

# Adeyemi Damilare Adeoye

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## EDUCATION

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**Ph.D. in Computer Science and Systems Engineering** Nov 2020 – Present

*IMT School for Advanced Studies Lucca, Italy*

Advisor: Prof. Alberto Bemporad

**M.Sc. in Machine Intelligence** 2019 – 2021

*African Institute for Mathematical Sciences, Rwanda*

Final essay: [A Deep Neural Network Optimization Method via a Highway Traffic Model](#) (Grade: Very Good Pass)

Supervisor: Prof. Philipp Petersen (University of Vienna, Austria)

**M.Sc. in Mathematical Sciences** 2017 – 2018

*African Institute for Mathematical Sciences, Cameroon*

Final essay: [Blood Flow in an Inclined Tapered Stenosed Porous Artery under the Influence of Magnetic Field and Heat Transfer](#) (Grade: Distinction)

Supervisor: Dr. Jos Usman Abubakar (University of Ilorin, Ilorin, Nigeria)

**B.Sc. in Mathematics** (First Class Honors) 2012 – 2016

*University of Ilorin, Ilorin, Nigeria*

Final-year project: [On Some Finite Difference Methods for Solving Partial Differential Equations](#) (Grade: A)

Supervisor: Dr. Babatunde Morufu Yisa

## EXPERIENCE

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**Visiting Ph.D. Student (Erasmus+ Trainee)** Aug 2023 – Jan 2024

*Faculty of Mathematics, University of Vienna, Austria*

Host supervisor: Prof. Philipp Petersen (Mathematics of Machine Learning research group)

**Academic Staff (STEM Learning Facilitator)** June – Sept 2019

*Inspire Paradigm Academy, Yola, Nigeria*

- Delivered STEM-oriented instruction through Project-Based Learning methods towards curriculum objectives and academic achievement.
- Evaluated students' performance assessments and provided feedback on the development of students.

**Teaching Assistant** 2016 – 2017

*Mountain Top University, Ogun, Nigeria*

- Tutored first and second year students of the university in their Mathematics courses.
- Taught and provided lecturing assistance on first year Descriptive Statistics course.

**Data Analyst (Student Intern)** Aug – Sept 2015

*Kwara State Bureau of Statistics, Ilorin, Nigeria*

- Analyzed statistical data using Microsoft Excel and SPSS.

## PUBLICATIONS

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### Submitted Articles & Preprints

4. **A. D. Adeoye**, and A. Bemporad. "Self-concordant Smoothing for Large-Scale Convex Composite Optimization." arXiv preprint [arXiv:2309.01781](#) (2023)

### Journal Publications

3. **A. D. Adeoye**, and A. Bemporad. "An Inexact Sequential Quadratic Programming Method for Learning and Control of Recurrent Neural Networks." *IEEE Transactions on Neural Networks and Learning Systems*. (2024): 1-15. [doi.org/...](#)

2. **A. D. Adeoye**, and A. Bemporad. "SCORE: approximating curvature information under self-concordant regularization." Computational Optimization and Applications 86.2 (2023): 599-626. [doi.org/...](https://doi.org/10.1007/s00158-023-03400-0)
1. J. U. Abubakar, and **A. D. Adeoye**. "Effects of radiative heat and magnetic field on blood flow in an inclined tapered stenosed porous artery." Journal of Taibah University for Science 14.1 (2020): 77-86. [doi.org/...](https://doi.org/10.1016/j.jtus.2020.07.001)

## TALKS

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5. "Self-concordant Regularization in Machine Learning." Mathematics of Machine Learning Group Seminar, University of Vienna, Dec 2023.
4. "Self-concordant Regularization in Machine Learning." DYSCO Research Unit Seminar, IMT Lucca, Italy (Virtual), Dec 2023.
3. "Self-concordant Regularization for Convex Composite Optimization." Mathematics of Machine Learning Research Group, Faculty of Mathematics, University of Vienna, Aug 2023.
2. "Inexact SQP for Neural Network-Based Identification of Nonlinear Dynamical Systems." DYSCO Research Unit Mini-Symposium, IMT Lucca, Italy, Feb 2023.
1. "SCORE: Approximating Curvature Information under Self-Concordant Regularization." Eastern European Machine Learning (EEML) Summer School, Vilnius, Lithuania (Virtual; Poster presentation), July 2022.

## SOFTWARE

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### SelfConcordantSmoothOptimization.jl

- A solver in Julia for nonsmooth convex composite optimization problems
- URL: <https://github.com/adeyemiadeoye/SelfConcordantSmoothOptimization.jl>

## HONORS & AWARDS

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<b>Erasmus+ Traineeship Grant</b>   <i>The European Commission at IMT Lucca, Italy</i>	2023
<b>Ph.D. Studentship</b>   <i>IMT School for Advanced Studies Lucca, Italy</i>	2020
<b>Graduate Scholarship</b>   <i>Google and Facebook (now Meta) at AIMS-AMMI, Rwanda</i>	2019
<b>Mastercard Foundation Scholarship</b>   <i>African Institute for Mathematical Sciences, Cameroon</i>	2017
<b>Award of Excellence</b>   <i>Kwara Class of Honors, Kwara, Nigeria</i>	Dec 2016
<ul style="list-style-type: none"> <li>• With cash award for earning a First Class Honors in Mathematics at the University of Ilorin.</li> </ul>	
<b>Silver Medal</b>   <i>National Mathematical Center (NMC), Abuja, Nigeria</i>	April 2016
<ul style="list-style-type: none"> <li>• National Mathematics Competition for University Students (NAMCUS): Silver medal in individual category and first runner-up in universities team category.</li> <li>• NAMCUS is a competition organized by NMC, Abuja, Nigeria for the next generation Nigerian mathematicians. Number of participants: Up to 30 universities, 4 contestants each. Focus areas: Algebra, Complex Analysis, Real Analysis, Functional Analysis and Differential Equations.</li> </ul>	
<b>Undergraduate Scholarship</b>   <i>MTN Foundation (MTNF) Scholarship Scheme, Nigeria</i>	2014 – 2016
<b>Others</b>   <i>Prizes at local/state and national primary and high school level mathematics competitions in Nigeria</i>	

## SKILLS

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<b>Programming</b>	Julia, Python, SageMath, Maxima, MATLAB, Maple, Mathematica
<b>Frameworks</b>	FluxML, SciML, JuMP.jl, JuliaDiff, JAX, NumPy, SciPy, pandas, PyTorch, TensorFlow
<b>Toolbox</b>	Visual Studio Code, JupyterLab, GitHub, LaTeX, wxMaxima
<b>Operating Systems</b>	Linux, Windows

## REFERENCES

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Available on request.