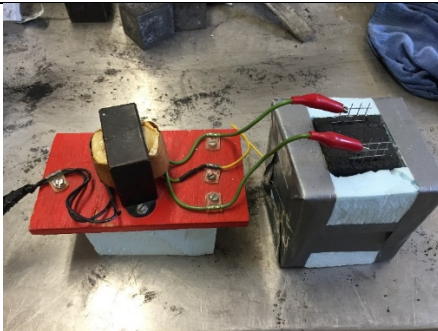
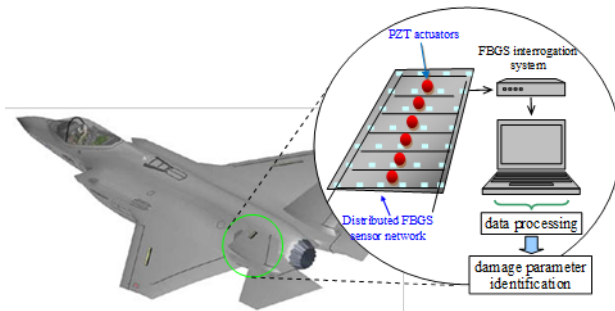
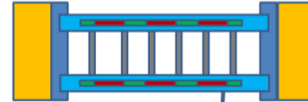


NDSU Engineering Grand Challenge Project Examples

Real time crash/collision logging for structures

Structures inevitably experience crash/collisions during their service life. What should we do with these events? Pretend they never happened? Or could we document this record and provide a past record for assessing their working conditions?

We can find answers to these questions by conducting some experiments spread out over a couple of years. Such a research is exciting because we will explore the unknowns and possibly contribute to improving urban infrastructure safety!



Making a green self-heating concrete out of waste

Removing snow and/or ice on driveways and sidewalks is a common burden for residents in North Dakota. Commercial snow removal services typically cost around \$1000 on average per season per household. Even with this cost, the service timing often does not meet the residents' needs due to simultaneous high demand across the community.

Fly ash geopolymer concrete utilizes fly ash waste, but shows higher electrical conductivity compared to conventional concrete. How can we tailor the existing formula and make it work for self-snow removal or roadway marking revealing would be very interesting questions that need your input and ideas.

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