List of highlights:

Dr. Ozcan is currently the Chancellor's Professor at UCLA and an HHMI Professor with the Howard Hughes Medical Institute (HHMI), leading the Bio- and Nano-Photonics Laboratory at UCLA Electrical Engineering and Bioengineering Departments. He is also the Associate Director of the California NanoSystems Institute (CNSI) at UCLA. His research lab has more than 60 scholars and students and is highly interdisciplinary spanning various branches of engineering, sciences and medicine.

Ozcan is extremely prolific as a scholar and he is at the top of his research productivity and impact, clearly making him a world-leader in his research fields, optical imaging, microscopy, sensing and diagnostics. He holds 33 issued patents and more than 20 pending patent applications for his inventions in telemedicine, mobile health, nanoscopy, wide-field imaging, lensless imaging, nonlinear optics, fiber optics, and optical coherence tomography. Many of these inventions have already been licensed and commercialized with products currently in use. Ozcan's leading scholarly contributions are internationally recognized; he gave more than 35 plenary/keynote talks and 300+ invited talks and is also the author of one book, the co-author of more than 450 peer reviewed publications in major scientific journals and conferences.

Ozcan's scientific achievements have reached across traditional outlets for engineering into the realm of telemedicine and global health applications. *Specifically, his interdisciplinary research focuses on the use of computation and algorithms to create new optical microscopy, sensing and diagnostic techniques, significantly improving existing tools for probing micro- and nano-scale objects while also simplifying the designs of these analysis tools*. For example, an important class of new microscopes his research has created uses lensfree on-chip imaging which replaces traditional lenses with holographic reconstruction algorithms. Basically, 3D images of specimens are reconstructed from their "*shadows*" providing considerably improved field-of-view and depth-of-field, thus enabling ultra-large sample volumes to be rapidly imaged, even at the nanoscale. These new computational chip-scale microscopes routinely generate over 1-2 billion pixels (giga-pixels), where even single viruses can be detected with a field-of-view that is >100 fold wider than other imaging techniques - a feature that is especially significant for high-throughput screening of rare cells or pathogens within complex specimen such as bodily fluids.

In addition to this remarkable increase in throughput, another major benefit of this technology platform is that it lends itself to field-portable and cost-effective designs which easily integrate with smart-phones to conduct giga-pixel microscopy, tele-pathology, sensing and diagnostics even in resource-poor and remote-settings where traditional techniques are difficult to implement and sustain, thus opening the door to various telemedicine and global health applications. Through these emerging technologies, his research lab creates integrated self-learning systems and networks, specifically for biomedical micro-analysis and diagnosis, aiming

to impact various global health challenges with highly sensitive, specific and yet remarkably cost-effective and compact solutions, integrated to or running on cellphones. Some examples of these technologies created by Ozcan include: cellphone based mobile microscopes that can detect even *single viruses and single DNA molecules*, flow-cytometers, rapid diagnostic test readers, personalized allergen detectors, bacteria/pathogen sensors, blood analyzers for complete blood count, urinary albumin detectors for monitoring of chronic patients, heavy metal detectors, among many others as detailed in his CV: http://goo.gl/XkPJMA

Some of these cellphone enabled telemedicine and mobile health technologies have already been commercialized as a spin-off from his lab (Holomic/Cellmic LLC), and are being used in more than 10 countries across four different continents, including Africa. Ozcan serves as the inventor of the core technologies, the founder and a member of the Board of Directors of Holomic/Cellmic LLC. As a major recognition, in 2015 Holomic LLC was named a ***Technology Pioneer by the World Economic Forum***. The World Economic Forum's Technology Pioneer program was started in 2000 to recognize early-stage companies from around the world that are "involved in the design, development and deployment of new technologies, and are poised to have a significant impact on business and society." Previous recipients of this prestigious honor include Google, Kickstarter, Twitter, SoundCloud and Airbnb.

