

A Big Ball of Wibbly Wobbly

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Time can have many shapes and forms, it is as a famous doctor said a "big ball of wibbly wobbly... time-y wimey... stuff". There are many views on time and this is true for the scientific community, be it physicists, logicians or philosophers (for example see (Dainton, 2016)).

In this paper, we present a first step in the project of unifying time or at least temporal logics. In a similar way as the project in fuzzy logics (Běhounek & Cintula, 2006), we try to find some common grounds to the myriad of different time approaches (or as in (Barbour, 2000) even the lack of it), categorize them and present a common way how to work with them. We do this at first informally and thereafter we propose possible ways how to achieve a formal categorization. We aim to allow transitions between these categories that would formally relate the different temporal representations in a similar way as the well known system of relations between modal logics. We draw inspiration especially from similar unifying projects in logics using coalgebras as in (S. Baron, 2015). We focus on scientific representations of time. Nevertheless, in order to test our temporal categorization, we peak into popular culture for unorthodox, possibly contradictory, time representations and use them as another testing ground of our approach.

References

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