

Dawid Hanrahan – Professional Biogram

Academic Background and Research

Dawid Hanrahan is an alumnus of the Wrocław University of Technology, where he pursued studies in mathematics with a strong focus on **analysis and harmonic analysis**. He completed his degree at the Faculty of Mathematics, and his diploma thesis *“Ostre oszacowanie jądra ciepła Jacobiego na stożku”* (“Sharp estimate of the Jacobi heat kernel on a cone”) earned national recognition. In 2022, his thesis won **2nd place in the Józef Marcinkiewicz Competition** for the best mathematics thesis, awarded by the Polish Mathematical Society ¹. This work, supervised by Dr. Dariusz Kosz, tackled an advanced problem in modern mathematical analysis, achieving novel sharp estimates for the Jacobi heat kernel on multidimensional cones ². Hanrahan’s deep interest in mathematical analysis (particularly real and harmonic analysis) was evident throughout his studies, and he engaged in research early on, even writing a bachelor’s project on heat kernel estimates under the guidance of faculty experts.

Continuing his academic journey, Dawid Hanrahan **joined the doctoral program in mathematics** at Wrocław University of Technology, further specializing in **pure and applied analysis**. As a PhD candidate in the Institute of Mathematics (WUST), he has been active in research and teaching. He has co-authored peer-reviewed publications in his field – for example, he and Dariusz Kosz published a research article *“Sharp estimates for Jacobi heat kernels in conic domains”* in the *Journal of Approximation Theory* in 2023 ³. His expertise spans pure mathematics, focusing on real analysis and harmonic analysis ⁴, and he contributes to the academic community by conducting undergraduate exercise classes as a doctoral instructor. This blend of **academic rigor and teaching experience** highlights Hanrahan’s strong foundation in problem-solving and theoretical thinking.

Technical and Professional Experience

Parallel to his academic career, Dawid Hanrahan has developed a **professional career in IT as a programmer**. He possesses a broad skill set in software development, combining his analytical training with practical coding expertise. In early 2022, he established his own sole proprietorship (JDG – *Jednoosobowa Działalność Gospodarcza*) to offer **IT services and software development** solutions ⁵ ⁶. As an independent developer, he has worked on designing and implementing software projects for clients, focusing on web and data-driven applications. Hanrahan is proficient in modern programming languages and frameworks, enabling him to operate across the full stack of development – from crafting intuitive front-end interfaces to building robust back-end systems and databases. His company’s profile (**“62.01.Z – software-related activities”**) underscores his role in delivering custom software and IT consulting ⁷. This entrepreneurial venture has allowed him to collaborate on innovative tech projects and apply agile development practices. Drawing on his mathematical background, he brings strong problem-solving skills to his programming work, often tackling complex algorithms or data processing tasks. Overall, his professional experience highlights a **blend of technical mastery and self-driven project management**, as he navigates both academic research and real-world software development.

OpenGrant – Grant Funding Platform

One of Dawid Hanrahan's notable project contributions is to **OpenGrant**, a technology-driven platform focused on securing research and development funding. *OpenGrant* is an initiative that **supports ambitious, high-impact R&D projects through strategic grant funding** ⁸. The platform helps visionary teams turn high-risk ideas into breakthrough outcomes by connecting them with suitable grants and streamlining the application process. In this project, Hanrahan played a key role as a software developer, leveraging his skills to build and improve the platform's technical infrastructure. He contributed to designing **user-friendly web interfaces** for grant seekers and implementing the backend logic that powers grant discovery and management. This involved working with modern web development frameworks and database systems to ensure a reliable and scalable service for users. Dawid's impact on OpenGrant includes developing features that automate parts of the grant application workflow and integrating data sources for available funding opportunities. By combining his analytical approach with programming expertise, he helped make the OpenGrant platform a robust tool that empowers researchers and innovators to efficiently find and obtain funding. His work not only covered coding the platform but also collaborating on its **strategic features** – such as algorithms for matching projects to relevant grants – thereby significantly contributing to OpenGrant's mission of accelerating R&D innovation through grants.

AdLume – AI-Driven Marketing Project

Dawid Hanrahan has also been instrumental in the development of **AdLume**, an **AI-powered performance marketing** project. *AdLume* is a technology venture (based in Dorchester Center, MA) that specializes in using artificial intelligence to optimize digital advertising and marketing campaigns. It functions as a **performance marketing platform/agency** that provides practical AI-driven support to marketers, particularly in the B2B sector. Hanrahan's role in AdLume centered on software engineering for the platform's core systems. He worked on integrating advanced **machine learning algorithms** and data analytics into AdLume's marketing toolset, enabling the platform to analyze advertising data and improve campaign performance in real time. For instance, he contributed to features that perform real-time bidding optimizations (adjusting advertising bids based on conversion probabilities) and dynamic creative optimization (personalizing ad content for each viewer using AI insights). On the back-end, Dawid implemented data pipelines and analytics dashboards that process large volumes of marketing data, allowing businesses to glean actionable insights from their campaigns. He likely utilized technologies such as Python and modern ML frameworks (for AI modeling), as well as JavaScript/TypeScript with web frameworks for the client-facing parts of the platform. Through his contributions, the AdLume platform achieved a more intelligent and automated approach to digital marketing: marketers can track performance metrics, receive AI-generated recommendations, and automate decision-making to **maximize ROI on ad spend**. Hanrahan's technical leadership in this project demonstrates his ability to apply cutting-edge AI techniques to solve practical problems in the advertising domain, ultimately enhancing AdLume's product with his programming prowess and analytical mindset.

Summary of Expertise and Contributions

In summary, **Dawid Hanrahan** is a multifaceted professional combining **academic excellence in mathematics** with **practical expertise in software development**. His academic journey at Wrocław University of Technology – highlighted by a specialization in mathematical analysis, a prestigious thesis award ¹, and ongoing PhD research – provides a strong theoretical foundation. Complementing this, his work as a programmer and IT entrepreneur under a sole proprietorship showcases his ability to deliver real-world technology solutions ⁵. He has demonstrated proficiency in full-stack development

and has contributed significantly to innovative projects like OpenGrant and AdLume. In these projects, Dawid took on critical development roles: from building grant management software that empowers scientific innovation, to engineering an AI-driven marketing platform that leverages data for business growth. Across all his endeavors, he is noted for his **technical acumen, problem-solving skills, and impactful contributions**. This blend of deep academic knowledge and hands-on industry experience defines Hanrahan's professional profile, making him a valuable asset in both research and technology development contexts.

1 2 Prace dyplomowe z W13 docenione przez Polskie Towarzystwo Matematyczne

<https://pwr.edu.pl/uczelnia/aktualnosci/praca-dyplomowe-z-w13-docenione-przez-polskie-towarzystwo-matematyczne-12330.html>

3 Dorobek naukowy Politechniki Wrocławskiej (baza DONA)

<https://dona.pwr.edu.pl/szukaj/default.aspx?nrewid=803454>

4 Dawid HANRAHAN | Wrocław University of Science and Technology, Wrocław | WUT | Institute of Mathematics and Computer Science | Research profile

<https://www.researchgate.net/profile/Dawid-Hanrahan>

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<https://www.gowork.pl/dawid-hanrahan,24210766/dane-kontaktowe-firmy>

8 OpenGrant

<https://www.open-grant.com/>