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RESEARCH EXPERIENCE

+ Nanophotonics Research Fellow

Institution : Swinburne University of Technology, Australia.
Duration : July 2019 – Till date
Research theme : *THz and Infrared Imaging technologies*

+ Project Officer

Institution : Indian Institute of Technology Madras, India.
Duration : February 2019 – June 2019
Research theme : *Optical lever for LIGO*

+ PBC Post-doctoral fellow

Institution : Ben-Gurion University, Israel.
Duration : October 2015 – October 2018
Research theme : *Incoherent digital holography*

+ Project Associate

Institution : Indian Institute of Technology Madras, India.
Duration : April 2015 – June 2015
Research theme : *Micro/nanofabrication and diffractive optics*

+ Monbukagakusho Research Fellow

Institution : Osaka University, Japan.
Duration : October 2010 – March 2012
Research theme : *THz generation by photomixing*

EDUCATION

+ Doctor of philosophy (Ph.D) (July 2009 - April 2015)

Institution : Indian Institute of Technology Madras, India
Thesis : *Design, fabrication and evaluation of composite diffractive optical elements for generation of focused ring pattern.*

+ Master of Technology in Laser and Electro Optical Engineering (August 2007 - May 2009)

Institution : College of Engineering, Anna University, India.
CGPA : 8.86/10
Dissertation : *Computer generated Fourier holograms*

+ Master of Science in Physics (June 2005– April 2007)

Institution : The American College, India
Degree issued by : Madurai Kamaraj University, India.

- CGPA : 8.9/10
- + **Bachelor of Science in Physics (June 2001 – April 2004)**
 - Institution : The American College
 - Degree issued by : Madurai Kamaraj University, India.
 - Percentage of Marks : 82%

PRESTIGIOUS FELLOWSHIPS

- + **Monbukagakusho (MEXT)** - Japanese Government Fellowship (Oct 2010-Mar 2012).
- + **PBC fellowship** - Israel Government Fellowship (Oct 2015-Oct 2018).
- + **JSPS fellowship** – Japanese government Fellowship (2020 selected).

POSITIONS OF RESPONSIBILITY

- + **Editorial Board Member** of Nature Springer Applied Physics B (March 2021-) **Honarium 1600 Euros per year.**
- + **Guest Editor** of a special issue on “Advanced Holography techniques” in Springer Nature Applied Physics B (March 2021-)
- + **Guest Editor** of a special issue on “Digital Holography” in the Journal of Imaging (March 2021-).
- + **Guest Editor** for a special issue “**Incoherent Digital Holography**” in the journal of Applied Sciences (2018-2020).
- + **Reviewer** of **Applied Optics, Optics Letters and Optics Express, JOSA A, Applied Physics Letters, Optical Engineering, Optics Communication, Applied Physics B, Journal of Laser Micro/Nanoengineering and Optics and Laser Technology.** (Reviewed more than 150 manuscripts and more than 50 reviews received outstanding review from Editors).
- + **Funding application reviewer** for OSA student chapter’s applications 2018.
- + **Funding application reviewer** for Siegman international school of lasers.
- + **Focused Ion Beam lithography unit trainer** for Indian Institute of Technology Madras (2012).
- + **Electron beam lithography system trainer** (RAITH 150 TWO) 2013 – 2015.
- + **Student Representative** for M.Tech (Aug 2007 – June 2009).
- + **Service Learning Programme** – Student Representative (Aug 2001 – June 2003).
- + **National Service Scheme Leader** – (Aug 2001 – June 2003).

RESEARCH EXPERTISE

- + Synchrotron Infrared beamline
- + Synchrotron THz beamline

- ✦ Incoherent Imaging
- ✦ Computational Optics
- ✦ Hyperspectral Imaging
- ✦ Fluorescence imaging
- ✦ IR and THz multidimensional imaging
- ✦ Micro/Nanofabrication

