From Ontology To Practical Applications

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Key Words: *Ontology, Digitalisation, Interoperability, EMMO.*

Everybody who wants to be initiated into the field of ontologies should be ready to embrace a wide range of disciplines that blatantly clashes against the actual tendency towards hyper specialisation of competencies.

Developing effective ontologies to support digitalization of the European industry requires skills spanning through philosophy and logics (for the epistemological approach and ontological formalization), computer sciences (for the tools to exploit ontologies in practice) and the domain experts (such as physicists, engineers, manufacturers), the latter providing the actual knowledge to be ontologised.

This multi-disciplinarity requirement is maybe one of the strongest barrier to be overcome for the effective usage of ontologies, together with the development of tools that will enable the exploitation of the knowledge condensed in ontologies by the largest audience possible.

During the lecture I'll go through the challenge of defining what is an ontology, the ways in which it can be formalized, its potential and limitations, the tools required for its exploitation and some example of usage in practice.

REFERENCES

[1] European Material Modelling Ontology, https://github.com/emmo-repo/EMMO
[2] Morgado, J.F, Ghedini, E, Goldbeck, G, Hashibon, A, Schmitz, G.J, Friis, J, De Baas, A.F. Mechanical testing ontology for digital-twins: A roadmap based on EMMO. International Workshop on Semantic Digital Twins, SeDiT 2020, Heraklion, Greece, June 2020, 2615 (2020) .