

## *The Metaverse: The virtual world of tomorrow* Pr. Jean-Paul HATON (Université de Lorraine & IUF, France)

### Keynote abstract:

The Metaverse is a digital universe based on virtual and augmented reality, and on artificial intelligence. Appeared initially in a 1992 in a science fiction novel, it is a 3D space in which users can interact with a computer-generated environment and with other users through their avatars.

The metaverse is not only an evolution of Internet, but it could be the beginning of a new virtual civilisation, since it would change how we connect, communicate, share and access information. It is based on four technological advances:

- 3D, high definition displays,
- very high communication networks (6G),
- intuitive, multisensory interfaces,
- artificial intelligence.

Applications can be found in a large variety of domains such as collaborative working (brainstorming, etc.), tourism, museums or commerce.

**Keywords:** metaverse – artificial intelligence – virtual reality- augmented reality – avatars.

*\* Short Bio \**



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Jean-Paul Haton is agrégé in physics (Ecole Normale Supérieure de Saint-Cloud) and Docteur ès Sciences from Université de Nancy. He is Emeritus Professor in Computer Science at **Université de Lorraine**, Nancy, France. He is a senior member of the **Institut Universitaire de France** where he created the first chair in computer science. He is Responsible for the Scientific Integrity of Université de Lorraine since 2016.

His research interests relate to Artificial Intelligence and Man-Machine Communication, especially in the fields of automatic speech recognition and understanding, speech training, signal interpretation, knowledge-based systems, and robotics. He has supervised or co-supervised more than 100 PhD theses in these fields. He authored or co-authored about 300 articles and books. J. P. Haton graduated from the **Institut des Hautes Études de Défense Nationale** (IHEDN, promotion 1993).

Jean-Paul Haton is a Fellow of IEEE, of International Pattern Recognition Society, IAPR, of AFIA, and of the European Artificial Intelligence Association, ECCAI. He served as chairman of ASTI, the French federation of associations for information processing. He received the silver medal from the French Acoustical Society (SFA) in 1995.

He is vice-president of **Académie Lorraine des Sciences** and a member of **Académie Royale de Belgique**. He was awarded a Doctorate Honoris Causa from the University of Genève, Switzerland and he is **Commandeur of the French Palmes Académiques**.