PRIZES WON

- ✦ Selected as a **global talent** for outstanding contributions in the area of **space and advanced manufacturing** and received invitation for **permanent residency in Australia** from Australian government.
- ✦ **Outstanding research award** – Opto-electronic advances (Impact factor 9.6) – **2000 RMB cash prize**.
- ✦ **RAITH Micrograph Award for Holographic Lens** – First prize – 2021 – **356 AUD**.
- ✦ **OSA outstanding reviewer award** 2019.
- ✦ **OSA Reviewer Lapel Pin** – 2018.
- ✦ **IOP's trusted reviewer** 2020.
- ✦ **Einstein's prize** – Proficiency in Physics, The American College.
- ✦ **Manuel.A.Thangaraj prize** – Proficiency in Physics, The American College.
- ✦ **Richard Riez Prize** – Proficiency in experimental Physics, The American College.
- ✦ **JNCASR** summer fellowship, JNCASR.
- ✦ **IMSc** summer fellowship, IMSc.

PUBLICATION STATISTICS

- ✦ Total number of citations : 951 (14th October 2021)
- ✦ H-index : 17.

EXTERNAL SHORT TERM PROJECTS

- ✦ **Design of a Michelson Interferometer based wavemeter** under **Jawaharlal Nehru Center for Advanced Scientific Research** summer research programme, **Raman Research Institute, India**.
Duration – 2 months.
- ✦ **Design of a Fizeau wavemeter** at **Raman Research Institute, India**.
Duration – 7 months.
- ✦ Reading project in **Quantum Information Theory** at **Institute of Mathematical Sciences, India**. Duration – 2 months.

RESEARCH GUIDANCE

1. Mr. Keenan Cohalan, bachelor's degree (Grand Challenge Project) 5D Imaging – Co-Advisor. (Swinburne University of Technology) 2020. His talk can be watched here in youtube.
<https://www.youtube.com/watch?v=VeK0y1fdWwA&list=PLqwBekqmY6N9o0A2w1Jg3gjUt4NROW-iR>
2. Mr. Daniel Smith, bachelor's degree (Honours project) – Micro-optics for Next generation FOBOS telescope – Co-Advisor. (Swinburne University of Technology) 2021 (On-going)

INSTRUMENTS HANDLED

- ✦ Direct write lithography (Intelligent micropatterning SF100 XPRESS) – Australian National License – Melbourne Center for Nanofabrication
- ✦ Focused Ion Beam system and Scanning electron microscope (Quanta 3D FEG (FEI)).
- ✦ Electron beam system (Elionix ELS3700S, (Quanta 400F (FEI) and RAI TH 150 TWO)
- ✦ Spin coating machines, Sputtering unit.
- ✦ Surface profilers (Dektak and Veeco).
- ✦ UV lithography system – Model J500 – IR/Visible (Mask Aligner) – OAI.
- ✦ Optical microscopes – Nikon eclipse LV150 and basic systems.
- ✦ Optical spectrum analyzers and wavemeters.
- ✦ DBR lasers, He-Ne lasers etc
- ✦ Spatial light modulators – Holoeye Pluto, Jasper Display
- ✦ Digital holography systems
- ✦ Mask writer License IMP Melbourne Center for Nanofabrication.

EXPERIENCE @ ANSTO

- ✦ Co-proposer of THz ATR geometry experiments in 2019 (\$ AUD 98,352.00).
- ✦ Principal proposer for IR multispectral imaging technique development – (\$ AUD131,136.00) in 2020.
- ✦ Principal proposer for IR 3D imaging technique development – (\$ AUD 98,352.00) in 2020.

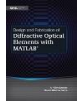
JOB OFFERS

- ✦ Postdoctoral position AR/VR Paul Hereman/Jan Genoe - ERC Advanced Grant – IMEC, Belgium (2017).
- ✦ Scientist – C – Indian Space Research Organization (2010). Permanent

position

List of publications

Books



Design and Fabrication of Diffractive Optical Elements with MATLAB, SPIE Press, ISBN – 9781510607057, Volume - TT109 (2017). **A.Vijayakumar** and S. Bhattacharya. **Best seller of 2017 in SPIE press (5% Royalty > 1 lakhs INR).**

Book chapters

“Coded aperture correlation holography system for recording secured digital holograms of incoherently illuminated 3D scenes” in the book titled **Advanced Secure Optical Image Processing and Optical Communications**. Online ISBN: 978-0-7503-1457-2 • **A.Vijayakumar**, M. Kumar, M. R. Rai and J. Rosen. IOP publishers.

