

Dr. Roman Iakymchuk  
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and  
Associate Professor  
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04.05.2022

## Certificate

for the internship of Professor Stepan Shakhno

I confirm that Professor Stepan Shakhno carried out an internship in the team PEQUAN (<https://www-pequan.lip6.fr>) at the Department of Scientific Computing of the Computer Science Laboratory LIP6, Sorbonne Université for four weeks from April 6<sup>th</sup> till May 4<sup>th</sup>, 2022 with Dr. Roman Iakymchuk.

During the internship, Prof. Shakhno participated in the lectures and labs of the course “Numerical Algorithms” given by Prof. Stef Graillat. Besides that, Prof. Shakhno presented a talk in the team PEQUAN on the topic “Some iterative methods for solving nonlinear equations with nondifferentiable operators”. He also participated in the MATHEXP-PolSys seminar. Together we prepared a manuscript for the article “On the method with approximation of the inverse operator for nonlinear least squares problems”. Prof. Shakhno discussed with Dr. Iakymchuk and Prof. Graillat a possibility of further collaboration on the topics of mixed precision and parallelization of algorithms for finding solutions of linear and nonlinear systems of equations and highlighted several possible directions of a joint research. Moreover, Prof. Shakhno was acquainted with the topics of master and PhD theses at the Computer Science Laboratory LIP6 and provided some useful recommendations.

The conducted work during the internship counts for 6 credits ECTS.

Sincerely yours,  
Roman Iakymchuk

