The goal of the talk was to discuss the various notions of Jensen measures and their potential application to the problem of establishing hyperconvexity for pseudoconvex domains with continuous boundary.

Given a domain Ω and a point $z_0 \in \Omega$ the **classical** Jensen measure is a regular Borel positive measure (necessarily a probabilistic one) μ such that

(1) μ is compactly supported in Ω;
(2) for any $\varphi \in PSH(\Omega)$ the inequality

$$\varphi(z_0) \leq \int \varphi(z) d\mu(z)$$

holds.

Naturally Jensen measures generalize the sub-mean value property of plurisubharmonic functions along holomorphic discs.

A generalization of these allows for measures that are not necessarily compactly supported and the center z_0 could be taken on $\partial\Omega$- then the testing has to be done against all $\varphi \in PSH(\Omega) \cap C(\overline{\Omega})$. A result of Carlehed, Cegrell and Wikström states that hyperconvexity of a bounded domain Ω is equivalent to the following statement: for any generalized Jensen measure μ centered at any boundary point $z_0 \in \partial\Omega$ the support of μ has to be contained in $\partial\Omega$.