“Diffractive optical elements with chiral-focusing properties for optical-trapping applications” in the book titled **Frontier Research and Innovation in Optoelectronics Technology and Industry**. Online ISBN: 978-0-429-44708-2. **A.Vijayakumar**, M.R. Rai, J. Rosen, B. Vinoth, C.J. Cheng, I.V. Minin, O.V. Minin CRC press, Taylor and Francis Group.

Patents

- ✚ A. Bulbul, **A. Vijayakumar**, J. Rosen, “Partial aperture imaging system,” US Patent (WO/2019/116364).
- ✚ **A. Vijayakumar**, Soon Hock Ng, Jovan Maksimovic, Saulius Juodkazis, “Hyperspectral imaging technique,” Australian provisional patent (2019904895).

Journals

1. D. Smith, S. H. Ng, M. Han, T. Katkus, **V. Anand**, K. Glazebrook, S. Juodkazis, “Imaging with Diffractive Axicons Rapidly Milled on Sapphire by Femtosecond Laser Ablation” Appl. Phys. B (Accepted).
2. J. Rosen, S. Alford, **V. Anand**, et. al. “Roadmap on recent progress in FINCH technology,” J. Imaging, **7**(10), 197 (2021).
3. M. Ryu, S. H. Ng, **A. Vijayakumar**, et. al. “Attenuated Total Reflection at THz Wavelengths: Prospective Use of Total Internal Reflection and Polariscopy,” Appl. Sci. **11**(16), 7632 (2021).
4. **V. Anand**, S. H. Ng, T. Katkus, J. Maksimovic, A. R. Klein, J. Vongsvivut, K. R. Bamberg, M.J. Tobin and S. Juodkazis, “Exploiting Spatio-Spectral Aberrations for Rapid Synchrotron Infrared Imaging,” J. Synchrotron. Radiat. **28**(5), 1616 (2021).
5. S. H. Ng, **V. Anand**, T. Katkus and S. Juodkazis, “Invasive and Non-invasive Observation of Occluded Fast Transient Events: Computational Tools,” Photonics, **8**(7), 253 (2021). (*Invited submission*) (*Equal contribution*)
6. **V. Anand**, J. Rosen, S. H. Ng, T. Katkus, D. P. Linklater, E. P. Ivanova and S.

