Portfolio of the academic advisors of the participants of the International Olympiad of the Global Universities Association on the track of postgraduate studies in 2021-2022

	Sergey Lupuleac PhD, Associate Professor Head of VIM Lab, Institute of Physics and Mechanics Peter the Great St.Petersburg Polytechnic University
University	Peter the Great St. Petersburg Polytechnic University
English proficiency	Advanced (C1)
Field of study on which the postgraduate student will be enrolled	09.06.01 Informatics and computer engineering
List of research projects of a potential supervisor (participation /supervision)	• Head of the project "Modeling the assembly process of the main structure of the wing of AIRBUS A320 passenger aircraft" • Head of the project "Modeling the assembly process of the S19 section of A350 aircraft" • Head of the project "Modeling the assembly of the wing and fuselage for A350 aircraft with ASRP"
List of possible research topics	Aircraft assembly simulation
Field of study	• Computational mechanics • Numerical methods • Solving of contact problems
Supervisor's research interests	Research is included into cooperation program with Airbus
Research highlights	• Mechanics (advanced) • Numerical methods, PDE (advanced) • Coding (C++,Python)
Supervisor's main publications	• Lupuleac, S., Pogarskaia, T., Churilova, M., Kokkolaras, M., & Bonhomme, E. (2020). Optimization of fastener pattern in airframe assembly. Assembly Automation, doi:10.1108/AA-03-2019-0040 • Lupuleac, S., Shinder, J., Churilova, M., Zaitseva, N., Khashba, V., Bonhomme, E., & Montero-Sanjuan, P. (2019). Optimization of automated airframe assembly process on example of A350 S19 splice joint. SAE Technical Papers, 2019-September(September) doi:10.4271/2019-01-1882

	• Lupuleac, S., Smirnov, A., Churilova, M., Shinder, J., Zaitseva, N., & Bonhomme, E. (2019). Simulation of body force impact on the assembly process of aircraft parts. Paper presented at the ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE), 2B-2019 doi:10.1115/IMECE2019-10635 Retrieved from www.scopus.com
	• Lupuleac, S., Zaitseva, N., Stefanova, M., Berezin, S., Shinder, J., Petukhova, M., & Bonhomme, E. (2019). Simulation of the wing-to-fuselage assembly process. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 141(6) doi:10.1115/1.4043365
	• Stefanova, M., Minevich, O., Baklanov, S., Petukhova, M., Lupuleac, S., Grigor'ev, B., & Kokkolaras, M. (2020). Convex optimization techniques in compliant assembly simulation. Optimization and Engineering, doi:10.1007/s11081-020-09493-z
Results of intellectual activity	• Lupuleac S. et al., "Modules of the integrated virtual simulation model of an underwater drilling complex", patent No2018611254, Register of programs for electronic computers https://patentinform.ru/programs/reg-2018611254.html