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Isidro, José M. [Isidro, José María[1]] (E-SACOM-MA); **Stachó, László L.** (H-SZEG-B)
Holomorphic invariants for continuous bounded symmetric Reinhardt domains. (English summary)
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The continuous Reinhardt domains mentioned are domains D is a space $C_0(\Omega)$ of continuous $\mathbb{C}$-valued functions satisfying the Reinhardt condition $f \in D$, $g \in C_0(\Omega)$, $|g| \le |f| \Rightarrow g \in D$. The assumption that D is a bounded symmetric domain in $C_0(\Omega)$ imposes a strong restriction on D, as shown by L. L. Stachó and B. Zalar [Arch. Math. (Basel) **81** (2003), no. 1, 50–61; MR2002716 (2004e:32001)]. D must be a mixture of Hilbert space balls of bounded dimension. More explicitly, there are finite sets $\Omega_i \subset \Omega$ partitioning Ω into equivalence classes $[\omega]$ of bounded cardinality and a bounded positive continuous $m: \Omega \to \mathbb{R}$ bounded away from 0 so that $f \in D \iff \sum_{\eta \in [\omega]} m(\eta)|f(\eta)|^2 < 1 \ \forall \omega \in \Omega$. The first result of this work characterises the weight functions m and partitions Ω_i which can actually arise in terms of continuity properties (the map $\omega \mapsto [\omega] \cup \{\infty\}$ with values in the finite subsets of the 1-point compactification of Ω is Hausdorff-continuous; and every $\omega \in \Omega$ has neighborhoods U with $m(\omega) - \sum_{\eta \in [\theta] \cap U} m(\eta)$ arbitrarily small when $\theta \in U$).

The second section of the paper is concerned with linear (biholomorphic) equivalence between such domains.

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Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.