1035-43-1427 **Gerardus Franciscus Helminck*** (helminckgf@yahoo.com), University of Twente Faculty EEMCS, Department of Applied Mathematics, P.O.Box 217, 7500AE Enschede, Netherlands, and **Aloysius Gerardus Helminck**. *Representations associated with $\mathfrak{p}$-adic symmetric spaces.*

The representation theory of real symmetric spaces was developed by Harish Chandra, Delorme, Schlichtkrul, van den Ban and many others. A natural next step is to consider the $\mathfrak{p}$-adic symmetric k-varieties. These homogeneous spaces have the form $X := \mathcal{H}_k/\mathcal{G}_k$, where $\mathcal{G}$ is a reductive algebraic group defined over k, its subgroup $\mathcal{H}$ is the fixed point group of an involution σ of $\mathcal{G}$ defined over k and k is a finite extension of $\mathbb{Q}_p$ for some p. In this talk we discuss recent progress on the representation theory related to these spaces. (Received September 19, 2007)