1. Abstract
2. Introduction
   1. Why it’s useful
      1. Predicting wind/temperature/field – Outline problem – Half a page, 10-15 references. Dave Whiteman has review papers
      2. Larry Mahrt 2017, Lemone’s 2003 paper, cited in presentations
   2. Previous work
      1. Neural network previous work
         1. Gertjan’s paper
         2. Florian’s paper
         3. Others?
      2. Other methods used to do this (Interpolation?)
      3. Sensitivity analysis in neural networks
      4. Nowcasting in complex terrain
   3. Neural network review
      1. What is neural network and how they work
      2. How neural networks have been used in meteorology
3. Methods
   1. Neural network implementation details
   2. KASCADE details
      1. Discussion of LEMSv2
      2. Table of instrument locations
      3. Map of locations – Use google or IGN maps, topo + satellite, Corine Land Use, Local slope and aspect of each site (Ask Thierry)
4. Results and Discussion
   1. Low/High Wind Focus - In general, follow format: 1 figure, 6 panels, 3 panels for Jan 17, 3 panels for Jan 27. See slides 34-39 on presentation. Do it for:
      1. Wind Velocity Components
      2. Virtual Temperature
      3. Specific
   2. Wind direction, wind speed, temperature, specific humidity (All in table). Use 15-20 for training
      1. Location sensitivity
      2. Number of stations sensitivity
      3. Type of station sensitivity (LEMS vs permanent stations)
   3. Hyperparameter
      1. One output vs. Multiple output
      2. Hidden nodes
      3. Percentage of training vs. validation
5. Future work
   1. Other field experiments
   2. Hyperparameter optimization
   3. Deep Learning
6. Conclusion