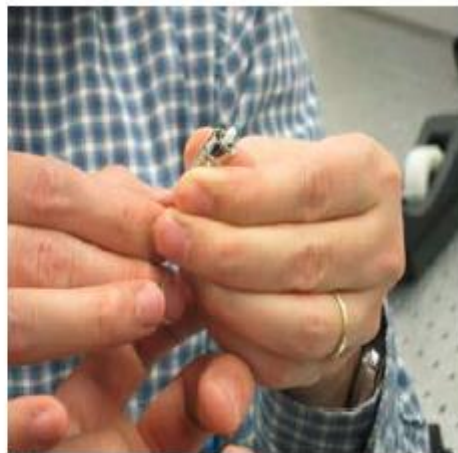


# Project 3: Connectors and splices

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## Goal:

- Learn how to make fiber connectors both manually and automatically.
- Mechanical splicing



# Project 3: Connectors and splices

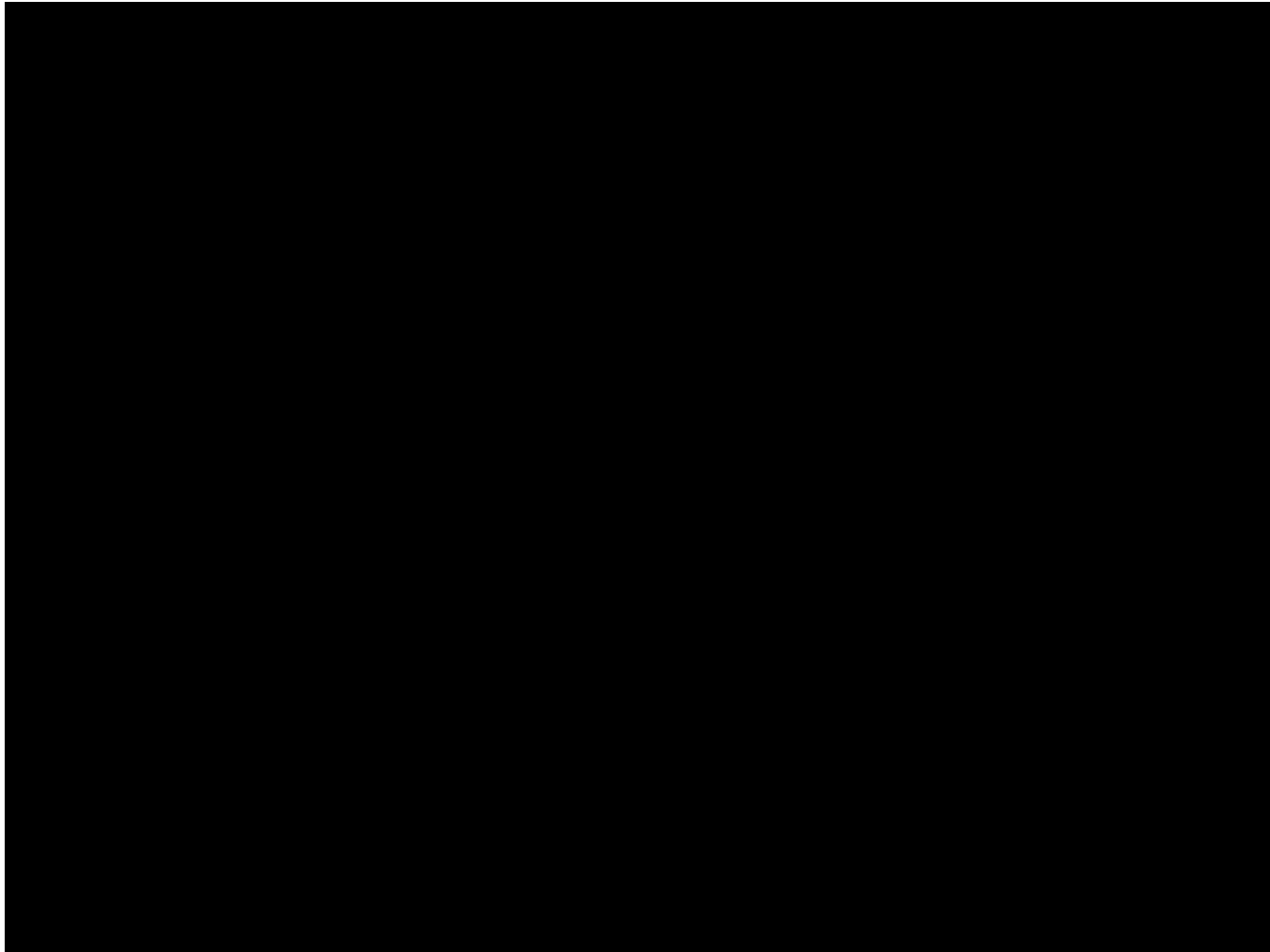
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Class website:

