

1106-03-417

**Michael J Lieberman\*** ([mlieberman02@gmail.com](mailto:mlieberman02@gmail.com)), Department of Mathematics and Statistics, Masaryk University, Faculty of Science, Kotlarska 2, Building 8, 61137 Brno, Czech Rep. *Toward A Categorical Model Theory.*

We discuss joint work with Jiří Rosický which aims, broadly speaking, to bridge the ever-narrowing gap between abstract model theory and category theory. In particular, we seek to develop a fragment of the classification theory for AECs in the more general context of accessible categories with concrete directed colimits (essentially AECs without coherence), with several surprising results—a generalization of Boney’s recent theorem on tameness under a large cardinal hypothesis follows from work of Makkai and Pare, and these categories admit a robust Ehrenfeucht-Mostowski functor which can be used to mimic certain constructions in AECs. It is noteworthy that these results can be proven without the assumption of coherence, or the reintroduction of syntax via Shelah’s Presentation Theorem. On the other hand, this investigation clarifies the situations in which coherence seems genuinely indispensable. (Received August 27, 2014)