



भारतीय प्रबंध संस्थान बेंगलूर
INDIAN INSTITUTE OF MANAGEMENT
BANGALORE

**The Decision Sciences Area at IIM Bangalore welcomes you to a
webinar, titled:**

Optimizing with human resources



by
Dr. Pieter Smet,
from KU Leuven

Date: 4th February, 2022
Time: 3:00 p.m. to 4:00 p.m.

Abstract:

Decision support models are an essential tool for companies seeking to optimize the efficiency of their operations. As a result of advances in the domain of operations research, the algorithms which lie at the heart of these systems have experienced enormous performance improvements and now enable us to solve complex large-scale combinatorial optimization problems. A large body of knowledge now exists in the academic literature on how to model and best utilize inanimate, non-human resources such as machines in scheduling problems or vehicles routing problems. In practice, the human operators of these inanimate resources cannot be ignored. Acknowledging the need for healthy socially sustainable schedules typically introduces new constraints or objective functions which have a considerable impact on the problems' computational hardness. In this talk Dr. Smet presents recent results on extending a well-known vehicle routing problem with two aspects originating from the driver requirements: break scheduling and workload balancing. Efficient algorithms for these new optimization problems will also be discussed.