

EXHIBIT F

UTC Project Information	
Project Title	Analyzing the Role of Air-Transportation in COVID-19 Pandemic Disaster.
University	Embry-Riddle Aeronautical University
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Funding Source(s) and Amounts Provided (by each agency or organization)	\$ 100 000 (CATM) +\$50,000 Cost share (ERAU)
Total Project Cost	\$150,000
Agency ID or Contract Number	69A3551747125
Start and End Dates	02/01/2021 - 08/30/2022
Brief Description of Research Project	<p>COVID-19 pandemic has caused a worldwide lockdown and a complete stoppage of all non-essential activities. In particular, it has affected air-travel, which is a significant driver of the global economy through the movement of people and goods. In this proposal, we will address the impact of air travel on the pandemic both at the scale of the entire country and at the level of airports.</p> <p>The ongoing COVID-19 pandemic data can be considered as spatio-temporal point data scattered all over the world. We will utilize Hawkes point process model to decluster this point data in terms of air-travel related cases or background events and the local spread cases which are off-springs of these background cases. This understanding can play a crucial role in devising strategies to micro-target and mitigate emergency transportation disruptions. We will also utilize our past work to develop agent based models for COVID-19 spread to devise transportation policies regarding crowd management that will mitigate the second wave of COVID -19 as travel returns to normal levels.</p>

Describe Implementation of Research Outcomes (or why Not implemented) Place Any Photos Here	The formulation has been developed. Data collection and coding are in progress.
Impacts/Benefits of Implementation (actual, not anticipated)	We will use point process models to characterize the spread of COVID-19 in USA to differentiate between cases originating from air-transportation between cities and those due to local spread. We will then correlate the background cases to transportation hubs and generate 'what-if' scenarios relating air-travel and disease spread. This can be used as a planning tool for future epidemics.
Web Links <ul style="list-style-type: none"> • Reports • Project Website 	Will be provided on project completion



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