

## Some aspects about coalgebraic logic in computer science

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Coalgebras are useful categorical structures with many applications in computer science. In our approach we use them for modeling state oriented behavior of program systems.

Our recent works regarding coalgebras [?], [?], [?] were oriented for example to modeling of intrusion detection system behavior as coalgebra for an appropriate endofunctor over category of infinite packet stream.

Many logical systems which are used in computer science are derivations of modal logics. In our paper we present one of it which is based on category theory and coalgebras, named coalgebraic logic. Its first definition came from Moss [?]. It is necessary for definition of this logical system to define category of classes and polynomial endofunctor over such a category.

Coalgebraic logic with its expressing power has wide use in computer science through its formulæ, for example for specifying not-well founded abstract data structures, infinite data structures or observation of program systems behavior.

We present in this work some fruitful aspects about coalgebraic logic and its role in a formal description of program behavior.

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### References

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