- Juodkazis, "Edge and Contrast Enhancement Using Spatially Incoherent Correlation Holography Techniques," *Photonics*, 8(6), 224 (2021). (*Invited submission*)
7. **V. Anand**, S. H. Ng, T. Katkus and S. Juodkazis, "White Light Three-Dimensional Imaging using a Quasi-Random Lens, *Opt. Express* **29**, 15551-15563 (2021).
 8. **V. Anand**; Maksimovic, Jovan; Katkus, Tomas; Ng, Soon Hock; Ulcinas, Orestas; Mikutis, Mindaugas; Baltrukonis, Justas; Urbas, Antanas; Sleky, Gintas; Ogura, H; Sagae, Daisuke; Pikuz, Tatiana; Somekawa, Toshihiro; Ozaki, Norimasa; Vailionis, Arturas; Seniutinas, Gediminas; Mizeikis, Vygantas; Glazebrook, Karl; Brodie, Jean; Stoddart, Paul; Rapp, Ludovic; Rode, Andrei; Gamaly, Eugene; Juodkazis, Saulius, "All femtosecond optical pump and X-ray probe: holey-axicon for free electron lasers," *JPhys Photonics* **3**, 024002 (2021).
 9. **V. Anand**, S. H. Ng, T. Katkus and S. Juodkazis, "Spatio-spectral-temporal Imaging of Fast Transient Phenomena using Chaotic Optical Waves," *Advanced Photonics Research* **2**, 2000032 (2021)
 10. **V. Anand**, T. Katkus, D. Linklater, E. P. Ivanova and S. Juodkazis, "Lensless Three-Dimensional Quantitative Phase Imaging using Phase Retrieval Algorithm," *Journal of Imaging*, **6**, 99 (2020).
 11. **V. Anand**, T. Katkus, S. H. Ng and S. Juodkazis, "Review of Fresnel Incoherent Correlation Holography with linear and non-linear correlations (Invited)," *Chinese Optics Letters* **19**, 020501 (2021). (*selected cover page + Chinese News*)
 12. **V. Anand**, T. Katkus, S. Lundgaard, D. P. Linklater, E. P. Ivanova, SH Ng and S. Juodkazis, "Fresnel incoherent correlation holography with a single camera shot," *Opto-Electronic Advances*. **3**, 200004 (2020). (*OEJ News*)
 13. **V. Anand**, SH Ng, J. Maksimovic, D. P. Linklater, T. Katkus, E. P. Ivanova and S. Juodkazis, "Single shot multispectral multidimensional imaging using chaotic waves," *Sci. Rep.* **10**, 13902 (2020).
 14. M. Kumar, **A. Vijayakumar**, J. Rosen and O. Matoba, "Interferenceless coded aperture correlation holography with synthetic point spread holograms," *Appl. Opt.* **59**, 7321-7329 (2020). (*Equal contribution*)
 15. D. Gailevičius, M. Ryu, R. Honda, S. Lundgaard, T. Suzuki, J. Maksimovic, J. Hu, D.P. Linklater, E. P. Ivanova, T. Katkus, **V. Anand**, M. Malinauskas, Y. Nishijima, SH Ng, K. Staliūnas, J. Morikawa, S. Juodkazis, "Tilted black-Si: ~ 0.45 form-birefringence from sub-wavelength needles," *Opt. Express*, **28**, 16012 (2020).
 16. **V. Anand**, T. Katkus and S. Juodkazis, "Randomly Multiplexed Diffractive Lens and Axicon for Spatial and Spectral Imaging," *Micromachines*, **11**, 437 (2020).
 17. R. Dharmavarapu, P. Srinivas, **A. Vijayakumar**, et. al. "Generation and decomposition of scalar and vector modes carrying orbital angular momentum: a review," *Opt. Eng.* **59**, 041205 (2020).
 18. Sruthy J L, **A. Vijayakumar** and S. Bhattacharya, "A compact single channel interferometer to study vortex beam propagation through scattering layers," *Sci. Rep* **10**, 296 (2020). (*Equal contribution*)
 19. S. Mukherjee, **A. Vijayakumar**, and J. Rosen, "Spatial light modulator aided noninvasive imaging through scattering layers," *Sci. Rep.* **9**, 17670 (2019). (*Equal contribution*)
 20. B. Vinoth, **A. Vijayakumar**, et. al., "Binary square axicon with chiral focusing properties for optical trapping," *Opt. Eng.* **59**, 041204 (2019) (*Equal contribution*)

