

# Vascular biometric research

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Raymond Veldhuis  
Biometric Pattern Recognition, University of Twente  
PO Box 217  
7500 AE Enschede  
The Netherlands  
r.n.j.veldhuis@utwente.nl

## Abstract

Vascular biometrics, i.e. the recognition of individuals based on vascular patterns, usually recorded from fingers, palms or the dorsal hand, is an upcoming biometric technology. It has two promising advantages. The first is that very low recognition error rates have been claimed, which renders this biometric suitable for high-security applications. The second advantage is that, unlike fingerprints and faces, the biometric data is derived from an internal physiological structure and thus cannot be copied from traces or by covert observation. This reduces the possibilities for abuse, e.g. in the form of identity fraud. These advantages open the way for future use in applications such as identity cards, (automated) border control, and on-line banking, but due to industrial protectiveness the conditions for deployment in the EU are not favorable.

In the presentation I will briefly describe the situation regarding vascular pattern research in the EU. After that I will present in more detail the finger vein sensor prototype that has been developed at the University of Twente and the results from our data acquisition. Suggestions for future research will be given and I will conclude the talk by presenting plans for an EU-funded training network on vascular biometrics.