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Education

- PhD Student in Mechanical and Aerospace Engineering, Princeton University Fall 2023 –
- Pre-doctoral Student in Computer Science, Princeton University 2022 – 2023
- MSc in Clean Energy Processes, University of Erlangen-Nürnberg (FAU) 2021 – 2022
Specialization: Energy Technologies (Unfinished - Transferred to Princeton)
Erlangen, Germany
- BSc in Mechanical and Energy Engineering, Kazan State Power Engineering University. 2017 – 2021
GPA 5.0/5.0 - Red Diploma (Summa cum laude - Graduated with the highest honors)
Advisor: Olga V. Soloveva
- Summer School on Condensed Matter Physics with Princeton Center for Complex Materials 2020
Princeton University
- Diploma in Russian language 2016 – 2017
Kazan National Research Technical University named after A.N. Tupolev – KAI
Kazan, Russia
- High School Diploma in Bio-Chemistry, Groupe Scolaire du Mont-Amba 2009 – 2015
(Ranked 1st in Graduating Class among 200 students)
Kinshasa, D.R. Congo

Research Experience

- Graduate Researcher 2023 –
Building Li-ion and Na-ion batteries as well as using a carbon aerogel for water purification
Advisor: Prof. Craig B. Arnold
- Undergraduate Researcher 2020 – 2021
Using Computational Fluid Dynamics (ANSYS) for the modelization of technological processes
Advisor: Dr. Olga V. Soloveva
- Undergraduate Research Experience 2020
Investigated the increase use of condensate instead of highly demineralized water for waste heat boilers
Supervisor: Prof. Denis S. Balzamor
- Undergraduate Research Experience 2019
Proposed the increase of Renewable Energy distribution in Russia
Supervisor: Prof. Guzel B. Sayfutdinova

Undergraduate Research Experience
 Contributed to the first wind farm project in the Republic of Tatarstan, Russia
 Supervisor: Prof. Nail F. Timerbaev

2018

Publications & Preprints

S. A. Solovev, O. V. Soloveva, Akhmetova, I. G., Vankov, Y. V, **D. L. Paluku**. *Numerical Simulation of Heat and Mass Transfer in an Open-Cell Foam Catalyst on Example of the Acetylene Hydrogenation Reaction*. *ChemEngineering* 2022, 6(1), 11.

Link: <https://doi.org/10.3390/chemengineering6010011>

S. A. Solovev, O. V. Soloveva **D. L. Paluku**, and A. A. Lamberov. *CFD simulation of the ethylbenzene dehydrogenation reaction in the fixed bed reactor with a cylindrical catalyst of various sizes*. *Chemical Product and Process Modeling*, 2021.

Link: <https://www.degruyter.com/document/doi/10.1515/cppm-2021-0002/html>

D. S. Balzamov, E. Y. Balzamova, V. V. Bronskaya, **D. L. Paluku**, G.I. Oykina, and O. S. Kharitonova. *Increased use of a condensate instead of highly demineralized water to prepare feed water for the waste heat boilers*. *Conference Series: Materials Science and Engineering (MSE)*, 1047 012173.

Link: <https://iopscience.iop.org/article/10.1088/1757-899X/1047/1/012173>

G. B. Sayfutdinova, and **D. L. Paluku**. *Application of Renewable Energy Sources in Resource Saving Russian Power Engineering*. *International Journal of Humanities and Natural Science*, April 2019, 4(3): 34–37.

Link: <http://intjournal.ru/wp-content/uploads/2019/05/Mezhdunarodnyj-ZHurnal-4-3.pdf>

D. L. Paluku, N. F. Timerbaev. *Prospects for the development of Wind Energy in The Republic of Tatarstan*. *Renewable Energy Sources: Proceedings of the All-Russian Scientific Conference with International Participation and of the XI Scientific Youth School – Moscow: MAKS Press*. December 2018, 292—296..

Link: <https://www.elibrary.ru/item.asp?id=37080369&pff=1>

Talks & Conferences

50th MRS (Materials Research Society) Fall Meeting, Boston, Massachusetts	November 2023
International Anti-Conference "It's possible" at Kazan State Power Engineering University	April 2021
Seminar of graduate students of Kazan State Power Engineering University	December 2019
BEBUC Scholarship's Conference in Lausanne, Switzerland	July 2019
Moscow State University Scientific Conference on Renewable Energy Sources	December 2018
Youth Conference in Sharm El Sheikh, Egypt	November 2018
Business Conference "Russia – Africa", Ministry of Economy of the Russian Federation	March 2018
Russian-Chinese Congress of Young Entrepreneurs in Kazan, Russia	September 2017

Awards & Honors

MAE Graduate travel fund to attend Materials Research Society Conference in Boston, MA	2023
Best Senior Graduate of the Class of 2021 highly involved in scientific activities	2021
Top 4 Best International Students in the Russian Republic of Tatarstan for 2020 among out of approximately 8000 students.	2021
Presidential Scholarship of Kazan State Power Engineering University	2019 – 2020
Top 3 Best Students in Material Science in sophomore year among 115 students	2019
Top 5 Best Students in Applied Mechanics in sophomore year among 28 students	2019
Contest winner - Renewable Energy Sources at Moscow State University out of 74 participants	2018
Gold Medal of - 6th Russian Language International Olympiad for foreign students	2018
Scholarship of the Russian Government for Bachelor Studies in Russia	2016
BEBUC Scholarship German-Congolese NGO “fUNIKIN”	2013 – Present
COMENGA High School Media Challenge Winner, German-African Media Camp	2014

Professional Service & Leadership

Workshop & Symposium Organization

International Anti-Conference “It’s possible” at Kazan State Power Engineering University 2021
Initiated the discussion on presenting existing scientific opportunities for international students in Russia. The anti-conference has been featured by the Russian Ministry of Science and Education.

Membership

MRS membership (Materials Research Society)	2023 –
Vice-President, Association of foreign students, Kazan State Power Engineering University	2019 – 2020
Spokesman of BEBUC Scholarship’s External Scholars BEBUC Scholarship is an excellence Scholarship Program supporting and mentoring young students until they become professors of Universities to renew the academic staffs in the D.R. Congo	2019 – Present
Spokesman of the Association of Congolese Students in Kazan, Russia	2017 – 2019
Spokesman for Mont-Amba BEBUC Scholarship’s Scholars, Kinshasa, D.R. Congo	2014 – 2015

Volunteering

Tutor Volunteer – World Skills Competition, Kazan, Russia	2019
Tutor Volunteer – Kazan Multi-Sport exposition	2018

Teaching

English and French Teaching appointment
Language School Need4speak

2019 – 2020

Communication Skills

Human Languages: Swahili (Native), French (Native), English (Fluent), Russian (Fluent), German(Basic),
Lingala (Fluent).

Machine Languages: Python (Pytorch).

Last updated: December 30, 2023