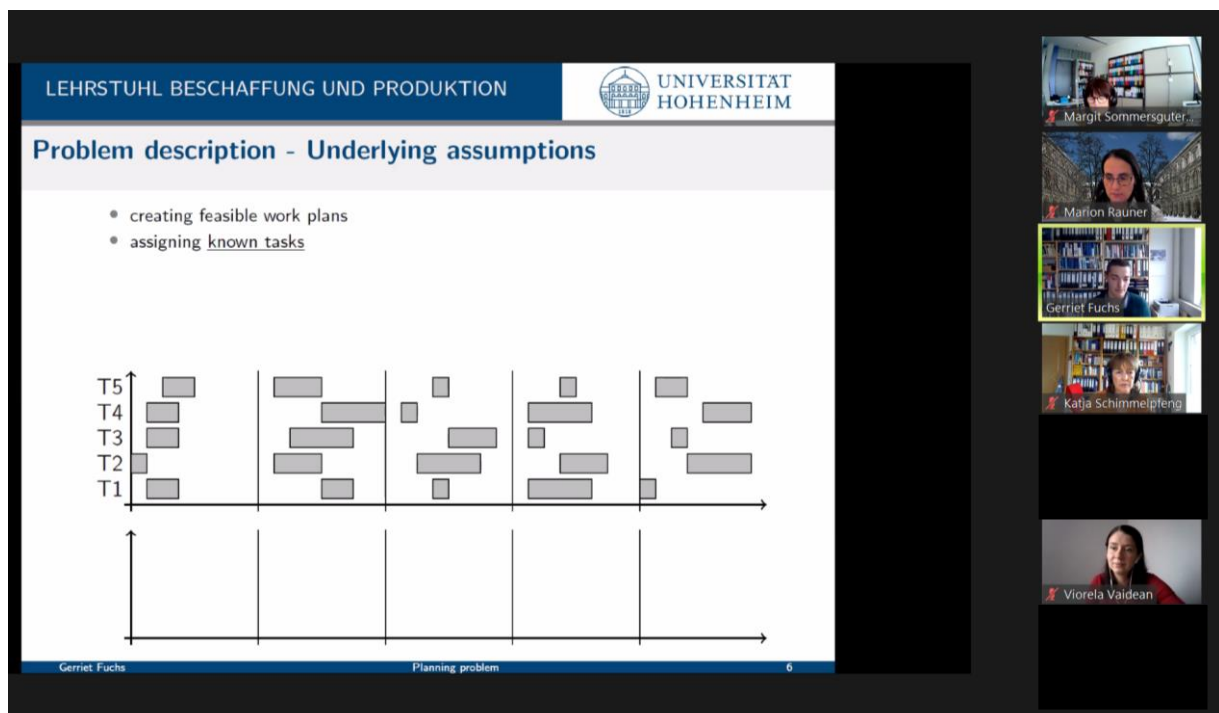


Workshop of the ÖGOR-Working Group

"Operations Research in Health Care & Disaster Management"

On Friday, November 5th, 2021, the ÖGOR working group "Operations Research in Health Care & Disaster Management" organized an online workshop via Zoom on current health economics and disaster management topics. The workshop organizers, Marion Rauner and Margit Sommersguter-Reichmann (Health Care Management) as well as Patrick Hirsch and Walter Gutjahr (Disaster Management) opened the conference following a warm welcome to the participants (researchers, practitioners, and students), who participated from several countries, such as Italy, Germany, Romania, and Turkey. As part of this year's workshop, two presentations were in the Health Care Management section and one talk in the Disaster Management section. At short notice, the organizers had to cancel the second talk in the Disaster Management section as the presenter, Johannes Göllner (Center for Risk and Crisis Management), was unavailable for Corona-specific reasons.

In the Health Care Management section, Gerriet Fuchs from the University of Hohenheim, Germany, presented the first results of his contribution coauthored with Katja Schimmelpfeng and entitled "Task-oriented Personnel Planning." According to the authors, "The main objective of this project is to identify possible benefits splitting shifts to derive flexible work schedules. Demand is modelled by tasks explicitly assigned to workers. The derived work schedules must comply with laws and organizational regulations. The main challenges are to identify suitable tasks and to speed up the solution procedure so that realistic problem cases can be solved." Following Gerriet's talk, a lively discussion emerged on how to differentiate the authors' modeling from previous literature approaches, both in the health care sector and other areas with similar issues.



