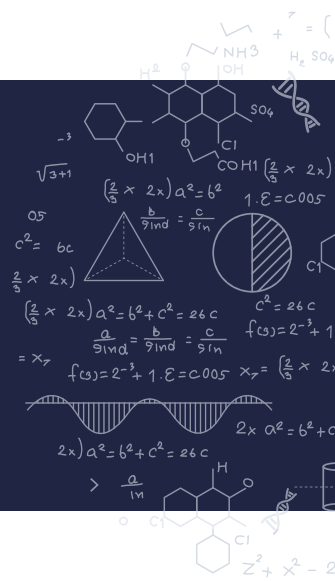


# LICENSING OPPORTUNITY: SPATIO-TEMPORAL PROFILOMETER AND PERFORMING TIME-RESOLVED SPATIAL PROFILOMETRY FOR PRODUCING A UNIFORM LIGHT PROFILE



## DESCRIPTION

### Problem

The invention solves the problem of creating wide, optical beams that have uniform intensity through their cross section.

### Invention

The invention is a device that creates uniform illumination profiles using a single waveguide structure. Input light can be from another waveguide (e.g. an optical fiber) or free-space light source.

## BENEFITS

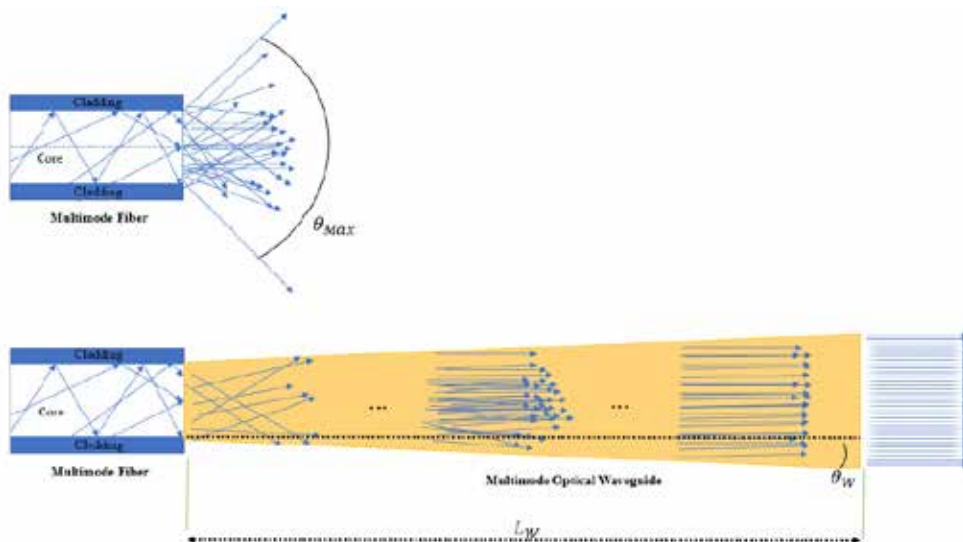
### Commercial Application

This invention is useful in optical measurement systems, including optofluidic applications such as cytometry and imaging.

### Competitive Advantage

The invention is easy and inexpensive to manufacture and adapt to other systems, is robust (durable), and is small in size and does not require additional optical components.

Ray tracings of light exiting optical fiber in free space (above) or into NIST's waveguide structure that both collimates and uniformly distributes output light rays from an input optical fiber.



Contact: [licensing@nist.gov](mailto:licensing@nist.gov)



NIST Technology Partnerships Office  
National Institute of Standards and Technology  
100 Bureau Drive, Gaithersburg, MD 20899-2200