

# Flooding, storm surge can be as destructive as a hurricane's winds

September 13 2018, by Chrystian Tejedor

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Flooding was among the major impacts when Hurricane Harvey struck Texas in 2017. Credit: Florida International University

When hurricanes and powerful storms threaten land, people typically focus on wind speed. That could be a mistake.

Damage caused by flooding and storm surge should just as concerning to people in the path of these storms, according to preliminary research conducted by FIU atmospheric sciences student Andrew Pinnock.

Poring over historical records dating as far back as 1900, Pinnock learned that fresh water flooding and storm surge associated with these storms are each about as destructive as wind. Combined, their effect is twice that of wind.

"This definitely surprised us," Pinnock said. "There were some outliers – storms that had lots of [wind damage](#) like Andrew and Charlie – but the majority of storms produced a lot of flooding, like [tropical storms](#) that people tend not to remember or take heed of."

By studying the damage caused by past storms, Pinnock and other researchers working with Distinguished Research Professor Hugh Willoughby hope to better gauge the threat posed by future storms.

"This year was predicted to be quiet and people always think in a quiet year you can keep your guard down, but here we have Florence, a storm that is high in latitude and it's not supposed to be as strong given where it is right now," Pinnock said. "They said Harvey was supposed to be a once in a lifetime storm and here we are again with another once in a lifetime [storm](#)."

Provided by Florida International University

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