality,” Biomed. Opt. Express. **9**:12, 6318-6330. (DOI: [10.1364/BOE.9.006318](https://doi.org/10.1364/BOE.9.006318))
- 2018 B. Vohnsen, A. Carmichael Martins, **S. Qaysi** and N. Sharmin, “Hartmann–Shack wavefront sensing without a lenslet array using a digital micromirror device,” Appl. Opt. **57**, E199-E204. (DOI: [10.1364/AO.57.00E199](https://doi.org/10.1364/AO.57.00E199))
- 2017 B. Vohnsen, A. Carmichael, N. Sharmin, **S. Qaysi** and D. Valente, “Volumetric integration model of the Stiles- Crawford effect of the first kind and its experimental verification,” J. Vision **17**:18, 1-11. (DOI: [10.1167/17.12.18](https://doi.org/10.1167/17.12.18))

Conference Publications

- 2020 **S. Qaysi** and B. Vohnsen, “Small pupil adaptive optics fundus camera with enhanced contrast,” *Investigative Ophthalmology & Visual Science* 61 (7), 219-219.
- 2019 **S. Qaysi** and B. Vohnsen, “Exploring Directional Light Scattering with Pupil Modulation in Adaptive Optics Fundus Imaging,” Retina meeting, Dublin.
- 2018 **S. Qaysi** and B. Vohnsen, “Exploring Directional Retinal Light Scattering using Pupil Modulation,” IX European Meeting on Visual and Physiological Optics, 126-128.
- 2018 **S. Qaysi** and B. Vohnsen, “Exploring directional retinal light scattering using a digital micromirror device,” *Investigative Ophthalmology & Visual Science* 59 (9), 662-662.
- 2018 **S. Qaysi**, D. Valente and B. Vohnsen, “Differential Detection of Directional Retinal Scattering using a Quadrant Pupil in Adaptive Optics Fundus Photography,” XI International Workshop on Adaptive Optics for Industry and Medicine.
- 2017 **S. Qaysi**, D. Valente and B. Vohnsen, “Relative Determination of Cone Pointing Using a Sected Pupil and Adaptive Optics Fundus Photography,” The Association for Research in Vision and Ophthalmology- Imaging in the eye conference, 86-86.
- 2017 **S. Qaysi**, D. Valente and B. Vohnsen, “Analysis of photoreceptor pointing using quadrant pupil detection,” *Journal of Vision* 17 (7), 33-33.
- 2016 **S. Qaysi**, D. Valente and B. Vohnsen, “Analysis of photoreceptor pointing using quadrant pupil detection,” VIII European Meeting on Visual and Physiological Optics, 109-111.

Technical skills and competences

Hands-on experience with optical systems and system design: CW laser (HeNe), laser diode (Compact Laser Diode Module, Fiber-Coupled LED), superluminescent diode, wavefront sensors (Hartmann-Shack (HS)), Spatial Light Modulators (SLM) (Reflective Liquid-Crystal-On-Silicon SLM from Hamamatsu™, Transmissive Liquid-Crystal SLM from Holoeye™, Vialux™ digital micromirror device (DMD)), adaptive optics and deformable mirrors, adaptive optics fundus photography, imaging, and image analysis.

Achievements

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| 2020 | Recipient of the University College Dublin Seed Funding research award, Dublin – Ireland |
| 2019 | Junior Invited Speaker to the Symposium on Adaptive Optics Retinal Imaging, The Rank Prize Funds, Grasmere - UK |
| 2018 | Recipient of the IOP C R Barber Trust Fund Travel Grant, Dublin – Ireland |
| 2018 | Recipient of the IOP Research Student Conference Fund, Dublin - Ireland |