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Lidar remote sensing (env applications)

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TA:	
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| Day/Time: | Friday 10:05 - 11:20 | 1104 GH |
| | Office hours: TBA |

Course overview: Hands on lidar processing with a selection of different software tools; reading and discussion of applications. Readings will be a mix of scientific literature and detailed web documentation and consist of practical applications for management. Selection of topics will involve student input.   Labs will primarily use ArcPro, Fusion (USDA) and Python/R.

Learning objectives:

By the end of this course, you should be able to:

- *Describe the principles of LiDAR systems.*

- *Describe best practices for geo-referencing and processing LiDAR data.*

- *Critically evaluate tradeoffs and limitations with respect to LiDAR sensors and decisions made in data processing workflows.*

- *Develop an inquiry-driven efficient data processing workflow that is appropriate to answer a research question.*

- *Use GIS and/or Fusion software to execute analysis.*

- *Produce a clear and professional presentation of findings.*

Grading: This class will be graded 60% on participation (attendance and completion of labs, participation in discussions) and 40% on a mini project that each student will design and conduct independently (with instructor assistance). *Brief* lab reflections describing results working with your dataset must be turned in via box [submissions folder] 1 week after the lab (these will be checked for completion, but not given letter grades). Each student will be expected to give a 5-min speed presentation and turn in a 3-5 page brief summarizing their project.