KATEDRA MATEMATICKÉ ANALÝZY A APLIKACÍ MATEMATIKY

## POZVÁNKA

na přednášku v rámci

#### Semináře z aplikované statistiky

v pátek 20. dubna 2018 od 10 : 30 hodin posluchárna č. 5.066, 17. listopadu 12, Olomouc

### Mgr. Ivan Kasanický, Ph.D.

Parkbob GmbH, Vídeň

# How math can help find a free parking spot in a city

#### Abstrakt

Parking in a city is a hassle. Constantly growing number of vehicles brings obvious problem: there is not enough spots to park all cars. Therefore, people spent tens of minutes looking for a free spot, so a lot of time, money and energy is wasted. In addition, drivers slowly looking for a free spot increase already dense traffic. There are studies saying that up to 30% of inner city traffic is caused by drivers looking for a free spot.

Our mission in Parkbob is to ease finding a free parking spot, or, at least, to provide a driver with information that can help him to make better decision. Additionally, we warn people if there is a slight risk of obtaining a parking ticket. All our solutions have one in common: they rely on applied math.

In the lecture we will show a range of project that Parkbob team is currently working on, and will show mathematical challenges that these projects bring. Some examples of the projects follows.

- 1. Using machine learning to identify when a driver parks his car.
- 2. Using spatial geometry to represent space where cars can be parked.
- 3. Modelling "survival" of a free parking spot.
- 4. Modelling street availability from parking payment data, or from floating car data.

We will show not only successful approaches that have allowed us to create current services, but will also discuss our failed attempts. For example, we will show a case where poor design of an experiment led to a situation that collected data contained purely noise.

K účasti jsou srdečně zváni všichni učitelé, vědečtí pracovníci a studenti, kteří mají zájem o danou problematiku.

doc. RNDr. Eva Fišerová, Ph.D. vedoucí semináře