# Gastvortrag

ICT


## Prof. Etienne Barnard

**Research Leader of the Human Language Technology Research Group.**
**Meraka Institute, Pretoria, South Africa**


# Generalization – the bridge between pattern recognition and artificial intelligence


Abstract:

In the six decades of active research on artificial intelligence (AI), a number of “core issues” have gained - and subsequently lost - popularity in the research community. These range from symbol manipulation in the 1950s through biological realism in the 1980s to embodiment in the past decade. We revisit one of the proposals that had wide currency some time ago, but has largely fallen out of favour – namely, that learning and generalization are the key unresolved issues in AI. Firstly, we review how some longstanding problems in pattern recognition were brought under control through the use of learning algorithms. The limitations of those learning algorithms are subsequently investigated within a general theoretical framework, demonstrating why further research in this area is crucial. Finally, some avenues for further research are proposed and assessed.


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www.ict.tuwien.ac.at

o. Univ. Prof. Dr. Dietmar Dietrich

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