21. **A. Vijayakumar**, S. Bhattacharya and J. Rosen, "Improving Dynamic Range of Speckle Correlation based Optical Lever by spatial multiplexing," *Sci. Rep.* **9**, 16035 (2019).
22. **A. Vijayakumar**, D. Jayavel, M. Muthaiah, S. Bhattacharya and J. Rosen, "Implementation of a speckle correlation based optical lever (SC-OptLev) with extended dynamic range," *Appl. Opt.* **58**, 5982-5988 (2019).
23. J. Rosen, **A. Vijayakumar**, et.al., "Review of 3D Imaging by Coded Aperture Correlation Holography (COACH)," *Applied Sciences* **9**, 605 (2019).
24. M. R. Rai, **A. Vijayakumar** and J. Rosen, "Superresolution beyond the diffraction limit using phase SLM between the observed objects and the entrance of an imaging system," *Opt. Lett.* **44**, 1572-1575 (2019).
25. **A. Vijayakumar**, C. Rosales-Guzman, et. al. "Structured light by multilevel orbital angular momentum holograms," *Opt. Express* **27**, 6459-6470 (2019).
26. M. R. Rai, **A. Vijayakumar**, Y. Ogura and J. Rosen, "Resolution Enhancement in Nonlinear Interferenceless COACH with a Point Response of Subdiffraction Limit Patterns," *Optics Express* **27**, 391-403 (2019). (**Editor's pick spotlight**)
27. A. Bulbul, **A. Vijayakumar** and J. Rosen, "Superresolution Far-Field Imaging by Coded Phase Reflectors Distributed only along the Boundary of Synthetic Apertures," *Optica* **5**, 1607-1616 (2018).
28. J. Rosen, **A. Vijayakumar**, et. al., "Recent advances in self-interference incoherent digital holography," *Adv. Opt. Photon.* **11**, 1-66 (2019). (**Selected as Hidden Gems**)
29. M. Ratnam Rai, **A. Vijayakumar** and J. Rosen, "Non-linear adaptive three-dimensional imaging with interferenceless coded aperture correlation holography (I-COACH)," *Opt. Express* **26**, 18143 (2018).
30. S. Mukherjee, **A. Vijayakumar**, M. Kumar and J. Rosen, "3D Imaging through Scatterers with Interferenceless Optical System," (Nature) *Sci. Rep.* **8**, 1134 (2018).
31. M. Ratnam Rai, **A. Vijayakumar** and J. Rosen, "Extending the field of view by a scattering window," *Opt. Lett.* **43**, 1043-1046 (2018).
32. A. Bulbul, **A. Vijayakumar**, and J. Rosen, "Partial aperture imaging by systems with annular phase coded masks," *Opt. Express* **25**, 33315-33329 (2017). (**Equal contribution**)
33. M. Ratnam Rai, **A. Vijayakumar** and J. Rosen, "Single Camera Shot Interferenceless Coded Aperture Correlation Holography," *Opt. Lett.* **42**, 3992-3995 (2017). (**Equal contribution**)
34. M. Kumar, **A. Vijayakumar** and J. Rosen, "Incoherent digital holograms acquired by interferenceless coded aperture correlation holography system without refractive lenses" (Nature) *Sci. Rep.* **7**, 11555 (2017).
35. Y. Kashter, **A. Vijayakumar**, and J. Rosen, "Resolving images by blurring - a new superresolution method using a scattering mask between the observed objects and the hologram recorder," *Optica* **4**, 932-939 (2017).
36. **A. Vijayakumar**, B. Vinoth, I. V. Minin, J. Rosen, O. V. Minin, and C.-J. Cheng "Experimental demonstration of square Fresnel zone plate with chiral side lobes," *Appl. Opt.* **56**, F128-F133 (2017).
37. **A. Vijayakumar** and J. Rosen, "Interferenceless coded aperture correlation holography—a new technique for recording incoherent digital holograms without two-wave interference," *Opt. Express* **25**, 13883-13896 (2017).

38. **A.Vijayakumar** and J. Rosen, "Spectrum and space resolved 4D imaging by coded aperture correlation holography (COACH) with diffractive objective lens," *Opt. Lett.* **42**, 947-950 (2017).
39. **A.Vijayakumar**, Y. Kashter, R. Kelner, J. Rosen, "Coded aperture correlation holography system with improved performance [[Invited](#)]," *Appl. Opt.* **56**, F67-F77 (2017).
40. **A. Vijayakumar**, Y. Kashter, R. Kelner, and J. Rosen, "Coded aperture correlation holography—a new type of incoherent digital holograms," *Opt. Express* **24**, 12430-12441 (2016).
41. Y. Kashter, **A.Vijayakumar**, J. Rosen and Y. Miyamoto, "Enhanced super resolution using Fresnel incoherent correlation holography with structured illumination," *Opt. Lett.* **41**, 1558-1561 (2016).
42. R. Dharmavarapu, **A.Vijayakumar** and S. Bhattacharya, "Design and fabrication of holographic optical elements for the generation of tilted and accelerating Airy beams [[Invited](#)]," *Asian. J. Phys.* **24**, 1363-1372 (2015).
43. **A.Vijayakumar** and S. Bhattacharya, "Compact generation of superposed higher-order Bessel beams via composite diffractive optical elements," *Opt. Eng.* **54**, 111310 (1-8) (2015).
44. **A.Vijayakumar** and S. Bhattacharya, "Design of multifunctional diffractive optical elements," *Opt. Eng.* **54**, 024104-024104 (2015).
45. **A.Vijayakumar** and S. Bhattacharya, "Quasi-achromatic Fresnel zone lens with ring focus," *Appl. Opt.* **53**, 1970-1974 (2014).
46. **A.Vijayakumar** and S. Bhattacharya, "Characterization and correction of spherical aberration due to glass substrate in the design and fabrication of Fresnel zone lens," *Appl. Opt.* **52**, 5932-5940 (2013).
47. **A.Vijayakumar** and S. Bhattacharya, "Design and fabrication of a spiral phase Fresnel zone lens for optical trapping," *Appl. Opt.* **51**, 6038-6044 (2012).
(Also available in Virtual Journal of Biomedical optics)
48. **A. Vijayakumar**, M. Uemukai and T. Suhara, "Phase-Shifted Fresnel Zone Lenses for Photomixing Generation of Coherent THz Wave," *Jpn. J. Appl. Phys.* **51**, 070206 (2012).
49. **A.Vijayakumar** and S. Bhattacharya, "Phase shifted Fresnel Axicon," *Opt.Lett.* **37**, 1980-1982 (2012).

