

COST Action IC1205 on Computational Social Choice: STSM Report

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Host: Murat Ali Cengelci

Host Institution: Bilgi University Istanbul

Host Country: Turkey

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For two weeks, I was hosted by Murat Ali Cengelci at the Department of Economics of the Bilgi University in Istanbul. During this visit, I had the opportunity to discuss my work on the allocation of convicted criminals in the Netherlands with him and Ipek Ozkal-Sanver, who is a matching specialist. Also, I had the opportunity to attend presentations given by researchers from renowned universities in the US who were there as guest speakers.

We expanded on research that I had already been doing for several months in cooperation with Burak Can at my home university. We looked at a completely new application of an allocation problem: the allocation of convicted criminals among prisons, in which our main focus was, and still is, on the Netherlands. A very interesting feature of this allocation is that the environment is very much restricted, due to the limited freedom of interpretation of the criminal law. The model that we created in Istanbul deals with several restrictions from the Dutch criminal law by imposing a Serial Dictatorship rule, that uses a ranking of criminals to match allocate them efficiently among the different types of prisons there are (5 in the Netherlands). We were able to proof that the Serial Dictatorship, where the conviction of the judges is the basis for allocation, is *Individually Rational*, *Prison Priority Respecting* and *Outside Priority Respecting*, as it makes sure that the criminals who have the highest priority are also the first to be placed in prisons.

There is still work to be done regarding the model, but my visit to Bilgi University has most definitely improved the current research. Hopefully, in the future we will be able to publish a paper that is in large part based on the research that we did during my two weeks in Istanbul.