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| Chairman | **Nikolakopoulos P.** |
| Topic | *Tribology of Machine Elelments, Fatique and the Role of (Nano) Coatings* |
| Objectives | Tribology is the engineering science of moving interacting surfaces. The science covers friction, wear and lubrication for interacting machine elements. It has been related to human invention since ancient history from the creation of wheels to inclusion of liquids while building pyramids or moving ships to avoid friction.<br>Machine elements such, journal bearings, rolling bearings, piston rings, gears, cranckshaft bearings, cams, brakes, clutches and floating ring bearings and not only, are crucial components in the operation of a Machine.<br>Tribosystems can fail in dependence on operating conditions due to wear or fatigue. These tribological situations are direct related to the operating states as well as to the used lubricant in terms of physical and chemical properties, the used materials, or the surface topography or surface treatment. The characteristics of the surface structure such us microtopography, coatings and nanocoatings of involved elements in a tribosystem have an essential impact on the friction, wear and fatigue behavior of those elements and further their structural integrity.<br>Session objectives:<br>Papers deal with the tribological design against to wear and fatique of machine elements and /or combined with microtopography and /or nano-coatings are welcome in this special session. |