

# 1 Introduction

For the past nearly two years the pandemic of COVID-19 ruled over our everyday lives, changing every aspect of it. Various rules and restrictions were implemented to limit the damage done by the virus, some of which made more sense to us and some less. Yet we have all first-handedly experienced the importance of infectious disease management. Main focus of the text was introducing new methods to this field, combining nonparametric kernel conditional density estimation (KCDE) and parametric framework for dependency modelling called *copulas*.