

Logikseminariet Stockholm–Uppsala

Fredrik Dahlgren

Partial continuous functions and admissible domain representations

One way of studying computability on uncountable spaces is through effective domain representations. It is well known that to be able to represent continuous functions between domain representable spaces it is critical that the domain representations of the spaces we consider are dense. Depending on the spaces under consideration it may be very difficult to find a dense domain representation which is also effective. As an example we mention the space \mathcal{D} of smooth continuous function from \mathbb{R} to \mathbb{C} with compact support.

In this talk I will indicate how to develop a representation theory over a category of domains with morphisms partial continuous functions. The reason for introducing partial continuous functions is that by passing to partial maps, we are now free to consider representations which are not dense. I will show that there is a natural subcategory of the category of domain representable spaces with morphisms representable maps which is Cartesian closed. Finally, I will consider the question of effectivity.

Onsdag den 1 februari kl. 10.30–12.15,
sal 3513, MIC,
Polacksbacken, Uppsala.

<http://www.math.su.se/~jesper/seminarier/>