From: **Willard, Dan E** dwillard@albany.edu
Subject: Fw: LFCS'22 notification for paper 10
Date: October 10, 2021 at 7:27 PM
To: Dan Willard dan.willard.albany@gmail.com

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From: lfcs22@easychair.org <lfcs22@easychair.org> on behalf of LFCS'22 <lfcs22@easychair.org>
Sent: Sunday, October 10, 2021 6:12 PM
To: Willard, Dan E <dwillard@albany.edu>
Subject: LFCS'22 notification for paper 10

Dear Author(s)

This year we had an especially serious competition at LFCS'22. I am sorry to inform you that your paper has not been selected for presentation/publication at LFCS'22.
I hope that the attached reviews will help you in your future creative work.

Sincerely,
Sergei Artemov
LFCS'22 PC Chair

SUBMISSION: 10
TITLE: On a 3-Part ``Tripod'' Styled Reply to Hilbert's Mysterious Second Problem

---------- REVIEW 1 ----------
SUBMISSION: 10
TITLE: On a 3-Part ``Tripod'' Styled Reply to Hilbert's Mysterious Second Problem
AUTHORS: Dan Willard

---------- Overall evaluation ----------
SCORE: 1 (weak accept)
----- TEXT:
The first half of this paper is a somewhat quirky summarized version of several lesser known pieces of history concerning Gödel's Second Incompleteness Theorem. The primary emphasis centers around Hilbert's and Gödel's belief that the Second Theorem did not end Hilbert's program. This is very interesting, and should be useful to many; the references are especially interesting.

The second half of the paper is a discussion of results, primarily of the author and to a lesser extent Artemov. It takes the viewpoint that the ways of addressing Hilbert's problem can be divided into three types. While it may be the case that this triple division applies so far, it does not make a good case that any future work must fit into these three categories. There are essentially no new results in this part, but rather it is a discussion of how to look at what has been done. This kind of discussion certainly has its uses, and so I believe there are benefits to be served by publication.

---------- REVIEW 2 ----------
SUBMISSION: 10
TITLE: On a 3-Part ``Tripod'' Styled Reply to Hilbert's Mysterious Second Problem
AUTHORS: Dan Willard

---------- Overall evaluation ----------
SCORE: 0 (borderline paper)
----- TEXT:
This paper extends earlier contribution of the author about weak systems proving their own consistency. There are however misunderstandings concerning Hilbert and Gödel
1.The consistency problem as stated by Hilbert is not mysterious, it derives from the methodology of demonstrating the consistency of complicated geometries by embedding them into real analysis (cf Hilbert/Bernays, Grundlagen der Mathematik II). The completion of these consistency proofs asks for a consistency proof of real analysis. Hilbert connected this necessity ingenously with the demand, that the proofs should be performed with finitary means,
and finitary means (i.e.real mathematics)were supposed to be complete, that is a finitary consistency proof would eliminate ideal statements from the proofs of real statements, i.e. guarantee Methodenreinheit (purity of methods)
2.Gödel naturally did not think the 2nd incompleteness theorem is directed against Hilbert's program, as for him the methods and not the strength of a theory counted. (If you accept primitive recursive functions as finitary, you have to accept primitive recursive functionals
as finitary as the mental activity is the same, therefore PA is as finitary as PRA)This is obvious from the very beginning.
Now the question arises which are the finitary means: the mental insight, that a suitable order is well founded (Gentzen), fixed points can be understood as simple mental activity (Artemov)etc.
The problem of this paper is that it does not provide for the simplification, which allows to understand the act transgressing formal strength as simple

---------- REVIEW 3 ----------
SUBMISSION: 10
TITLE: On a 3-Part ``Tripod'' Styled Reply to Hilbert's Mysterious Second Problem
AUTHORS: Dan Willard

---------- Overall evaluation ----------
SCORE: 0 (borderline paper)
----- TEXT:
This submission has its definite merits but cannot be accepted for publication in its current form. Perhaps, the author has enthusiastically tried to squeeze too much in the given format. The result is not satisfactory.

Its historical comments are imprecise, results of the others are often misrepresented, the history of submitter's studies is overloaded but does not give a clear picture. Yet, the submitter finds a room for a lengthy historical anecdote. It also appears that there are no

new technical results in the paper, but rather more broad interpretation of the existing ones and their easy corollaries. The connections of the fixed-point systems with Hilbert's Second Problem was not justified properly.

It is really a pity that a potentially meaningful discussion with some foundational contributions has not been shaped properly. I wish the LFCS leaders would consider a special session for talks with scientific merits which, however, are not of the publishable grade. Such talks can be accepted to LFCS as a discussion, without publication in the Springer proceedings, but with a chance to make it to the post-LFCS volume after rigorous iterated refereeing process of the full length paper.