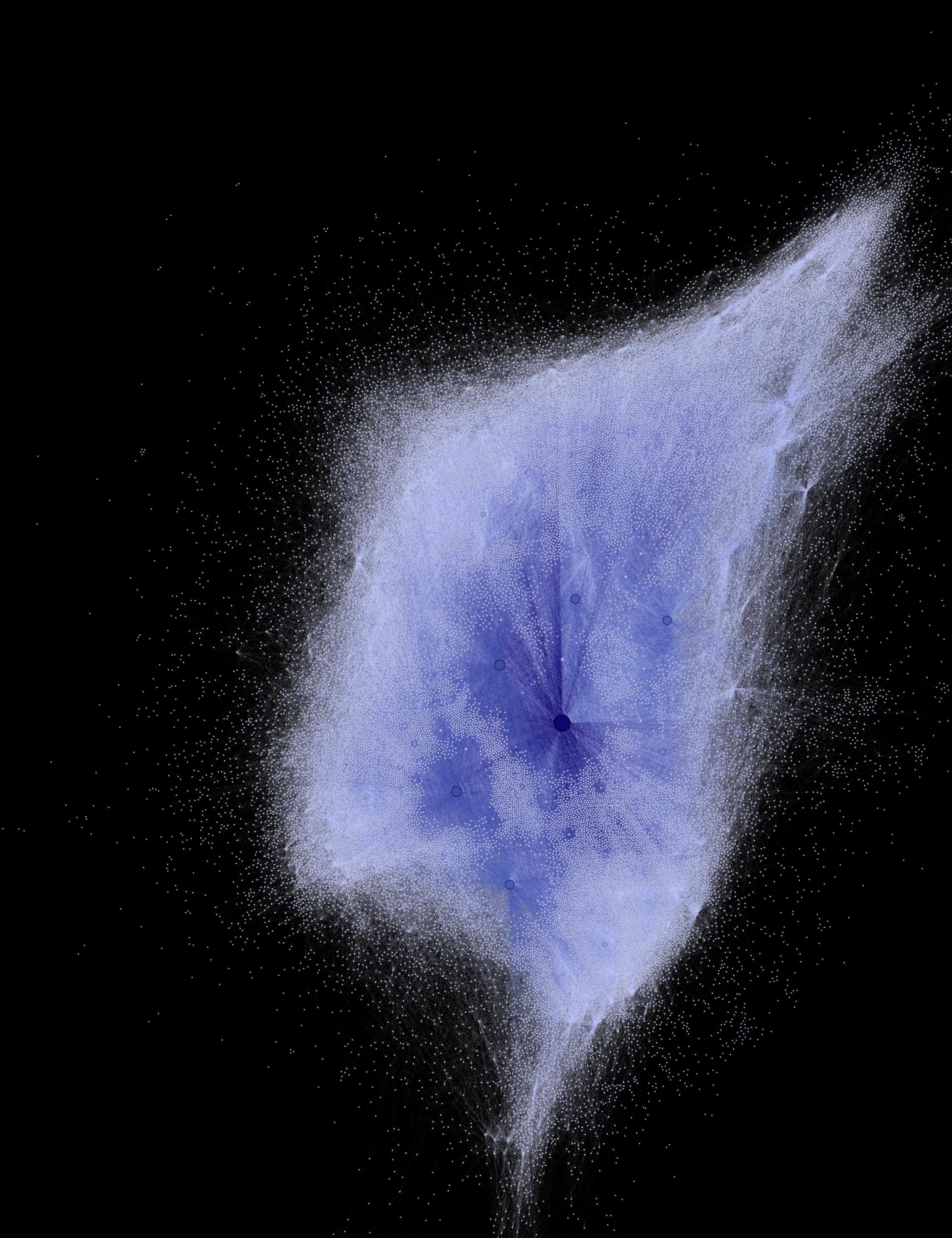




Ján Pastorek. Metamath Proof Explorer: A Modern Principia Mathematica. Metamath is a formal language for archiving, verifying and studying mathematical proofs. In the picture we see a network with 33 000 nodes, 250 000 edges of mathematical axioms and theorems (the link corresponds to the use of a given axiom/theorem in the proof of another theorem), from the very foundations of mathematics (first-order logic and set theory, and proof of $2+2=4$) to the very foundations of theoretical physics. Interestingly, this network has scale-free properties. The biggest hub (used more than 13000) in the middle is the so-called "the principle of the syllogism" (Theorem *2.06 of [Whitehead Russell] p. 101). Some authors call this law a "hypothetical syllogism". *Data source:* <https://us.metamath.org/mpeuni/mmset.html>