Through the development of computational imaging and sensing techniques, ***Ozcan's lab has also reported the discovery of new 3D swimming patterns observed in human and animal sperms***. One of this newly discovered rare motion is in the form of 'chiral ribbons' where the planar swings of the sperm head occur on an osculating plane creating in some cases a helical ribbon and in some others a twisted ribbon. These are unique observations that could "not" be reported before Ozcan's work, mostly due to tight curvature of such trajectories as well as the rapid speed of sperms, which make it rather challenging to image in 3D using the limited sample volume and depth-of-field of conventional optical microscopy techniques. Shedding light onto the statistics and biophysics of various micro-swimmers' 3D motion, these results provide an important example of how biomedical imaging and sensing significantly benefits from emerging computational algorithms/theories, revolutionizing existing tools for observing various micro- and nano-scale phenomena in innovative, high-throughput, sensitive and yet cost-effective ways, impacting basic science as well as various biomedical applications, including point-of-care diagnostics and field medicine.

For his research and scholarly achievements, Ozcan also received several major awards including the ***2011 Presidential Early Career Award for Scientists and Engineers (PECASE)***. He received this prestigious award at the ***White House from President Obama*** for developing innovative optical technologies and signal processing approaches that have a significant impact in biological sciences and medicine; addressing public health needs in less developed countries; and service

to the optical science community including mentoring and support for underserved minority undergraduate & graduate students.

Furthermore, Ozcan received the ***2015 ICO Prize*** from the ***International Commission for Optics (ICO)*** for his seminal contributions to bio-photonics technologies impacting computational microscopy and digital holography for telemedicine and global health applications. The International Commission for Optics (ICO) was created in 1947 with the objective to contribute, on an international basis, to the progress and dissemination of the science of optics and photonics and their applications. Under its broad umbrella, ICO includes The International Society of Photonics (SPIE), The Optical Society of America (OSA), IEEE Photonics Society, and the European Optical Society among other optics/photonics related professional societies in the world. ***The ICO Prize is the highest award of ICO and is given each year to an individual who has made major contributions to optics, measured chiefly by its broad impact, opening a subfield or significantly expanding an established subfield in research or technology***.

In addition to this prestigious international award Ozcan received several other major awards including the ***2013 SPIE BioPhotonics Technology Innovator Award*** from the International Society of Photonics (SPIE), ***2011 Army Research Office (ARO) Young Investigator Award***, ***2011 SPIE Early Career Achievement Award***, ***2010 NSF CAREER Award***, ***2009 NIH Director's New Innovator Award***, ***2009 Office of Naval Research (ONR) Young Investigator Award***, ***2009 IEEE Photonics Society Young Investigator Award*** and the ***MIT's Technology Review TR35 Award*** for his seminal contributions to near-field and on-chip imaging, computational microscopy, sensing and telemedicine based diagnostics.

As a recognition of the impact, significance and novelty of his research and scholarship, Ozcan has also received a number of additional major awards including:

- ***2016 Mary Kay Foundation Cancer Research Award***
- ***2016 Wireless Innovation Award, the Vodafone Americas Foundation***
- ***2016 Ernst Abbe Lecture and Award, the Carl Zeiss Foundation***
- ***2016 IEEE Photonics Society Distinguished Lecturer Award***
- ***2014, The Optical Society (OSA) Fellow***
- ***2013 and 2015 Microscopy Today Innovation Awards***
- ***2013 International Photonics Society (SPIE) Fellow***
- ***2012 Popular Science Brilliant 10 Award***
- ***2012 National Academy of Engineering (NAE) The Grainger Foundation Frontiers of Engineering Award***
- ***2011 Innovators Challenge Award, the Rockefeller Foundation and mHealth Alliance***
- ***2010 National Geographic Emerging Explorer Award***
- ***2010 Bill & Melinda Gates Foundation Grand Challenges Award***
- ***2010 Popular Mechanics Breakthrough Award***
- ***2010 Netexplorateur Award given by the Netexplorateur Observatory & Forum in France***

- ***2009 Wireless Innovation Award, the Vodafone Americas Foundation***
- ***2008 Okawa Foundation Award*, *the Okawa Foundation, Japan*.**

Ozcan was also selected as one of the top 10 innovators by the U.S. Department of State, USAID, NASA, and NIKE as part of the LAUNCH: Health Forum organized in 2010. Furthermore, he also received the ***2012 World Technology Award on Health and Medicine***, which is presented by the World Technology Network in association with TIME, CNN, AAAS, Science, Technology Review, and Fortune.

For a complete list of his achievements and honors: http://goo.gl/XkPJMA