

Defining Corecursive Functions in Coq Using Approximations (Artifact)

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Abstract

This is the formalization in the Coq proof assistant of the related conference article shown below.

2012 ACM Subject Classification Theory of computation → Functional constructs

Keywords and phrases corecursive function, productiveness, approximation, Coq proof assistant.

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Related Article Vlad Rusu and David Nowak, “Defining Corecursive Functions in Coq Using Approximations”, in 36th European Conference on Object-Oriented Programming (ECOOP 2022), LIPIcs, Vol. 222, pp. 12:1–12:24, 2022.

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Related Conference 36th European Conference on Object-Oriented Programming (ECOOP 2022), June 6–10, 2022, Berlin, Germany

Evaluation Policy The artifact has been evaluated as described in the ECOOP 2022 Call for Artifacts and the ACM Artifact Review and Badging Policy.

1 Scope

Formal proofs in the Coq proof assistant provide near absolute certainty that the results stated in the related article are correct.

2 Content

The artifact package consists of Coq code and includes the formalizations of the two methods for defining corecursive functions in Coq presented in related article. All the examples mentioned in the article are also available.

3 Getting the artifact

The artifact endorsed by the Artifact Evaluation Committee is available free of charge on the Dagstuhl Research Online Publication Server (DROPS). In addition, the artifact is also available at: <https://project.inria.fr/ecoop2022/>.

4 Tested platforms

The code has been developed using Coq v8.13.2.

5 MD5 sum of the artifact

58285d6a9a89a270f39b6eed5d9c8eb8



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6 Size of the artifact

139.1 kB