

MIKEY SASAGAWA

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PROFESSIONAL SUMMARY

Senior Mechanical Engineer with 8+ years of experience, including 5+ years in fast-paced, early-stage startups, developing mechanical systems from initial concept through fabrication, system integration, validation, and deployment. Proven track record delivering high-reliability automated machinery, complex mechanical designs, root-cause troubleshooting, and international vendor coordination. Skilled at translating customer requirements into production-ready solutions across semiconductor equipment, food automation, and advanced national security technologies.

CORE COMPETENCIES

Mechanical Engineering: CAD Design & Drawing • BOM • Custom Tool Fixtures • Injection Molding • Sheet Metal • Additive Manufacturing • Thermal Analysis • FEA • DOE • Waterleak Testing

Production: Concept-to-Production • Prototyping • DFM/DFA • GD&T & Drafting • Design Validation & Testing

Manufacturing & Operations: Automation Hardware • System Health Monitoring • Root-Cause Troubleshooting • Vendor Management

Tools & Software: SOLIDWORKS • Onshape • Autodesk Inventor • Python • ANSYS • Arena PLM • Windchill

PROFESSIONAL EXPERIENCE

SAMBA SOLUTIONS — Senior Systems / Mechanical Engineer (July 2024 – Present)

- Lead mechanical development and system integration for plasma-dicing semiconductor equipment from design and fabrication through system bring-up, validation, and pilot deployment.
- Perform thermal, fluid-flow, cooling, and mechanical calculations for vacuum chambers, PCW/chiller loops, gas-delivery hardware, and facility interfaces to guide design decisions and equipment modifications.
- Lead integration and commissioning of vacuum chamber hardware, wafer lift mechanisms, gas-injection components, thermal interfaces, and cooling systems; supported pilot-tool deployment at Micron Taiwan.
- Develop test fixtures and equipment-health monitoring methods to diagnose failures, perform root-cause analysis, validate corrective actions, and improve equipment reliability.

HYPHEN TECHNOLOGIES — Senior Mechanical Engineer (December 2021 – June 2024)

- Designed and deployed automated food-packaging equipment for prepared salad and bowl production, replacing manual food assembly and packaging operations for customers including Chipotle and Cava.
- Led mechanical development of conveyor-based bowl transfer, food dispensing, and packaging subsystems from concept and prototyping through design validation, manufacturing, and production deployment.
- Reduced equipment operational failure rates by ~30% through root-cause analysis, DOE testing, machine design improvements, and validation of corrective actions.
- Designed production equipment using sheet metal, CNC-machined, injection-molded, and fabricated components, optimizing for food safety, manufacturability, reliability, serviceability, and high-volume operation.
- Coordinated manufacturing and equipment changes with international suppliers and cross-functional engineering teams, resolving fabrication, assembly, and system-integration issues during production ramp.
- Managed 400+ engineering changes through Agile PDM, maintaining controlled drawings, BOMs, specifications, and configuration documentation for production equipment.
- Developed novel food-automation mechanisms resulting in **U.S. Patent Publication US20250098903A1**.

LAWRENCE LIVERMORE NATIONAL LABORATORY — Project Manager & Engineer (2019 – 2021)

- Directed engineering execution for high-energy diagnostic equipment, collaborating with cross-functional technical teams to deliver custom hardware and precision instrumentation for scheduled experiments.
- Guided experimental set-ups from initial technical specifications through design review, manufacturing, assembly, and final deployment, addressing interface constraints and critical project timelines.
- Partnered with internal engineering departments and additive manufacturing specialists to re-engineer a radiography phantom, optimizing structural weight and overall manufacturability.

EDUCATION

University of California, San Diego — B.S. Mechanical Engineering, Minor in Design | GPA: 3.7 **Provost Honors**