

- ▶ TAKAYUKI KIHARA, *Incomputability of Simply Connected Planar Continua*.
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Le Roux and Ziegler asked whether every simply connected compact nonempty planar Π_1^0 set always contains a computable point. As mentioned in Penrose's book "Emperor's New Mind", the Mandelbrot set is an example of a simply connected compact planar Π_1^0 set which contains a computable point, and Penrose conjectured that the Mandelbrot set is not computable as a closed set. In this paper, we solve the problem of Le Roux and Ziegler by showing that there exists a planar Π_1^0 dendroid without computable points. We also study global computability of tree-like continua, e.g., trees, dendrites, and dendroids. It is shown that not every Π_1^0 dendrite is almost computable, by using a tree-immune Π_1^0 class in the Cantor space.