

Curriculum Vitae

Michael Shribak

Education:

Lviv National University, Lviv, USSR (currently Ukraine)
MS in Physical Optics and Spectroscopy (1982)

Moscow University of Geodesy and Cartography Moscow, USSR (currently Russia)
PhD in Optics (1991)

Experience:

- 1982-1993 Lviv Radio Engineering Research Institute of Ministry of Radio Industry of the USSR, Lviv, Ukraine
- 1993-2000 Institute Heat and Mass Transfer of National Academy of Sciences of Belarus, Minsk, Belarus
- 1995-1998 Scientific and Technical Center "LEMT (Lasers in Ecology, Medicine and Technology)", Minsk, Belarus
- 1998-1999 Tokyo University of Agriculture and Technology, Tokyo, Japan
- 2018-2021 Vilnius University, Vilnius, LITHUANIA
- 2000- Marine Biological Laboratory, Woods Hole, Massachusetts, USA

Honors and Awards (selected):

- 1987: Honorary title and medal "The best young inventor of Ukraine".
- 1988: Honorary title and medal "Inventor of the USSR".
- 1988: The Silver Medal of the Exhibition of Achievement of National Economy of the USSR.
- 1989: Honorary title and medal "The best young innovator of Moscow (Russia)".
- 2010: One award for the Technical Merit and 3 Honorable Mentions in the Olympus BioScapes International Digital Imaging competition.
- 2011: Image of Distinction in the Nikon's Small World International Photomicrography Competition.
- 2012: Two Images of Distinction in the Nikon's Small World International Photomicrography Competition.
- 2017: Director of the NIH Dr. Francis S. Collins highlighted the polychromatic polarizing microscope in the weekly NIH Director's Blog:
<https://directorsblog.nih.gov/2017/04/27/snapshots-of-life-neurons-in-a-new-light/>

Service on National Committees:

- NIH: ZRG1 BST-M (58): "ARRA-Challenge grant program at NIH" (2009)
- NIH: ZGM1 BBCB-A: "Biomedical Instrumentation" (2014)
- NIH: ZRG1 MDCN-N (92): "Glia Development, Function and Disease" (2015)
- NIH: ZRG1 BCMB-A (51) R: "NIH Director's Transformative Research Awards (R01)" (2017)

Editorial Board of Scientific Journals:

- Nature/ Scientific Reports

Reviewer for Scientific Journals:

Applied Optics; Biomedical Optics Express; Computational and Mathematical Methods in Medicine; IEEE: Transactions on Medical Imaging; Journal of Biomedical Optics; Journal of

Engineering Physics and Thermophysics; Journal of Microscopy; Journal of the Optical Society of America; Journal of Optics; Journal of Physics D: Applied Physics; Journal of Visualized Experiments; Material Research Express; MAPAN - Journal of Metrology Society of India; Nature/ Scientific Reports; Optical Engineering; Optics and Lasers in Engineering; Optics Communications; Optics Express; Optical Letters; Sensors; Thin Solid Films.

Projects (Principle Investigator):

2005-2007: NIH R44HD037317 (sub-award), "Morphology-based rating of egg development potential".

2007-2012: NIH R01EB005710, "Orientation independent DIC and polarization microscopy".

2012-2022: NIH R01GM101701, "Orientation independent DIC and polarization microscopy".

Patents (selected):

1. M.Shribak "Polychromatic polarization state generator and its application for real-time birefringence imaging", US Patent 9625369, Int.Cl. G01N 21/23 (2017).
2. M.Shribak "Orientation-independent differential interference contrast microscopy technique and device", US Patent 7564618, Int.Cl.G02B 21/06 (2009).
3. M.Shribak, and R.Oldenbourg "Retardance measurement system and method", US Patent 7372567, Int.Cl. G01J 4/00 (2007), *licensed to Perkin Elmer (Waltham, MA)*.
4. M.Shribak, and R.Oldenbourg "Retardance measurement system and method", US Patent 7239388, Int.Cl. G01J 4/00 (2007), *licensed to Perkin Elmer (Waltham, MA)*.
5. M.Shribak "Orientation-independent differential interference contrast microscopy technique and device", US Patent 7233434, Int.Cl.G02B 21/06 (2007).
6. M.Shribak, and R.Oldenbourg "Retardance measurement system and method", US Patent 7202950, Int.Cl. G01J 4/00 (2007), *licensed to Perkin Elmer (Waltham, MA)*.
7. M.Shribak, R.Oldenbourg, P.J.Cronin, C.C.Hoyt, and P.J.Miller "Instantaneous polarization measurement system and method", US Patent 7079247, Int.Cl. G01J 4/00 (2006), *licensed to Perkin Elmer (Waltham, MA)*.

Publications in Peer-Reviewed Journals:

www.ncbi.nlm.nih.gov/myncbi/michael.shribak.1/bibliography/public/

Book Chapters:

1. M.Shribak, "Polarization" (revised). In: *Handbook of Optical Metrology: Principles and Applications, 2nd edition* (ed. T. Yoshizawa), CRC Press, Boca Raton, FL, USA, pp. 373-388 (2015).
2. M.Shribak, "Differential interference contrast microscopy". In: *Biomedical Optical Phase Microscopy and Nanoscopy* (eds. N. T. Shaked, Z. Zalevsky and L. L. Satterwhite), Elsevier, (2012).
3. R.Oldenbourg, and M.Shribak, "Microscopes". In: *Handbook of Optics, Third Edition, Volume I: Geometrical and Physical Optics, Polarized Light, Components and Instruments* (ed. Michael Bass), McGraw-Hill Professional, (2010).
4. M.Shribak, "Polarization". In: *Handbook of Optical Metrology: Principles and Applications* (ed. T. Yoshizawa), CRC Press, Boca Raton, FL, USA, pp. 339-350 (2009).