

THE EDUCATION UNIVERSITY OF HONG KONG  
FACULTY OF LIBERAL ARTS AND SOCIAL SCIENCES

**Research Impact/Knowledge Transfer Prize (IKTP)**  
**for the Dean's Research Fund 2021/22**

**Brief Introduction of Awardee's**

**Research Impact/KT Publication/Output and Future Research Impact/KT Development**

<b>Awardee (Dept):</b>	<u>Dr Chu Man Ying Amanda, Assistant Professor (SSC)</u>
<b>Publication Title / Research Impact / KT project:</b>	<u>COVID-19 Pandemic Risk and its Impacts on Finance and Education</u>

A. *Briefly introduce your research impact/KT publication/output for which you have received the prize.*

Since early 2020, many countries have been significantly affected by the coronavirus disease 2019 (COVID-19) pandemic. I, together with my invited research collaborators from various disciplines in other universities, develop methodologies to visualize, detect, and assess pandemic risk using publicly available data for policy makers to better optimize timely containment strategies to mitigate the outbreak of infectious diseases. In addition, we study the impact of COVID-19 on finance and education.

A common pandemic risk assessment approach is by epidemiological modeling, where population is divided into at least three groups: susceptible, infected, and recovered. This approach has been successful in understanding the disease transmission in a region through mathematical formulation of human interactions which may lead to infection, and the rate of recovery from infection. However, the susceptible-infection-recovery approach was designed fundamentally for closed populations and so restricted to regional studies. To supplement the epidemiological modeling, it is important to study the world connectedness and combine data from different regions or countries to study the pandemic situation, i.e. the status of the disease transmission in multiple regions or over the world, and to quantify the potential risk involved due to the COVID-19 outbreak. Our research, based on network connectedness ideas, contributes in these issues and our research findings are helpful to detect early signals of and predict the COVID-19 pandemic risk.

B. *How you used/will use your prize and perhaps its usefulness to your research impact/KT development?*

I will use the prize to recruit a part-time research assistant and purchase some necessary equipment to help me to continue my research related to COVID-19 pandemic risk and conduct my research more efficiently.

C. *Expected research impacts/KT outcomes/outputs arising from this prize.*

I am currently preparing some related papers. I hope to have at least one paper published in a prestigious journal in the next academic year.