Van Suijlekom explains, "Our new model was derived in the framework of non-commutative geometry and has a direct coupling with the Standard Model. Therefore, the current publication confirms our approach in non-commutative geometry and it gives us direction where to search for particles beyond the Standard Model."

So what do these fundamental, mathematical results bring us? "Our model can now be confirmed at low energies in CERN", Van Suijlekom explains. "And it offers possibilities to do more accurate predictions on for instance the mass of particles, because these predictions are now based on solid mathematics."

The article by Van Suijlekom and colleagues has only recently been published, but phenomenological physicists have already used it in new research. They re-calculated the results, confirmed the described results and immediately checked a few extra cases.


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