

Dimitri Stetsenko

Associate | Vehicle Engineering
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Professional Profile

Mr. Stetsenko's expertise encompasses product design and testing, design of experiments, product lifecycle analysis, vehicle dynamics, root-cause failure analysis, rigid body analysis, design for manufacture, computer aided design, computational fluid dynamics and finite element analysis.

Through Mr. Stetsenko's broad engineering breadth and hands-on focus, he has designed, consulted on and led many experiments. He is proficient in wind tunnel testing, material stress analysis, and dynamic system behavior. Within vehicle engineering, he has experience with building prototype electric vehicles, specializing in suspension design for an electric race car. Additionally, he has experience generating static and dynamic stress models for prototype fixed-wing aircraft wings. His knowledge within numerical analysis enables him to quantify decisions and visualize performance using MATLAB, Python and C.

Prior to joining Exponent, Mr. Stetsenko received his MEng in Mechanical Engineering from UC Berkeley. During his program he served as a Graduate Student Instructor teaching a core ME class focusing on Design of Experiments, leading both the laboratory section and lecture hall. Additionally, he completed his capstone project, which focused on reducing emissions from oil spill clean up fires. His work there helped refine his design, analysis, manufacturing, and communication skills. By the end of the program, he was able to present a design that substantially reduced particulate emissions and total burn time. He was also the head vehicle dynamics engineer for UC Berkeley's Formula Electric team. His outside experience with automotive racing through 24 Hours of Lemons and automotive repair helped guide decision making, resulting in a more reliable and cost-effective race car. Lastly, he also served as a CFD engineer for UC Berkeley's Aerospace competition team modeling airflow for a variety of airfoil cross sections.

Academic Credentials & Professional Honors

M.E., Mechanical Engineering, University of California, Berkeley, 2022

B.S., Mechanical Engineering, University of California, Berkeley, 2021

Prior Experience

Graduate Student Instructor, UC Berkeley ME Dept., 2021-2022

Engineering PM Intern, Port of Oakland, 2018

Project Experience

Designed, built, and assessed an apparatus to better clean up offshore spilt crude oil. Resulting design reduced harmful emissions and burn time.

Performed CFD and rigidity analysis on composite wing resulting in an overall lighter airfoil and more maneuverable aircraft.

Designed a wheel hub and supporting suspension geometry that focused on ease of assembly and manufacture, cost-effectiveness, repairability. Resulting design reduced unsprung mass leading to improved vehicle handling.