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Hyland + Gleason = Herbrand

Recently, Benno van den Berg introduced a new class of realizability toposes which he named "Herbrand realizability toposes". They have various remarkable properties which set them apart from other realizability toposes, notably the fact that they satisfy De Morgan's law. We show that this is no accident: a Herbrand realizability topos is precisely the result of applying the Gleason cover construction, introduced by the author 35 years ago as providing the "best approximation" to an arbitrary topos by one satisfying De Morgan's law, to an ordinary realizability topos.