

# $E = i MC^2$ and $M|E|I$ – new spacetime equivalence principles

Rudolf Klimek<sup>1</sup>

---

$E = i MC^2$  и  $M|E|I$  – новые принципы эквивалентности пространства-времени

Рудольф Клидек

**ABSTRACT.** In this paper, based on the fundamentals of my Information theory : which are the central formula  $E = i MC^2$ ; the triunity of cosmic organization –  $M|E|I$  (Mass – Energy – Information) and the key concept of *Information Rays* – this work also directly goes to the understanding of our reality as the existence and self-development of a fundamentally Living World (Universe, Cosmos – Biocosmos); thus, author’s cornerstone statement concludes that ‘**the universe is a self-realizing informational spacetime,**’ but this can only take place in the Living Cosmos – Biocosmos.

**Keywords:**  $E = i MC^2$ ,  $M|E|I$ , information rays, mass, dissipation, cancers, spacetime.

**РЕЗЮМЕ.** В данной работе, на основании фундаментальных положений моей Информационной теории : каковыми являются центральная формула  $E = i MC^2$ ; триединство космической организации –  $M|E|I$  (Масса – Энергия – Информация) и ключевое понятие *Информационных лучей* – это сообщение также напрямую выходит на понимание нашей действительности как существования и саморазвития принципиально Живого Мира (Вселенной, Космоса – Биокосмоса); так, краеугольное утверждение автора заключает, что «**Вселенная – это самореализующееся информационное пространство-время,**» но подобное может состояться только в Живом Космосе – Биокосмосе.

**Ключевые слова:**  $E = i MC^2$ ,  $M|E|I$ , информационные лучи, масса, диссипация, рак, пространство-время.

---

<sup>1</sup> Jagiellonian University, Cracow, Poland; for additional information; see the endnote.

**Melvin M. Vopson** formulated a new hypothesis proposing that **a bit of information is not only physical** as already demonstrated, but also **it carries a finite non-zero mass while it stores information** and that **all cosmic elementary particles** store information about themselves, similar to the way humans have DNA<sup>1</sup>. He had established that the **entropy in information systems remains constant or decreases as second law of information dynamics** and **information** as the fundamental building block of the universe makes up almost a third of the universe, what he calls **the mass-energy-information equivalence principle M|E|I**. **His information is a distinct fifth state form of matter** along the other four observable **solid, liquid, gas, and plasma** states of matter. Although the proposed theory has speculative aspects and gaps, his work will stimulate further theoretical and experimental research in the Universe<sup>1</sup>.

Vopson proposed a new idea that could explain the nature of the Universe without relation to our references 2-6. Therefore, together with professor of biology **W. Korohoda** we wrote to Him that XXI century started with the domination of **information**, which turns the focus upon the meaning of the moral-ethic dimension of every person to live and work according to her/his autoteleological principle of compatibility between deeds and socially acceptable human values. **The universe is a self-realizing informational spacetime**, whose quintessence is **the informational interchange of mass and energy among directly or indirectly visible its particles**. **Information** means **both the act of informing and the action** of giving the form to the **being**, which denotes the entirety of everything that exists in **the essential** or/and **existential sense**, identifiable both as the whole of the **universe** or as the **quantum** form of any it's part. The **law** of quantum feedback equivalence of information, mass and energy:  **$E = iMC^2$**  denotes **mass and energy as quantity equal** and at the same time **the equation raised** to the power of **information (=i)** defines **the information's part of world reality**.

Therefore, **informational conscience** is the part of man that judges how moral his/her own actions are and makes feel guilty about thinks that have be done or only that feel responsible for them. The steady growth of diseases worldwide can be returned to the natural beginning of a man's individual life when the concept of **matter** will be replaced with **information**, to which **energy** and **mass** belong in **each separate part (being)** and **integrates it** with **the environment** beyond the limits of the observed-selected parts of the human body (e.g., PET/CT, fMRI). The **Nuclear Magnetic Resonance Imaging** method involves atom nuclei's excitation and analyzes how these nuclei recover to the original equilibrium. **A mirrored human picture** appears thanks to **resonating informational field** (“**pattern information**”), wherein the **information rays** coming from a real object and from eyes (**sight's rays**) meet together and resonance due to having the identical value of their unique character. The emergent structure is hard to predict because the number of interactions between the system components

increases exponentially with the number of members, thus allowing for many new types of behavior to fix structures or behaviors, allowing local variations to grow into global patterns.

