

The title of my speech is:

## **Green Vegetal Lubricants: State of the Art and Future Research Trend**

Abstract

The environmental and toxicity issues of conventional lubricants as well as their rising cost related to a global shortage and their poor biodegradability led to renewed interest in the development of environmental friendly lubricants. Environmental legislation by Occupational Safety and Health Administration (OSHA) and other international regulation authorities discourage the use of mineral oil-based lubricant and environmental-harmful additives. In recent years this gives increasing demand for green lubricants and lubricant additives. Vegetable oils are viable and good alternative resources because of their environmental friendly, non-toxic and readily biodegradable nature, providing motivation to increase the demand and use of environmentally friendly fluids in various industrial sectors such as manufacturing, agriculture, sailing and the railway industry. Triglycerides of vegetable oils are more polar than petroleum-based oils, thus they have a higher affinity to metal. Owing to this character, vegetable oils and their derivatives are suitable for lubrication applications.

Therefore, the aim of this speech is to present an overview of the latest relevant investigations on the tribological performances of some novel vegetal basestocks as well as to highlight research trends especially in the field of the additive to use for improving their tribological performances.