

# Stanford

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## Punnag Padhy

Ph.D. Student in Electrical Engineering, admitted Summer 2016

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Currently, I am working on an on-chip platform to simultaneously trap and manipulate micron scale beads and droplets with an intention to implement chemical reactions on a chip at ultrasmall volumes.

#### Publications

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##### PUBLICATIONS

- **On the substrate contribution to the back action trapping of plasmonic nanoparticles on resonant near-field traps in plasmonic films** *OPTICS EXPRESS*  
Padhy, P., Zaman, M., Hansen, P., Hesselink, L.  
2017; 25 (21): 26198–214
- **Dielectrophoresis-assisted plasmonic trapping of dielectric nanoparticles** *PHYSICAL REVIEW A*  
Zaman, M. A., Padhy, P., Hansen, P. C., Hesselink, L.  
2017; 95 (2)
- **Adjoint method for estimating Jiles-Atherton hysteresis model parameters** *JOURNAL OF APPLIED PHYSICS*  
Zaman, M. A., Hansen, P. C., Neustock, L. T., Padhy, P., Hesselink, L.  
2016; 120 (9)
- **Metal wire waveguide based all plasmonic refractive index sensor for terahertz frequencies** *SENSORS AND ACTUATORS B-CHEMICAL*  
Padhy, P., Sahu, P. K., Jha, R.  
2016; 225: 115-120