

“The work of Dr. Kryukov has been highly creative and characterized by a deep understanding of both the physics he is attempting to describe and the mathematical tools he is using. He has demonstrated that he is a master of the differential geometry and Hilbert space theory, and has developed a growing literature which makes explicit the use of the combined strength of these methods in their applicability to the quantum theory. It is generally recognized that geometrical methods, applied to quantum theory, could yield important new results, and many researchers, including myself and collaborators, have been attempting to achieve such a synthesis. Alexey has indeed succeeded to break through new ground in this subject, and has already made application to some outstanding questions in the difficult domain of entanglement, involving the quantum correlations that are so remote from classical physics.

He has also made considerable progress in the mathematics of the structure of quantum theories that encompass relativistic covariance, a particularly difficult problem due to the special role of time. I have been carefully following his work since it is very relevant to my own research program; I find his contributions very useful and interesting.

His highly positive and creative, as well as productive, attitude toward basic research has been very rewarding and useful. There is no question that his deep understanding of physics, the quantum theory, and the associated mathematical methods makes an excellent basis for teaching and bringing students into the fascinating world of modern mathematical physics for which new aspects are now opening, offering many opportunities for new understanding as well as in applications in fields such as superconductivity, solid state and particle physics.”