

- Because GlobalOptimization toolbox for MatLab is not free, Inspyred.py and Deap.py may be viable options.
- Can python interface with LabView?
 - Yes: [LabPython](#), [Calling Python Code from LabView](#), [Call Perl and Python Scripts from LabVIEW](#)

Elaborate on the following Questions

- What is the big picture?
 - Develop method for imaging with uniform distribution of light
 - Develop method to increase depth of field
 - Create non-diffracting beam (laser)
 - Without diffraction, there is no limit to the distance laser can travel with uniform distribution
- How many parameters?
 - What will be parameters?
 - Each “parent” is a phase function $\phi(x,y)$
 - 10 phase functions will be sent to SLM
 - Function of x and y (2 parameters)
- How do we measure fitness?
 - Similarity of planes, size, max of secondary peaks
- What is meant by “profile”?
 - Intensity = $I(x,y) = \text{Amplitude}^2 = A(x,y)^2$
 - Intensity or amplitude profile = 2D distribution of light
 - We will measure the 2D intensity profile with a 2D camera. $I(x,y)$

More Questions/Comments...

- SLM will affect phase of laser.
- What is meant by “phase”?
 - A single wave-peak from a source
 - Two waves aligned crest to crest and trough to trough are said to be in **phase**
 - [the fraction of the wave cycle that has elapsed relative to the origin.](#)