<https://wp.optics.arizona.edu/kkieu/courses/opti-587I/>

# Project 3: Connectors and splices

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# Project 3: Connectors and splices

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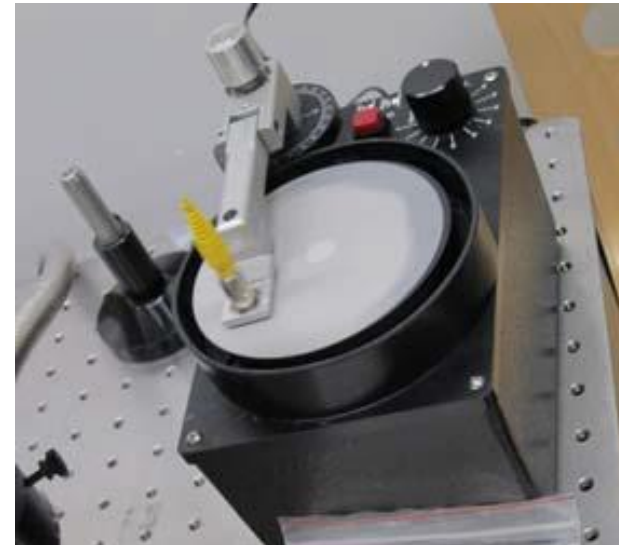
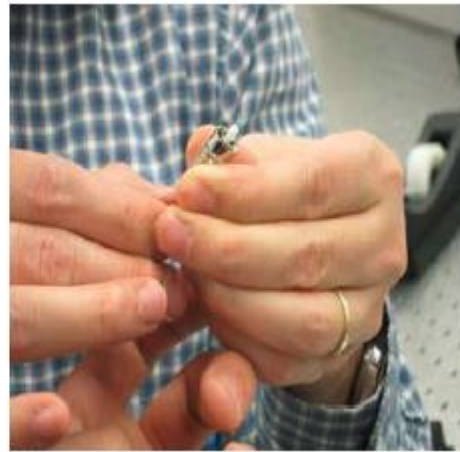
# Project 3: Connectors and splices

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Buffer/jacket color	Meaning
Yellow	single-mode optical fiber
Orange	multi-mode optical fiber
Aqua	10 gig laser-optimized 50/125 micrometer multi-mode optical fiber
Grey	outdated color code for multi-mode optical fiber
Blue	Sometimes used to designate polarization-maintaining optical fiber

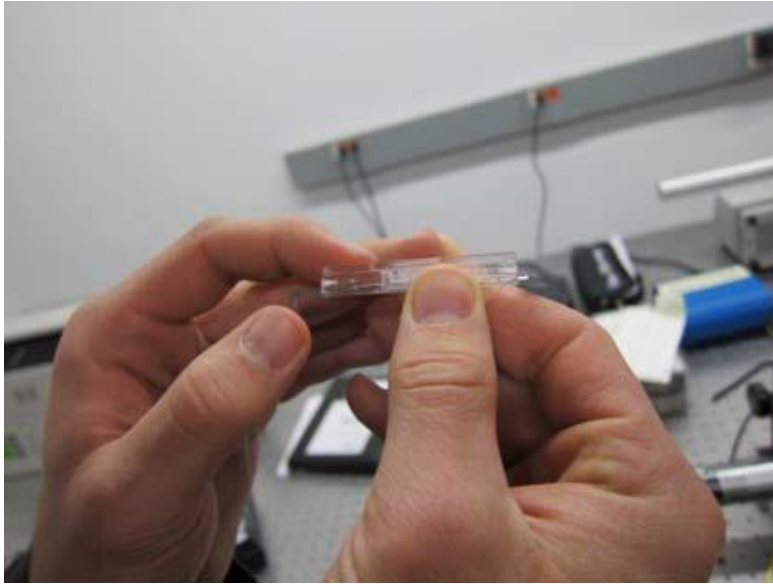
Connector Boot	Meaning	Comment
Blue	Physical Contact (PC), 0°	mostly used for single mode fibers; some manufacturers use this for polarization-maintaining optical fiber.
Green	Angle Polished (APC), 8°	not available for multimode fibers
Black	Physical Contact (PC), 0°	
Grey, Beige	Physical Contact (PC), 0°	multimode fiber connectors
White	Physical Contact (PC), 0°	
Red		High optical power. Sometimes used to connect external pump lasers or Raman pumps.

