

Industrial Research Institute For Automation and Measurements PIAP 012/2023

CERTIFICATE

issued to certify that

VLADYSLAV SHYBETSKYI

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

stepcs Dyrektora ds. Badawczych

Deputy Director for Research,

PhD, Maciej Cader

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Sieć Badawcza Lukasiewicz – Przemysłowy Instytut Automatyki i Pomiarów PIAP Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP 02-486 Warszawa, Al. Jerozolimskie 202, Tel. +48 22 874 01 64 E-mail: piap@piap.lukasiewicz.gov.pl | NIP: 522 318 53 70 District Court for the capital city of Warsaw, XIII Commercial Division of the National Court Register under KRS No. 0000846727

