Joint DESY and University of Hamburg Accelerator Physics Seminar

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(16:00 in Room 459/30b)

Generalised Ripken Lattice Functions

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Abstract

In a discussion the author was told by Dr. Ripken that the author's extension of Ripken's lattice functions was the only thing he had been unaware of. It was a great compliment. This talk explains the authors view on how the generalised Ripken lattice functions unify all linear theories in a way which is covariant, i.e., independent of any phase definition.

This is a point of view vastly superior to the introduction of Teng-Edwards parameterization and its 6d extension (Ohmi-Hirata-Oide). Unfortunately, most of the work in the USA and even Europe is based on the Teng-Edwards parameterization as if there was something sacred about it.

The most interesting results come from the fact that in N-degrees of freedom, the generalised Ripken lattice functions are N independent parameterization of the complex numbers. Remarkably it follows from this that Chao and Sands integrals for the $\mathcal{H}$-functions are one and the same thing if written in terms of Ripken lattice functions.

J.Roßbach (Univ. HH) and M.Vogt (MFL).