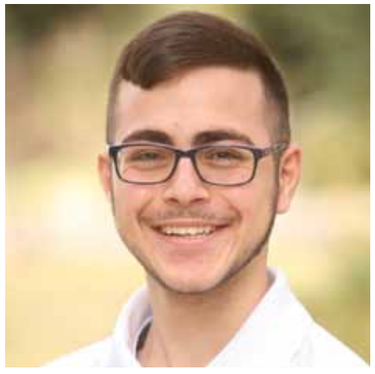

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Research topic: Measuring humidity in the atmosphere through the cellular network

Synopsis:

Humans have been relying on the weather since the beginning of existence in many things like farming..., which is why the weather is one of the most important things nowadays. Because the weather is constantly changing due to many different causes and phenomena, people need the weather forecast to cope with these changes. The aim of this study was to develop the method of measuring rain using cellular links so that it can also measure the humidity in the air. And this is because humidity is an important parameter for weather phenomena such as rain and clouds - clouds are made up of water vapor and so on ... The purpose of this study is to investigate the effect of various surface types on humidity. In this study number of links were taken and the deferent surface types that were underneath them have been examined in the study using specific maps of the surface types, and for each different link group, (for example the links group that is located above cities) a comparison was made, the purpose of which was to show the gap between the different link correlations with the meteorological stations. The results show that there is a surface effect on the measurements, but of course each different type had a different level of influence on the measurements and the correlation itself. Agricultural surfaces had the largest percentage of impact, and we can see that the correlation average of each type is mostly neither negative or close to 0 (Figure-1), what proves that the deferent surface types really affect the measurements using cellular links. With the help of our research, measurements will become extremely accurate, help to create higher-quality weather forecasting models, and of course improving life in a general, and for farmers and agricultural stuff in specific, a better understanding of such things will also help to understand better how humans primarily affect the planet, all People know and understand how important the weather forecast is in life.

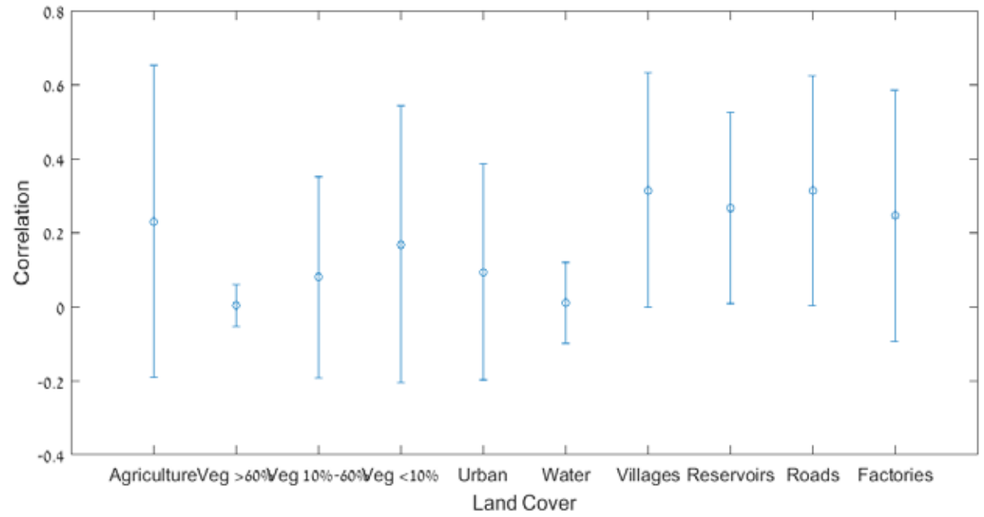

Figure 1.: Mean correlation for each of the different surface areas tested in working with the error lines of each type. The graph shows a spherical correlation average of the link measurements with the most meteorological stations measured in the experimental area for the different surface types below the links, with error lines showing the standard deviation of each type.