

## Tucker Ely review of Alicia Gonzalez

Hi Alicia! Firstly, I really enjoyed this study overall, I think it is a fascinating and relevant topic for this class. Below I have tried to separate my comments by section. Also, don't forget to check the copy of your paper I am sending with this review, as I took notes directly on it.

**Abstract:** You should add a short and concise abstract which briefly describes the major points and conclusion of the study.

**Introduction:** I really like your introduction. I felt that it sufficiently introduced the two major topics of your paper, a combination of information measures and the airport network system.

**Model Description:** This section contains the information it needs to I feel, but might be better organized. I found myself re-reading it a few times in order to determine which studies you were referring to as you moved between previously published work (I think) and your model. Also, the significance of checking your outputs against the dynamics of Nov 24<sup>th</sup> was lost on me. It makes sense that this day is an extremely busy day, but how exactly was this helping you monitor your system?

**Results:** Your opening statement for the results section, regarding transfer entropy, feels like it belongs in the model description. Maybe it is just a style difference, but I have always felt that an unembellished description of raw results is all that belongs in a results section. That being said, your readers should already have enough information to understand the results section by the time they get there, without any additional model descriptions.

**Discussion:** Your sections –(Distribution of info. . . . and Summary) Should be wrapped in a Discussion section, where you dive into the interpretation of your data. I'm just going on Sara's requirements here. Obviously there are a 1000 ways to write a paper, but she seemed to stress this specific format here.

The issue of the difference in your initial conditions comes up again here. It is not entirely obvious to what the difference is between cases A and C. More surprisingly is that these two show the largest deviations from one another in the TE data. How is it that imposing a real delay schedule produces such different results than if you imposed the statistical distribution of that same delay data? I'm sure that I am misunderstanding something here which is obvious to you, but after reading your description of the initial conditions in the Model Description, and your recap in this section, I still feel lost. Can I view the set of conditions A as just one iteration of the average which C represents?

I think you should try to tease out why runs A and C turned out so different. Also, what does it really mean to have higher information content? I think this paper would benefit from an explanation of what it means to have different transfer entropy distributions in general. Then, if you would like to speculate further on your results, you can dive into how these results might be used by airlines to optimize their response to one of the variables you took into consideration.