# SE&T Colloquium Series-Fall 2018

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| Speaker | Dr. Xu Zhang<br>Department of Electrical and Computer Engineering |
| Title | ***Controlling Light with Metadevices*** |
| Abstract | The development of metamaterials has provided a new way to manipulate electromagnetic waves by sub-wavelength artificial structures, and hence access new properties and functionalities that cannot be found with conventional materials. Many fascinating devices have been designed and fabricated, such as perfect lenses, hyperlenses, invisibility cloaks, and perfect absorbers. When these intriguing devices are intended for practical use, some critical challenges need to be tackled. A major issue for optical metamaterials is loss. The ohmic losses due to the metal components in the metallic metamaterials stop the materials from functioning and lead to a variety of undesired phenomenon. A loss compensation technique called the plasmon injection (Π) scheme is proposed and successfully applied to experimental hyperlenses and the resolution enhancement is obtained. |
| Date | Tuesday, November 13 |
| Time | 4:10-5:00pm |
| Place | Pioneer 240 |
| | Refreshments will be served at 4:00pm. |