HOMAGE TO YURI RESHETNYAK
ON HIS NINETIETH BIRTHDAY

S.S. KUTATELADZE

Abstract. This is a short homage to Yuriĭ Grigorʹevich Reshetnyak on the occasion of his 90th birthday.

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September 26, 2019 is the ninetieth birthday of Yuri G. Reshetnyak This great date welcomes the overview of what was done and happened.

Reshetnyak is a professional mathematician, a representative of the most universal humanist technology of mankind. Mathematics is the art and science of provable calculuses which liberates the infinite capabilities of a finite human.

Reshetnyak has made a notable contribution to mathematics, and became one of the founders of the geometric analysis that resides at the juncture of analysis, geometry, and function theory. Many of his achievements belong to the treasure-trove of mathematics. He proved the theorem about isothermic coordinates on the two-dimensional surfaces of bounded curvature which was introduced by Aleksandr Alexandrov. The Reshetnyak theorem bridges the gap between analysis and the ideas of geometry in the large. The final solution of the Mikhail Lavrentiev problem of stability of conformal mappings gained world publicity. The arsenal of function theory and optimal control has welcome the Reshetnyak theorem of the weak convergence of Jacobians, of the lower semicontinuity of the functionals of variational calculus, and of the almost everywhere differentiability of the functions with Sergei Sobolev's generalized derivatives.

Reshetnyak's school and its achievements are universally accepted and well-known to specialists. There is no reason to expatiate on the technical details for the wider readership. It suffices to mention that Reshetnyak's mathematics meets the high standards that were formulated by Sounders Mac Lane: "Excellent mathematics should be inevitable, illuminating, deep, relevant, responsive, and timely."

To be a mathematician is not shameful, but shameful is to be only a mathematician. Reshetnyak has always been a scientist by belief, i.e. a human for whom the principles of science are imperative. Each scientist by belief is a student and a tutor simultaneously. Reshetnyak is a student of Aleksandr Alexandrov and a tutor of thousands of mathematicians, the graduates of Novosibirsk State University whom he taught the fundamentals of analysis. His course remains basic for more than half-century. Every scientist of belief always endeavors to lead his students to the frontiers of the unbeknown. The Reshetnyak course marks the transition from the classical teaching of the differential and integral calculus in the wake of Gregory Fikhtengolts to the modern analysis that bases on set theory, metric and Banach spaces, exterior forms, and measure theory.

Every scientist by belief is broader than the narrow frameworks of specialization. He is an adversary of any violation of the principles of academic freedom and equity, a sturdy enemy of pseudoscience, and a warrior against would-be scientists. Reshetnyak has always defended his students and coworkers against any persecutions. He has always repercussed the slanderers of the predecessors notwithstanding the external obstacles and circumstances. These qualities are not frequent in any scientific community.

All those fortunate to be acquainted with Yuri Reshetnyak wish him and his next of kin happiness and joy.

Semen Samsonovich Kutateladze
Sobolev Institute of Mathematics,
4, Koptyuga ave.,
Novosibirsk, 630090, Russia
E-mail address: sskut@math.nsc.ru