Date: October 29, 2019

Subject: Arrest of Dr. Victor Kudryavtsev, senior scientist of TsNIImash on July 20, 2018

Statement issued by: The von Karman Institute for Fluid Dynamics (VKI)

The von Karman Institute (VKI) has been been informed about the arrest of Dr. Victor Kudryavtsev (75), a senior scientist working at the Central Research Institute of Machine Building (known as TsNIImash), a Russian rocket and spacecraft research center located near Moscow. The information stems from contacts with the press media, the defense of Dr. Kudryavtsev and his family. The VKI has never been contacted by any official Russian government authority concerning the case of Dr. Kudryavtsev.

According to this information, Dr. Kudryavtsev has been arrested for being accused of high treason, allegedly disclosing secret information on hypersonic vehicles to a source in the West. The investigation of this alleged crime is focusing on a project funded by the European Union, conducted in collaboration with the VKI in the period 2010-2013, see further below. In June 2019 we were informed that also Roman Kovalev (56), his former student and Director of Kudryavtsev’s research center, has been arrested.

The present letter aims to clarify the nature of the VKI as an organization and the collaboration which has existed between the Russian partners, in particular TsNIImash, and the European partners in this project, VKI in particular.

Let us first explain the nature of VKI as a unique-in-the-world postgraduate educational and research institute in Fluid Dynamics, see also http://www.vki.ac.be. The VKI has been founded in 1956 under the inspiring leadership of Prof. Theodor von Karman, world renowned aerodynamicist (also called the father of supersonic aviation), born and grown up in Hungary, further educated in Germany (Göttingen), becoming Professor at TU Aachen, before finally moving to the USA in 1930 (anticipating the upcoming NAZI regime in Germany) and becoming US citizen and first Director of the Guggenheim Aeronautical Laboratory at CALTECH, CA (at the origin of the Jet Propulsion Lab). From the beginning the VKI has been created as an international non profit post graduate training center for young engineers in aerodynamics. In later years the field was expanded to Fluid Dynamics in general, focusing on Aerospace, Turbomachinery (e.g. aero-engines) and Environmental and Industrial flows (including also Green Energy).

The international environment enabling the creation of the VKI in 1956 was AGARD (Advisory Group For Aero Space Research and Development), a science organization within NATO, also created by Theodor von Karman. Also today, NATO is engaged with the scientific community through its Science and Technology Organization (STO), which is the world’s largest collaborative research forum in the field of defense and security. The VKI is still part of this community, together with other institutions and some 5,000 scientists from NATO Allied and Partner countries, including also the Partnership for Peace countries, Russia being one of them after the end of the cold war in the early nineties (see https://www.sto.nato.int/Pages/partnership-for-peace.aspx). In this context it was completely natural to work with Russian partners, such collaborations even being stimulated by NATO and the European Union. This good collaboration with Russia continued until the deterioration of the relations between NATO and Russia following the events in Crimea in March 2014 (long after the end of the project referred to in the accusation). Until today scientists from NATO Allied and Partner countries – including Russia between 1990 and 2014 - have benefitted from the VKI facilities by
mutual exchange and collaboration programs.

However, although links with NATO exist as has been made clear above, the VKI is not a NATO body. Its priorities and research are independent from NATO. The Institute receives funding from a variety of sources, including national contributions, EU and ESA grants, and projects for industry.

As far as Russia is concerned, the VKI has collaborated since the early 1990’s with several partners, e.g. ITAM (Siberian Branch of the Russian Academy of Sciences), TsAg, IPM-RAS (Moscow branch of Russian Academy of Sciences), Keldysh Institute of Applied Mathematics (Russian Academy of Sciences). These projects were funded by ESA or the European Union, also encouraged by (small) training grants issued by the NATO Partnership for Peace Program. Several of these projects were on topics of hypersonic atmospheric entry aero-thermodynamics in the context of civil space programs. Hypersonics is now considered as a very sensitive area, but was completely open for collaborative research in the 1990’s and the applications targeted were completely for civil space applications (ESA, NASA).

