Summary of my results

in my two websites
www.natural-geometry.de and **www.conformal-geometry.de**

Unfortunately, the core of my results - on the deeper basis of the mathematical theory of our natural environment - is currently still not clearly presented on the two Internet websites from 2002 and 2022. Therefore, here is a summary for a better overview for an interested reader:

The **quaternions** discovered by Hamilton are the NATURAL NUMBERS in the full sense of the word.

These form the most extensive set of numbers, because mathematically,

there is no further extension of the number body.

These numbers, topologically coherent and compact, form a

maximum extension as skew solids.

Hamilton showed:
Quaternions can be visualised using Cartesian coordinates as **points** in

a **4-dimensional** space.

My result:
Quaternions can be understood as directed and centred basic figures consisting of 2 x 4 building blocks,

<div align="center">4 p-points and 4 k-lines,</div>

located as first elements in our **3-dimensional natural space.**

The designation p-POINT is reminiscent of the basic **Euclidean** geometric element point.

The designation **k-LINE** reminds us that - depending on the choice of perspective - a k-line in the geometric image looks like a Euclidean CIRCLE **or** a Euclidean STRAIGHT LINE.

However, in Euclidean geometry, a circle and a straight line are two **different**

Lines. In an all-metric, a k-line is an element which - depending on the perspective selected - can appear like a Euclidean straight line **or** a Euclidean circle.

The fundamental figure, which is dual in terms of the 2 x 4 basic elements p and k, is optimally expressed spatially in its duality through 4 colours if dual elements have the same colour.

The reader's route to this illustration: see "FAIRY TALE" on the page www.conformal-geometry.de.

Decades ago I called this basic figure of 2 x 4 elements TETRA-GLOBE. After recognising the importance of this figure as a NATURAL basic element over the years

("physical" basic element!), the term All-TETRA may be more appropriate.

Listed below are six reasons why this conformal geometric, all-metric basic figure was initially developed specifically on our planet.

Euclidean geo-metry is extended and supplemented by an all-metry that is valid **in the entire universe.**

Six reasons that support the natural existence of this theoretical all-metry:

I. 24 elementary particles of the traditional physical particle zoo can be understood
as 2 x 12 perspectives of ONE fundamental figure,
of the **equiangular** HIGGS-ALLTETRAS.

II. THE **2 x 3 quarks** of traditional elementary particle theory are
the **2 x 3 angular dimensions of** this HIGGS-ALLTETRAS.

III. The charges of the **protons** and **neutrons**, the two components of all atomic nuclei,
are the two **conformal angle sums of** the HIGGS-ALLTETRAS.

IV. The physical dualism of wave and corpuscle can be understood
as a mathematical dualism - naturally realised through the duality of an All-Tetra,
with a 1-dimensional k as the generator of a wave; and a 0-dimensional element p as the
generator of a corpuscle movement.

V. By succeeding in extending traditional Euclidean geo-metrics to a
generally valid all-metrics, it is possible to analyse the observed DIMENSIONS (see Nobel-
Price 2022) theoretically as conformal-geometrically constituted phenomena which - in
space and time - are not realised Euclideanly, but which arise in a
conform-metric, metrically constituted natural world solely by means of conform **angles.**

VI. The empirical, physical three-dimensionality of our natural environment is reflected in
the mathematical three-dimensionality of the quaternionic number figures.
And vice versa: the natural empirical three-dimensionality of our environment is exactly
reflected in the three-dimensionality of quaternionic numbers.

Or - for children and adults alike - in simple language:
The Creator structured the nature of the world according to his numbers.
Divine numbers describe the natural structure of creation.

The representation of the natural world by means of natural numbers as its first elements
makes a representation of this world by means of atoms in the sense of Democritus
historically obsolete.

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