



Institute of Thermomechanics, Czech Academy of Sciences

invites you to a lecture within the lecture series **Institute of Thermomechanics Seminar**

Power of Pulsating Liquid Jets

given by **dr. Josef Foldyna**

Department of fluid jets, Institute of Geonics of the Czech Academy of Sciences, Ostrava

The effects of high-speed water jets on disintegration of materials are well known - pure water jets are able to cut paper, wood, plastic, rubber, and thin metal sheets. Abrasive jets are capable of cutting, drilling, turning or milling not only metals, but also difficult to process materials such as composites, structural ceramics, high-strength alloys, glass, etc. Despite the undisputed technological advances made in recent years in the field of high-speed abrasive water jet applications, there is a constant pressure on the development of new technologies using only pure water jets. One potential approach is the utilization of the physical phenomenon created by the droplet's impact on a solid surface.

In the lecture, I will briefly explain what a high-speed liquid jet is and how is generated, what types of high-speed liquid jets we can encounter and what they are used for. The main part will be devoted to results of research on high-speed pulsating liquid jets at the Institute of Geonics. I will present possibilities of generating pulsating jets, their applications and I will also mention the problems we face.



**The lecture will be held on Wednesday, January 17, 2024 at 10:00
in the building of the Institute of Thermomechanics (large lecture room),
Dolejšková 5, 182 00 Prague 8**

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