

Vážené kolegyně, vážení kolegové,
níže přikládám nabídku PhD studia ve Velké Británii
s ročním příjmem cca 14000 liber bez poplatků.
Prosím o rozšíření mezi studenty.
Děkuji.

Jiří Vomlel
ÚTIA AV ČR

Probabilistic CP-nets and related networks

Supervisor: Dr Peter Thwaites

Conditional Preference Networks (CP-nets) are used to depict an agent's preferences between different scenarios "all other things being equal" (e.g. between choosing red wine or white wine when it is known that she is having prawns for the starter and steak for the main course). Although these networks have been in use since 2004, only in the last couple of years has anyone attempted to add probabilities to the associated conditional preference tables. This project aims to

- (i) investigate how the imposition of probability distributions affects the logical structure of CP-nets,
- (ii) investigate the effect of missing information on this structure, and
- (iii) develop a formal semantics for a much richer class of probabilistic CP-nets than is currently available.

This project would suit a student interested in the mathematical aspects of artificial intelligence, methodological statistics, or theoretical decision analysis.

The project will be funded for 3 & a half years (probably about £14000 pa, and fees paid).

Informal enquiries:

Dr Peter Thwaites

School of Mathematics, University of Leeds

P.A.Thwaites@leeds.ac.uk

References:

C. Boutilier et al. CP-nets: A tool for representing and reasoning with conditional Ceteris Paribus preference statements. *Journal of Artificial Intelligence Research* 21 (2004), 135--191.

D. Bigot et al. Probabilistic conditional preference networks. In *Proceedings of the 29th Conference on Uncertainty in Artificial Intelligence*, (2013), 72--81.