

DANIEL M. VOGT

ROBOTICS PROGRAM LEAD · HARDWARE FOR EXTREME ENVIRONMENTS

PERSONAL INFORMATION

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links [Google Scholar](#) · [LinkedIn](#)

citizenship US & Swiss dual citizen

location Boston, MA

PROFESSIONAL SUMMARY

Robotics program leader with 15+ years taking complex hardware from concept to field deployment in the world's most demanding environments, from **1,000 m ocean depths** to **autonomous aerial systems**. I lead **multidisciplinary teams of 10–15 engineers and researchers**, own programs end-to-end (roadmap, budget, hiring, schedule, and ITAR compliance), and stay hands-on in mechanical design, fabrication, and embedded systems. Track record of **delivering field-proven robotic systems**, generating **licensed and patented IP**, and translating hard R&D into deployable hardware.

EXPERIENCE

2020–Present Program Manager & Lead Robotics Engineer

Harvard School of
Engineering and
Applied Sciences
Project CETI

- **Lead a multidisciplinary team of 10–15** staff engineers, postdocs, and graduate students building autonomous bio-logging and deployment robotics for [Project CETI](#); own the full program: roadmap, budget, hiring, and delivery.
- **Delivered field-proven bio-logging tags** that record synchronized audio, depth, GPS, and IMU data at ocean depths to **1,000 m**; tens of units built and deployed across ~10 international expeditions.
- **Drove the full hardware lifecycle** (concept, design reviews, fabrication, and harsh-environment field deployment), setting the test protocols and reliability gates the program runs on.
- **Co-invented a drone-based “tap-and-go” tag-deployment method** for marine mammals (published in *PLoS One*; featured in the *New York Times*), reducing deployment time and animal disturbance.
- **Built quality and reliability processes**: automated pressure testing and systematic in-field performance tracking.
- **Own program operations**: budget oversight, funder and stakeholder reporting, hiring, and coordination of international field expeditions.
- **Established ITAR export-control compliance** and safety protocols for drone operations and hazardous-materials (battery) transport across international deployments.

2011–2020 Research Engineer, Soft Robotics

Wyss Institute at
Harvard
University

- **Led design and fabrication of novel soft sensors and actuators** for wearables and soft robotic systems, taking concepts from prototype to transferable technology.
- **Developed embedded 3D-printing (additive manufacturing) methods** for highly stretchable sensors and actuators, the core IP behind multiple patents and publications in *Advanced Materials* and *PNAS*.
- **Delivered soft-sensing IP that was licensed to a major consumer-electronics company**.
- **Built wearable sensing systems** for biomechanics, including real-time joint-angle measurement and a soft sensor suit for quantitative leg-motion tracking.
- **Co-authored 6 patents** (multi-axis force sensing, soft artificial skin, joint-position measurement) and 30+ peer-reviewed papers.

- **Managed research projects, mentored 20+ students**, and contributed to successful grant proposals.

EDUCATION

2006–2011 Swiss Federal Institute of Technology (EPFL)

*MS & BS,
Robotics*

MS and BS in Robotics and Autonomous Systems; minor in Management of Technology and Entrepreneurship. Master's thesis at the Harvard Microrobotics Lab (2011); exchange year at TU Berlin (2008–2009).

2002–2005 Engineering School of Geneva (EIG)

*BS, Computer
Science*

BS in Computer Science. Diploma project: attitude control of a small-scale quadcopter.

SKILLS

*Leadership &
Program*

Team leadership (10–15), program/project management, budgeting, hiring, roadmapping, vendor management, stakeholder & funder reporting, ITAR export-control compliance, field-operations safety.

*Mechanical &
Systems*

Complex mechanical design for extreme environments, pressure/waterproof enclosures, CAD (Fusion 360, SolidWorks), FEA, ANSYS CFD, design for manufacturing.

*Electrical &
Software*

Embedded firmware (STM32, AVR, Arduino), Linux SBCs (Raspberry Pi, Jetson Nano), sensor integration, Python, C/C++, MATLAB.

Fabrication

3D printing (FDM, SLA, SLS), CNC machining, laser micromachining, mold making & soft lithography, composites, TIG/MIG welding.

*AI & Emerging
Tools*

Active adopter of agentic AI engineering workflows, including LLM-assisted coding (Claude Code, Cowork), AI-driven design, and rapid prototyping, plus integrating new AI tooling into hardware R&D.

FIELD CERTIFICATIONS, LANGUAGES & SERVICE

Flying

FAA Part 107 drone pilot; Private Pilot (SEL, VFR), competition aerobatics.

Sailing

ICC certified skipper (CCS).

Diving

CMAS Two-Star diver.

Languages

French (native), English (fluent), German (advanced), Spanish (intermediate).

Military Service

Air-defense soldier (Stinger missile specialist), Swiss Army.

SELECTED PUBLICATIONS

J26

D. Vogt, S. Pagani, Z. Gonzalez-Peltier, S. Gero, D. Gruber, R. Wood. "Drone-based application of whale tags: a "tap-and-go" approach for scientific animal-borne investigations". PLoS One, 2025. **Featured in the [New York Times](#)**.

J2

D. Vogt, J. Muth (co-first author), R. Truby, Y. Menguc, D. Kolesky, R. Wood, J. Lewis. "Embedded 3D printing of strain sensors with highly stretchable elastomers". Advanced Materials, 2014.

J7

S. Li, **D. Vogt**, D. Rus, R. J. Wood. "Fluid-driven origami-inspired artificial muscles". Proceedings of the National Academy of Sciences (PNAS), 2017.

Full list of 25+ publications and patents available [here](#) or on [Google Scholar](#).

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