

Application of machine learning in gravitational waves survey

Filip Morawski¹

¹Nicolaus Copernicus Astronomical Center, Warsaw, Poland

Detection of gravitational waves is extremely complex task. Among many known and unknown noise sources, we would like to find very weak signals originating from very distant objects. Up to now, this was possible for only relatively strong signals. However, there are methods that might help us in this challenging task. Nowadays machine learning gains more and more attention in science. It might be especially useful in the domain of the weak signals characterization. I would like to present examples of my own research in the application of the machine learning in gravitational waves studies I did for the past few months concerning signal classification, artifact detection and detector characteristics.