TECHNISCHE UNIVERSITÄT WIEN
Institut für Computergraphik und Algorithmen
Arbeitsbereich für Computergraphik

zentrum für virtual reality und visualisierung forschungs-gmbh

OESTERREICHISCHE COMPUTER GESELLSCHAFT
AUSTRIAN COMPUTER SOCIETY

laden gemeinsam zum

GASTVORTRAG

Prof. Dr. Jan J. Koenderink

Delft University of Technology, The Netherlands

"Shape in Visual Awareness"

Abstract:

Visual Awareness is a systolic process that "just happens" about every tenth of a second. Awareness is prepersonal. In contradistinction, Visual Perception is a cognitive activity, partly voluntary, partly involuntary. It ranges from mere awareness to reflective thought. Visual perceptions are based upon multiple events of awareness, in many cases on multiple viewpoints. In this talk I focus on visual awareness - the soil on which visual perception grows. This implies a fixed viewpoint, and limited angular extent (Hildebrand's (1893) Fernbild). The space of visual awareness is non-Euclidean. It is a fiber bundle of depth (a singly extended quality) over the visual field (a two-fold extended simultaneous presence). We have developed methods to probe this space, and have identified its geometrical structure. It is, of course, very different from the Euclidean "space of perspectives" that rules enactive vision. Its group of movements and similarities describes "mental movements", and its invariants are Shapes of Awareness. Pure awareness is the stuff that provides conscious visual experience with its qualities and meanings. It is at the core of artistic practice. Visual art directors think "visual language" as on a par with the language of speach and reflective thought: it is crucial in applications of a pictorial nature. I review both empirical methods and formal structures that pertain to this realm of reality.

Biography:

Jan Koenderink graduated in Physics and Mathematics in 1967 at Utrecht University. He has been associate professor in Experimental Psychology at the Universiteit Groningen. In 1974 he became lector, 1978 full professor Universiteit Utrecht where held a chair in the Department of Physics and Astronomy. In 2008 he was forced to retire (at 65). At Utrecht he cofounded the Helmholtz Instituut in which multidisciplinary work in biology, medicine, physics and computer science is coordinated. Jan Koenderink spent periods at Oxford, École Normale Supérieure (Paris) and is currently visiting professor at M.I.T.

Jan Koenderink presently is at Delft University of Technology. His main (scientific) interests are the psychology and philosophy of perception, computer vision and ecological physics, in all cases both theoretically (conceptually and mathematically) and empirically.

Jan Koenderink has received an honorific degree (D.Sc.) in Medicine from the University of Leuven and is a member of the Royal Netherlands Academy of Arts and Sciences. He is a member of the editorial boards of a fair number of scientific journals, scientific boards of international conferences and scientific institutes.

Datum: 19. April 2013, 10:30 Uhr s.t.
Ort: TU Wien, Favoritenstr. 9, Stiege 1, 5. Stock, Seminarraum E186