

To: 5.1.2e [5.1.2e @rivm.nl]
From: 5.1.2e
Sent: Fri 11/27/2020 3:21:02 PM
Subject: FW: Covid-19 Research
Received: Fri 11/27/2020 3:21:09 PM

Beste 5.1.2e

Hoe gaat het met jou en je afdeling? Nog steeds druk verwacht ik?

Ik benader je omdat we binnen de TU/e nieuwe plannen aan het maken zijn om opnieuw naar COVID-19 modelering te gaan kijken. Hier willen we een soort van optimal control policies beoordelen (zie de tekst in de email hieronder), waar we meerdere componenten (health, economy) willen meenemen in de design.

Ik zou graag willen dat RIVM meedoet met deze aanvraag, vanwege jullie expertise, maar ook omdat we gebruik willen kunnen maken van de data die RIVM heeft. Dus mijn vraag aan jou is of je wilt meedoen?

Alvast heel erg bedankt.

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From: 5.1.2e
Sent: Wednesday, November 25, 2020 11:00 AM
To: 5.1.2e < 5.1.2e @tue.nl>
Subject: Covid-19 Research

Dear 5.1.2e

First of all, thank you for your time and precious advice! Please, find the statement of intended research below.

We think that as mathematicians, control and data engineers, and social scientists, we can give a significant contribution to the current Covid-19 pandemic. Therefore, we would like to apply for this grant on [complexity research in relation to Covid-19](#). When dealing with a pandemic outbreak, we ultimately want to find the **optimal** control **policies** that keep the pandemic under control whilst minimizing the **overall** societal damage, holistically intended as number of casualties, mental and physical health damage, economic losses, etc.

This is a very challenging **modeling** and **optimization** problem, evidently containing several **societal** aspects (quantifying the societal impact of measures, e.g., discomfort in distancing, in wearing masks, in closing restaurants, etc.) and deeply depending on different kinds of **data** (to identify the model's dynamics, quantify the impact of measures on the population's behavior and infection rate, etc.).

In our project, we want to devise a decision-support tool that can effectively frame and solve this problem, and provide experts with the optimal policies to tackle pandemic situations for different scenarios and costs' parametrizations.

RIVM would a perfect partner for this project, as on the one hand it would represent the ideal end-user of such a tool and, on the other hand, it could provide us with crucial support in terms of data and expertise.

Thank you!

Groetjes,
 5.1.2e

TU/e EINDHOVEN
 UNIVERSITY OF
 TECHNOLOGY

5.1.2e

5.1.2e

5.1.2e

5.1.2e@tue.nl

5.1.2e