The process of creating information requires work externally applied to modify the physical system and to create a bit of information, while the process of erasing a bit of information generates heat /energy released to the environment. **Once a bit of information is created, in the absence of any external perturbations, it can stay like this indefinitely without any energy dissipation.** Erasing the information requires input external work and the mass bit is converted back into energy / heat. Furthermore, the information depends on the temperature at which the information bit exists, while no information can exist at zero absolute.

Within the concept of M. Vopson each elementary particle must have an associated bit of information with it, so all the baryonic matter in the visible Universe would require a huge amount of information associated to it. **Philosophy of cosmic being  $E = i MC^2$  promotes the information rays and patterns** so that everyone could understand the primary significance of own and social health along with importance of caring about the world inhabited by people. Each person has the life experience influencing the way of thinking and understanding speech and the message itself can be done in completely different situations. Even the posture of the body expressed during the conversation expresses our attitude towards the other person. The whole person resonates to an even single word, if he understands it and wants to how much he can use the information he carries. The prolongation of **invisible rays of information** on the principle of just resonance creates an informational image of the original object (e.g. portrait) without the participation of its atoms, that is an information determines not only the organization of the universe, but also a source of sensory and intellectual cognition. Both these categories are inextricably linked. **Information** has been equated to the quantum equivalence of mass and energy, expressed through the feedback equation  $E = i MC^2$ .

### *References*

1. Vopson M. (2019). The mass – energy – information equivalence principle, *AIP Advances* 9, 095206 (2019).
2. Klimek R. (2014). Threefold material-informational-energetic reality:  $E = i MC^2$ . *Biocosmology – Neo-Aristotelism* 4(4), 405–415.
3. Klimek R. (2016). “Life, Cancer and Virtual Information,” *Biocosmology – Neo-Aristotelism* 6(2): 255–272.
4. Klimek R. (2015) *Psychoneurocybernetic Conquest of Carcinogenesis and Cancers*, Nova Biomedical, USA.
5. Klimek R. (2018). *Information Medicine –  $E = i MC^2$* . WIU, ISBN 978-83-923871-5-2, Cracow.

6. Khroutski KS & Klimek R. (2018). Biocosmological definition of information and its naturalist causal significance. BCnA 8(2): 204–262.

i

---

**Rudolf Klimek** : Professor ord., Dr h.c.multi, born 1932 Cracow, Poland, emeritus ordinary professor of Jagiellonian University Cracow, president of World Information University, author of over 760 publications and 75 books.

Among the scientific discoveries made: opening the sulfur bacteria cytochrome S (co-author) – 1954; introduction of hypothalamic hormones in medicine and synthetic ACTH in obstetrics – 1960; enzymatic monitoring of pregnancy and delivery – 1960; description of hypothalamic post-pregnancy syndrome and reactions of cervical vessels in precancerous and cancerous stages of neoplasms – 1963; discovery of natural thermodynamic cause of cancers as dissipative structures – 1977, which entailed the creation of the thermodynamic theory of health and disease – 1978; introduction of the nuclear magnetic resonance imaging in clinical practice – 1980; immunotherapy of cervical intraepithelial neoplasia – 1985; eventually, the formulation of law equation  $E = i MC^2$  of the threefold mass-information-energetic universe – 2014; in this light, the mirror experiment of bidirectional cosmic informational rays' existence and action – 2017; solution of Turin Shroud mystery mechanism of man's image – 2018.

For more than the last 10 years Prof Klimek has proved to be a major contributor to the proceedings of the *Biocosmological Association*; at the same time, standing not only as a leading researcher (in the field of Organicist and Integralist knowledge); but also as a superb organizer. In the 2017, he held a large-scale scientific forum in Cracow on the topic: '*Biocosmology and Cancer: recognizing Teleological and Integralist approaches in contemporary biology, medicine and health sciences; and reinstating Aristotle's scientific Organicism (Entelechial naturalism, teleological physics)*'; July 14-15, 2017, Sheraton hotel, Cracow, Poland: [https://biocosmology.org/?page\\_id=1671](https://biocosmology.org/?page_id=1671)