



Łukasiewicz
Industrial
Research
Institute
for Automation
and Measurements
PIAP

008/2023

Warsaw, 3 th July 2023

CERTIFICATE

issued to certify that

MYROSLAVA KALININA


From National Technical University of Ukraine
"Igor Sikorsky Kyiv Polytechnic Institute" (Kyiv, Ukraine)
Successfully completed the Scientific and Academic internship
*"Modern practices of secure automated production using industrial robots in
biotechnological and pharmaceutical production"*

Organizers: Łukasiewicz Research Network – Industrial Research
Institute for Automation and Measurements PIAP
Al. Jerozolimskie 202, 02-486 Warsaw

From May 2, 2023 until July 1, 2023

The training load of the internship is 6 ECTS (180 hours) and is distributed as follows:

Module	Number of hours
Integrated intelligent work systems of robots in clean rooms of pharmaceutical production facilities.	36
Numerical methods of modelling robotic systems and complexes	36
Automation of technological lines of biotechnological and pharmaceutical industries	36
Modern classification of robots that are used in various fields of strength	36
General methods of calculating robotic systems	36
Total number of hours	180

Sincerely,

Zastępca Dyrektora
ds. Badawczych
PROKURENT
dr inż. Maciej Cader

Deputy Director for Research,

PhD, Maciej Cader

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