Let us now turn to the project referred to in the accusation. This was a collaborative research project in the framework of the European Union FP7 program, called TRANSHYBERIAN, project ID 263182 funded under FP7-SPACE, see https://cordis.europa.eu/project/rcn/99134_en.html. The subject of the project was about the Characterization of Wall Temperature Effect during Transition of Hypersonic flow over a Cone By Experiments And Numerical Simulations.

It was evidently (as all FP7 projects) an unclassified project running from 2011 till 2013, funded under a normal call for proposals from the European Union in response of a work programme topic with the intention to foster international cooperation of space scientists and researchers particularly between Europe and Russia, see details on the call for proposals in appendix. Not only the TRANSHYBERIAN project but the whole FP7 EU framework programme very clearly excluded military research. In its overall setup, the project TRANSHYBERIAN was an ordinary international scientific collaboration project with as subject fundamental research on aerodynamics of atmospheric entry from space (item 5 of the call topic) targeting civil space applications like capsules, space shuttle, the ESA IXV etc ….

In line with the call topic the project involved EU as well as Russian partners, 5 in total: DLR (the German Aerospace Center) and VKI from the EU side, and Tsagi, ITAM and TsNIImash from the Russian side. Dr. Kudryavtsev was the senior scientist of the team of partner TsNIIMash. VKI was the coordinator of the project which means that it was responsible for the overall management and the contacts with the funding agency REA and the European Commission.

During the project, information was exchanged between the partners through the usual channels like e-mail, written reports, a shared database on internet and a project website, all foreseen in the work packages defined for the project. The VKI confirms that all these exchanges were fully in line with the project goals and tasks defined for the project and had no relation to any military project nor classified research. All kinds of exchanges and access to information (including background results) were described in the grant agreement (concluded with the European Commission) and the consortium agreement (concluded between the partners), which is standard and common practice in collaborative research for all EU framework programme projects. These agreements were also in this project defined beforehand and approved by the authorities mandated to commit the different institutions. After thorough investigation the VKI testifies that the research executed by TsNIImash and the team of Dr. Kudryavtsev fully complies with the tasks defined in the proposal. The VKI confirms that as far as background information is concerned, there are only references to the open literature, no internal nor classified reports were cited in the reports under the responsibility of TsNIImash. In conclusion, the
VKI could not find any trace of disclosing secret information by the team of Dr. Kudryavtsev in the context of the TRANSHYBERIAN project.

Moreover, the VKI confirms that after the completion of the EU project in 2013 no further collaboration has existed between the VKI and TsNIImash, nor has any further information exchange taken place between researchers of the VKI and researchers from TsNIImash, nor with Dr. Kudryavtsev in particular.

To support the above declarations, the VKI confirms that all reports and other information related to the project (proposal, technical annex, deliverable reports, email exchanges) can be made public as far as the VKI is concerned. This however requires the prior approval of the European Commission and the partners in the project, since there could be a conflict with the Intellectual Property rights of the other concerned partners (DLR, TsAGI, ITAM and TsNIImash).

**Appendix: Details about the EU FP7 call topic**

**SPA.2010.3.2-04  EU-Russia Cooperation for Strengthening Space Foundations (SICA)**

In the framework of the EU-Russian Space Dialogues’ working group on Technology and Applied Science several activities for technology development have been identified: 1. Microbial detection and contamination understanding and countermeasures 2. Multiple laser ignition technology 3. EEE-Components mapping 4. Space Wire Real Time Protocol 5. Re-entry technologies and tools

Specific International Cooperation Actions (SICA) require a minimum participation of at least four independent entities. Of these, two must be established in different Member or Associated States, and the other two must be established in different regions of the Russian Federation. Additionally, Russian participation is required from at least two independent institutions. In order to ensure a genuine EU-Russia cooperation, a balanced distribution of effort between the EU and Russian partners is expected.

Funding schemes and projects size: small size SICA Collaborative Projects are expected, with upper eligibility limit of EUR 500 000 Community requested contribution.

Expected impact: Projects are expected to contribute significantly to further joint space technology developments in areas of mutual interest between EU and Russia, reducing duplication of research efforts, as well as technology dependencies on both sides. Projects are also expected to positively impact the collaboration between Russian and European actors in this field beyond the timeframe of EC support.