

Technology and responsible citizenship

Summary

Semiconductor Industry (SI), where Human-Tool interfaces & IA (Artificial “Intelligence”) have already started to be implemented for design, manufacturing, and supply chain processes. Thus, SI is both a user of technology & digitalization, and one of the main providers of key components embedded in the products used by citizen with multiple impacts on the society. In this talk we show the effect of technology and digitalization on Quality Management System (QMS) & Knowledge Management (KM) in such 4.0 (Technological) and 4.H (Human) operational context. Thus, it is highlighted that the challenges to address is cooperative construction of a common & sustainable world based on preservation &/or reorganization of existing knowledge, while preventing from competencies spread out. Then based on existing publications references related to artefacts and technical object impact on human being and the society, it is shown how European University Alliances, and especially Phd’s with both natural sciences & humanities education, can contribute to insure the requested link between education, research, and industry. EUN’s and Phd’s are essential for making a step forward to design responsible and sustainable Projects / Business using technology, in accordance with European Citizen socio-economic *needs* and cultural *values*, and moving from “problem solving” to “expandable rationality”, the only way to reach an “ecology of meaning”.

About the speaker:

Stephane Hubac is a Manufacturing Science Fellow (Advanced Process & Equipment Control & Knowledge management) and presently works in transverse projects at STMicroelectronics. He has been Chairman of ST France Technical College Board of fellows (2016-2019). Since 1981, he has worked in many disciplines within the semiconductor industry including memory device design, manufacturing, process & equipment engineering in lithography, dry etching and dielectric deposition, process control, quality methods implementation in Manufacturing & R&D contexts. Its special interests include R&D on DFM methods, yield enhancement, productivity, process control and scientific practices in industrial context. He has joined 300mm Crolles 2 Alliance (Freescale, NXP, ST) in the initial phase of the project as a project manager; responsible for the selection of 300mm plasma etching & dry stripping equipment, then manufacturing and R&D ramp-up as an AREA Manager (Etch, Strip, APC (Advanced Process Control) programs). He has led the Crolles 2 Alliance APC project, ISOTS audit supervisor for Fab qualification and Process Control Area manager in the Alliance 300mm R&D facility at Crolles, France and has been involved as a work package leader in ENIAC European Project IMPROVE (WP3: Predictive Maintenance) and INTEGRATE (WP5: data Analysis & Yield). Associated with Grenoble Alps University as a visiting Professor on QMS, process control and plasma physics, he is also ST representative @ "Industrial Club" of Grenoble INP university and @ Grenoble IMEP-2 doctorate school.