# Project 3: Connectors and splices



# Mechanical splicing

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# Project 3: Connectors and splices

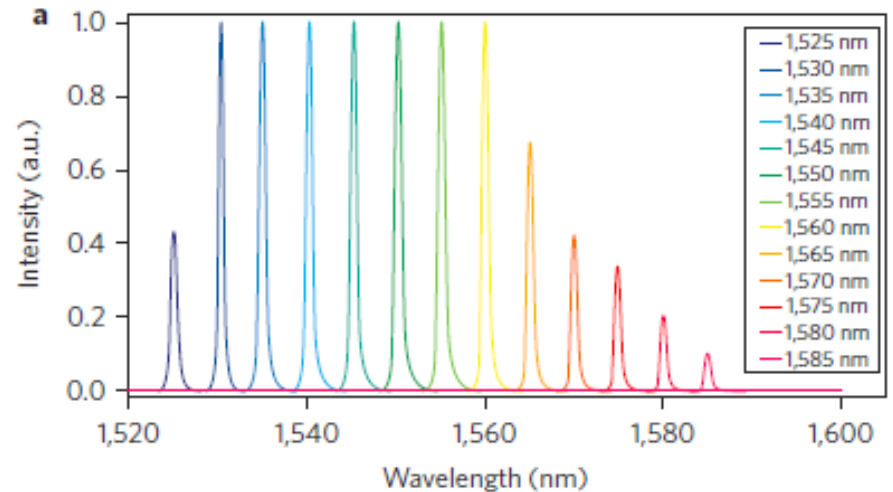
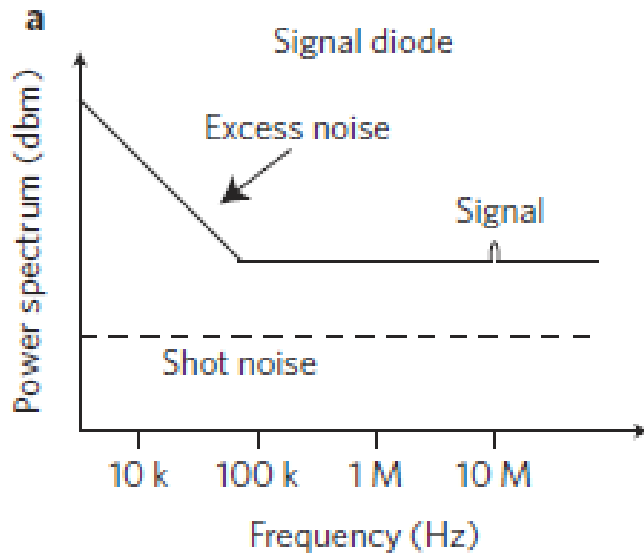
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## Experimental equipment:

- Fiber (SMF28)
- Razor blade, Striper, Fiber axe cleaver
- Fiber cleaver (Fujikura, High precision fiber cleaver)
- Microscope, Fiberscope
- Laser source (1550nm)
- Fiber connectors kit [FC2 Conn (SM126ZR) 3MM, PN 0860535000, Molex Fiber Optics]
- Optical power meter (Newport Power Meter, Model 1918-C) and Detector
- Rotating polisher [company 3M] with polishing sheet [DLF4XN-5661X, Imperial Diamond Lapping Film, 0.5 micron grade]
- Mechanical splicer
- Epoxy [from Walmart] and a slab of glass to mix it on, and a small stick to pick it up
- Polishing sheets [F-TK1L Lapping Sheet Assortment, Newport]