Conferences

1. **V. Anand**, et. al. "Single camera shot Fresnel incoherent correlation holography," Proceedings Volume 11696, Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XIV; 1169605 (2021).
2. **V. Anand**, et. al. "Femtosecond laser fabrication of diffractive optics for spatial and spectral imaging at synchrotron infrared beamlines," Proceedings Volume 11696, Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XIV; 116960C (2021).
3. **V. Anand**, et. al. "Five-dimensional imaging with a coded pinhole array," Proceedings Volume 11696, Advanced Fabrication Technologies for Micro/Nano Optics and Photonics XIV; 1169606 (2021).
4. Soon Hock Ng; **Vijayakumar Anand**; Alan Duffy; Alexander Babanin; Meguya Ryu;

- Junko Morikawa; Saulius Juodkazis, "Remote-sensing concept using polariscopy for orientation determination below the spatial resolution limit," *Proceedings Volume 11693, Photonic Instrumentation Engineering VIII*; 1169306 (2021).
5. J. L. Sruthy, **A. Vijayakumar**, and S. Bhattacharya, "Compact Single-channel Interferometer for the Study of Light Propagation through Thin Diffusers," in *Laser Congress 2019 (ASSL, LAC, LS&C)*, OSA Technical Digest (Optical Society of America, 2019), paper JM5A.48.
 6. S. Bhattacharya, **A. Vijayakumar**, J. L. Sruthy, and J. Rosen, "Speckle correlation technique to improve the dynamic range of an optical lever," in *Laser Congress 2019 (ASSL, LAC, LS&C)*, OSA Technical Digest (Optical Society of America, 2019), paper LTh4B.3.
 7. S. Mukherjee, **A. Vijayakumar**, and J. Rosen, "Noninvasive imaging through a thin scattering layer using coded phase masks," in *Digital Holography and Three-Dimensional Imaging 2019*, OSA Technical Digest (Optical Society of America, 2019), paper M5B.2.
 8. M. R. Rai, **A. Vijayakumar**, and J. Rosen, "Resolution Enhancement of imaging systems using a phase-only SLM," in *Imaging and Applied Optics 2019 (COSI, IS, MATH, pcAOP)*, OSA Technical Digest (Optical Society of America, 2019), paper CTh4A.5.
 9. A. Bulbul, **A. Vijayakumar**, and J. Rosen, "Superresolution Far-Field Imaging by Coded Phase Reflectors," in *Imaging and Applied Optics 2019 (COSI, IS, MATH, pcAOP)*, OSA Technical Digest (Optical Society of America, 2019), paper IM3B.5.
 10. M. R. Rai, **A. Vijayakumar**, and J. Rosen, "Interferenceless coded aperture correlation holography with single shot recording and non-linear reconstructing," in *Imaging and Applied Optics 2018 (3D, AO, AIO, COSI, DH, IS, LACSEA, LS&C, MATH, pcAOP)*, OSA Technical Digest (Optical Society of America, 2018), paper DM3F.4.
 11. A. Bulbul, **A. Vijayakumar**, and J. Rosen, "Far-Field Imaging by Annular Phase Coded Apertures," in *Imaging and Applied Optics 2018 (3D, AO, AIO, COSI, DH, IS, LACSEA, LS&C, MATH, pcAOP)*, OSA Technical Digest (Optical Society of America, 2018), paper DM3F.3.
 12. M. R. Rai, **A. Vijayakumar**, and J. Rosen, "Extending the field of view by a scattering window," in *Imaging and Applied Optics 2018 (3D, AO, AIO, COSI, DH, IS, LACSEA, LS&C, MATH, pcAOP)*, OSA Technical Digest (Optical Society of America, 2018), paper DM3F.5.
 13. J. Rosen, **A. Vijayakumar** and S. Mukherjee, "Incoherent digital holography for biomedical imaging," SPIE, *Proceedings Volume 10711, Biomedical Imaging and Sensing Conference*; 107110S (2018).
 14. J. Rosen, **A. Vijayakumar**, M. R. Rai and S. Mukherjee, "Is phase measurement necessary for incoherent holographic 3D imaging?," *Quantitative Phase Imaging Methodologies (Invited) SPIE Photonics West Bios* (San Francisco, USA 2018).
 15. J. Rosen, **A. Vijayakumar** and Y. Kashter, "3D Image Acquisition by Incoherent Digital Holography," *3D Image Acquisition and Display: Technology, Perception and Applications*. (San Francisco, USA 2017)
 16. J. Rosen, Y. Kashter and **A. Vijayakumar**, "FINCH and Other Methods of Incoherent Digital Holography" *Digital Holography and Three-Dimensional Imaging*, Tu1A. 1

