The Universe as Intension: an Expressive Dynamic Information and Communication System as Extension

Nick Rossiter & Michael Heather, Computer Science and Digital Technologies, Northumbria University, Newcastle NE1 8ST, UK

The intension/extension relationship is explored across a number of recursive levels. The starting point is the Universe as intension, from which a section is identified as an extension, the Universe of Discourse. This section becomes the intension for a more detailed formal exposition of the area of interest. The example of music is used to provide an insight into how the attributes of an information and communication system can be captured in an expressive and dynamic manner, with colimits in a topos under the control of a monad as process.