

## **Seminar IRH-ICUB**

### **Consciousness and Cognition: An Interdisciplinary Approach**

<https://irhunibuc.wordpress.com/2016/04/05/new-seminar-consciousness-in-philosophy-and-neuroscience/>

**convenor Dr. Diana Stanciu**

<https://irhunibuc.wordpress.com/associated-members/>

**Date: Tuesday, 23 May 2017, 17h**

**Place: IRH-ICUB (1 D. Brandza Str.), conference room**

## **Prof. Stefan Trausan-Matu**

**University Politehnica of Bucharest and scientific researcher I, Research Institute for Artificial Intelligence of the Romanian Academy**

**Stefan Trausan-Matu** received the Engineer (M.S. - 1983) and Ph.D. (1994) degrees in computer science from the University Politehnica of Bucharest (UPB), Bucharest, Romania, and was a Postdoctoral Fulbright Scholar at Drexel University, Philadelphia, PA, USA, in 2005. He founded and heads the "K-Teams" Collaborative Knowledge Construction Laboratory at the Computer Science Department of UPB, and conducted or participated in many international and national research projects. Prof. Trausan-Matu was invited professor and lectured in USA, Netherlands, France, Germany, San Marino, Puerto Rico, etc. He has authored or edited 21 books, authored 40 book chapters and more than 340 peer-reviewed papers. He chaired international conferences (including A rated) and participated to the program or organizing committees of many others. His research interests are at the confluence of Artificial Intelligence, Computational Linguistics, Discourse Analysis, Knowledge Construction, Education, Philosophy, Religion, and Music. He introduced (and received the Romanian Academy prize for) the Polyphonic Model and Analysis Methodology for collaboration, learning and creativity, based on the idea that these activities have essential common points with polyphonic music.

### ***Consciousness, Dialogism, and Polyphony. A New Perspective on Artificial Intelligence***

Even if in recent years Artificial Intelligence (AI) becomes a part of our daily life, it still lacks human features like consciousness, creativity and understanding. AI has obvious achievements: Tools like Google Translate, Siri or Cortana are in common use. Robots improve permanently their capabilities, self-driving cars become a reality, and computer programs with AI defeated in 2016 the world champion in the Go game (more complex than chess, game in which AI defeated the world champion many years ago). However, Google Translate sometimes provides hilarious results. Conversational agents (or "bots") like Siri and Cortana are still far from being able to have a dialogue similar to that with a human being. In

fact, Natural Language Processing, one of the most difficult domains of AI, has not fulfilled its expectations and some scholars say it will never do. As Terry Winograd wrote, language understanding needs empathy and "living in the world", a feature that, together with consciousness, insight, and creativity, are specific to human beings; robots (and, in general, AI) lack them. In this hermeneutic direction, Mikhail Bakhtin's concepts of dialogism, multivocality, ventriloquism, and polyphony provide a basis for new perspectives on linguistics phenomena, in post-structuralist philosophy, on consciousness (considered by Bakhtin as having a dialogistic essence), and even in interactive computer systems. In this latter sense, I introduced a polyphonic model and analysis method that were used for designing and implementing a series of AI systems that do not aim at imitating the human beings hermeneutic capacities, but, instead, at providing support tools for human understanding.