- (Jeju, South Korea 2017).
17. **A. Vijayakumar** and J. Rosen, "Interferenceless Coded Aperture Correlation Holography-A Way to Record Incoherent Digital Holograms from a Single Viewpoint without Wave Interference," OSA Digital Holography and Three-Dimensional Imaging, Th4A. 1 (Jeju, South Korea, 2017).
 18. **A. Vijayakumar** and J. Rosen, "Improvement of spectral and axial resolutions in modified coded aperture correlation holography (COACH) imaging system," OSA Digital Holography and Three-Dimensional Imaging, Tu1A. 3 (Jeju, South Korea, 2017)
 19. **A. Vijayakumar** and J. Rosen, "Improvement of spectral and axial resolutions in modified coded aperture correlation holography (COACH) imaging system," SPIE Holography: Advances and Modern Trends V 10233, 1023308. (Prague, Czech Republic, 2017).
 20. J. Rosen, R. Kelner, Y. Kashter and A.Vijayakumar "Recent advances in FINCH technology." *Industrial Informatics (INDIN)*, 2016 IEEE 14th International Conference on. IEEE, 2016.
 21. **A. Vijayakumar**, Y. Kashter, R. Kelner, and J. Rosen, "Coded Aperture Incoherent Digital Holography," in *Imaging and Applied Optics 2016*, OSA Technical Digest (online) (Optical Society of America, 2016), paper DW2H.4.
 22. Y. Kashter, **A. Vijayakumar**, Y. Miyamoto, and J. Rosen, "Enhanced Resolution Using Fresnel Incoherent Correlation Holography With Structured Illumination," in *Imaging and Applied Optics 2016*, OSA Technical Digest (online) (Optical Society of America, 2016), paper DT1E.4.
 23. Raghu Dharmavarapu, **A.Vijayakumar**, R. Brunner and S. Bhattacharya, "Composite axilens-axicon diffractive optical elements for generation of ring patterns with high focal depth," Proc. SPIE 9753, Optical Interconnects XVI, 97531D.
 24. **A.Vijayakumar** and S. Bhattacharya, "Multifunctional diffractive optical elements for the generation of higher order Bessel-like-beams," Proc. SPIE 9370, Quantum Sensing and Nanophotonic Devices XII, 937034 (8 February 2015).
 25. G. M. Sridharan, **A.Vijayakumar** and S. Bhattacharya, "Fabrication of diffractive optical elements on glass by dry etching," International conference on MEMS and Sensors, IIT Madras, 18-20. December (2014).
 26. **A. Vijayakumar**, and S. Bhattacharya, "Design, fabrication and evaluation of diffractive optical elements for generation of focused ring patterns," SPIE International conference on Photonics and Optical Engineering, China, 17-21. October (2014). (**Invited paper**).
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