

# Daniel Lwanzo Paluku

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

## Research Experience

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

Undergraduate Research Experience

2018

Contributed to the first wind farm project in the Republic of Tatarstan, Russia

Supervisor: Prof. Nail F. Timerbaev

## 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: MAKSS Press. December 2018, 292—296..

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

## Talks & Conferences

50th MRS (Materials Research Conference) 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 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	2019 – Present
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	
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