MAS.S66
Computational Wireless Sensing

Lecture 7 (part 2):
MIMO & Writing Related Work

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MIMO/Beamforming

- Transmit & receive beamforming
- Beamforming & diversity gains
- Precoding & MIMO
- Why can’t we use traditional beamforming inside the body?
- What is the expected gain in distance?
How to Write Related Work Section (in CS systems)?

**Pass 1:** Be extensive, put thoughts down, write about areas
make sure to cover your bases, any Google scholar article that
might be relevant

**Pass 2:** Two ways of writing related work

Approach 1: story/context. Give me an idea of how the work started
and how it evolved

Approach 2: Past work falls in these two/three main areas. In
contrast, we are the first to do XXX. Then go in details about these
areas (ideally, same as approach 1)
Do’s and Don’ts of Related Work

**Do’s**

- Be comprehensive
- Say how your approach is different/better from a body of work
- Elucidate the differences between your work and prior work
- Leave out important related work
- Focus on fundamental differences, and why your technique is intrinsically different

**Dont’s**

- Make it a laundry list (group, instead)
- Restate your methods or their details
- Go into a lot of detail about all related work
- Reinterpret how related work could be applied to your problem domain
- Gloss over important differences assuming the reviewer will automatically “get it”
Where should the related work come?

It might be in the beginning or end of the paper — depending on how well-known the area is to the community.

Sometimes you might need to divide into background/primer and related work.