

Lifschitz Realizability as a Topological Construction

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Abstract

We develop a number of variants of Lifschitz realizability for CZF by building topological models internally in certain realizability models. We use this to show some interesting metamathematical results about constructive set theory with variants of LLPO including consistency with unique Church's thesis, consistency with some Brouwerian principles and variants of the numerical existence property. This is joint work with Andrew W Swan.