# Graphs

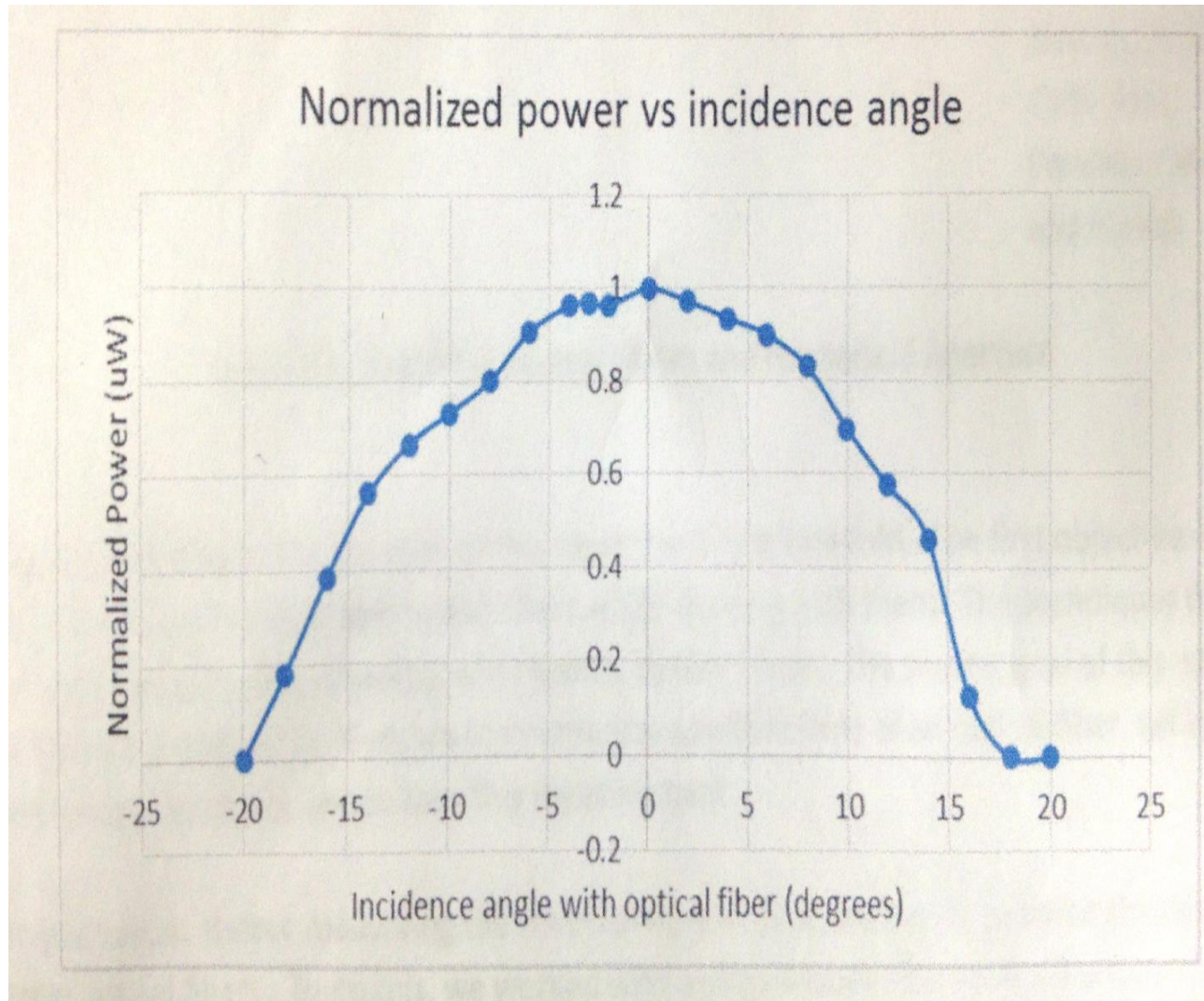


- x, y axis caption
- x, y axis scale
- The graph itself

## Stimulated Raman scattering microscopy with a robust fibre laser source

Christian W. Freudiger<sup>1,2†</sup>, Wenlong Yang<sup>2†</sup>, Gary R. Holtom<sup>2</sup>, Nasser Peyghambarian<sup>3</sup>, X. Sunney Xie<sup>2\*</sup> and Khanh Q. Kieu<sup>3\*</sup>

# Graphs



# Graphs

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