The screenshot shows a Zoom meeting interface. On the left, a presentation slide is displayed with the following content:

- LEHRSTUHL BESCHAFFUNG UND PRODUKTION
- UNIVERSITÄT HOHENHEIM
- Problem description - Underlying assumptions
- creating feasible work plans
 - assigning known tasks
- A Gantt chart showing task assignments (T1 to T5) across five time periods.
- Gerriet Fuchs
- Planning problem
- 6

On the right side of the screen, there is a vertical stack of video feeds for participants:

- Margit Sommersguter
- Marion Rauner
- Gerriet Fuchs
- Katja Schimmelpfeng
- Viorela Vaidean

Gerriet Fuchs formulates the problem and underlying assumptions of his talk

In the second talk, Viorela-Ligia Vaidean from the University of Babes-Bolyai, Cluj-Napoca, Romania, presented a highly relevant research stream in health economics. In her contribution "Improving health outcomes - which are the effects of corruption, economic prosperity and culture?" the author investigated, among other things, corruption issues in health care. The author stated that "The presentation targets the estimation of the impact of corruption upon several physical and mental health outcomes, within an economically and culturally constrained environment, through a linear and parametric approach as well. The quadratic function approach of subjectively assessed corruption as a determinant of several health proxies is the first of its kind within the specialized literature, validating a 3% higher explanatory power in most models. The worldwide sample includes 185 states, further subsampled within developed and developing countries, covering the 2005-2020 time interval. Using the Pooled OLS method for panel data, fixed effects modeling and random effects modeling, the negative impact of corruption and the positive impact of economic prosperity on health proxies is validated, interesting findings being validated on the 6D cultural model of Hofstede. The limits of this study leave avenue for future research in the field: different corruption proxies, supplementary control variables, other multivariate data techniques." The talk was followed by a lively discussion on econometric modeling, the advantages and disadvantages of the dependent and independent variables, and the challenges of explaining the identified associations.

The screenshot shows a Zoom meeting interface. On the left, a presentation slide is displayed with the following content:

Improving health outcomes - which are the effects of corruption, economic prosperity and culture?

KEY CONCEPTS:
health outcomes;
corruption;
prosperity;
culture;
wellbeing.

AGENDA
LITERATURE REVIEW
DATA AND MODELS
RESULTS AND DISCUSSIONS
CONCLUSIONS

At the bottom of the slide are logos for 'universität wien', 'UNIVERSITÄT BABES-BOLYAI', and 'UBBFSEGA Curine FSEGA'. On the right side of the Zoom window, a vertical stack of five video thumbnails shows participants: Margit Sommersguter-Rej..., Marion Rauner, Gerriet Fuchs, Katja Schimmelpfeng, and Viorela Vaidean (highlighted with a yellow border).

Viorela-Ligia Vaidean introduces to her talk

Following the first two talks in the Health Care Management section, the participants could meet and exchange ideas in the virtual cafe "Gathertown."

In the Disaster Management section, Burcu Balcik from Özyeğin University, Istanbul, Turkey, elaborated on "Service Delivery Planning for Effective Management of Chronic Dialysis Patients After a Disaster." The presenter summarized that "This talk focused on two studies that address capacity allocation problems to manage the treatments of chronic hemodialysis patients effectively during resource-constrained times such as pandemics and disasters. Mathematical models and solution approaches that support health care professionals to make treatment planning decisions are presented. Results from two case studies that focus on cohorting patients during Covid-19 pandemic to avoid infection spread in the clinic and assigning patients to available clinics after a disaster are discussed." The research, which is highly relevant from a health policy perspective, especially in COVID-

19 times, met great interest and was discussed intensively from methodological and health policy perspectives.



The screenshot shows a Zoom meeting interface. On the left, a presentation slide is displayed. The slide has a white background with a red title 'Conclusion' and a blue horizontal line. Below the title, there are three bullet points. The top bullet point is 'Operations Research approach to support implementation of cohorting strategies during a pandemic under uncertain patient demands'. The second bullet point is 'Case study:', followed by two sub-bullets: '3-unit cohorting is effective for the addressed period' and 'Performance of each strategy highly depends on the daily number of each type of demand'. The third bullet point is 'Our scenario-based models would allow analysis of different cohorting strategies and making capacity planning decisions in the dialysis clinics'. In the top right corner of the slide, there is a small image of a journal cover for 'European Journal of Operational Research' with the title 'Capacity Planning for Effective Cohorting of Hemodialysis Patients during the Coronavirus Pandemic: A Case Study'. The journal cover also includes the Elsevier logo and the text 'Available online 10 October 2021 in Press, Journal Pre-proof'. On the right side of the Zoom window, there is a vertical stack of four video thumbnails. From top to bottom, they are labeled: 'Marion RAUNER', 'Burcu BALCIK', 'Walter Gutjahr', and 'Patrick HIRSCH'. The thumbnails show the participants' faces and their respective backgrounds.

Burcu Balcik concludes main findings of her case study with the participants

At the end of the workshop, the organizers Rauner, Hirsch, Sommersguter-Reichmann and Gutjahr, thanked the speakers for sharing their insights into the research results and the participants for the lively discussion.

Marion Rauner, University of Vienna,

Patrick Hirsch, University of Natural Resources and Life Sciences Vienna,

Margit Sommersguter-Reichmann, University of Graz, and

Walter Gutjahr, University of Vienna.