

HUGO ZANQUETA

GLOBAL ENGINEERING & R&D LEADER

hzanquetausa@gmail.com • 1 (864) 328-5777 • [LinkedIn](#) • Anderson, SC

Engineering and R&D leader with extensive experience driving global product development, laboratory operations, systems engineering, and cross-functional engineering initiatives across North America, Europe, Latin America, and Asia. Proven track record leading multidisciplinary engineering teams, modernizing laboratory capabilities, standardizing engineering processes, and delivering innovation initiatives aligned with performance, quality, regulatory, and cost objectives.

Recognized for combining deep technical expertise with strong leadership in engineering operations, organizational alignment, strategic planning, and technical program execution. Experienced in leading global engineering initiatives, developing advanced engineering methodologies, and translating complex technical challenges into scalable business and product solutions.

CORE COMPETENCIES

Engineering Leadership & Operations: Global Engineering Leadership • R&D Management • Laboratory Operations • Engineering Strategy • Technical Program Management • Cross-Functional Leadership • Team Development & Mentorship • Operational Excellence • Continuous Improvement

Product Development & Systems Engineering: Systems Engineering • Product Development • Multi-Physics Engineering • Acoustics & Vibration • Thermodynamics • Heat Transfer • Fluid Dynamics • Sound Quality & Psychoacoustics

Testing, Validation & Analytics: Advanced Validation & Testing • Data Acquisition Systems • Laboratory Standardization • Root Cause Analysis • Verification & Validation (V&V20) • CFD Modeling • Predictive Engineering Models • Data Analysis • AI-Driven Engineering Initiatives • Python

Regulatory & Compliance: DOE (10 CFR 429/430) • IEC • INMETRO • Certification Strategy • Regulatory Compliance • Product Validation • Quality & Performance Optimization

Strategic & Business Leadership: Innovation Leadership • Global R&D Initiatives • Stakeholder Management • Engineering Governance • Cost Optimization • Strategic Planning • Six Sigma Black Belt

PROFESSIONAL EXPERIENCE

Electrolux North America, Anderson, SC
Global Systems Engineering Leader

2015 – Present

- Lead global engineering initiatives across major product platforms, coordinating cross-functional teams across North America, Europe, and Latin America to align product development, regulatory compliance, performance, and cost objectives.
- Lead and mentor global engineering teams (direct and matrix, 25+ engineers), supporting technical development, prioritization, organizational alignment, and execution of strategic R&D initiatives.
- Drive system-level engineering solutions integrating acoustics, thermodynamics, airflow, and structural dynamics, reducing prototype dependency by 30% and accelerating development efficiency.
- Standardized global test methods, instrumentation, and laboratory data acquisition architecture across 3 international labs, reducing procedures by 35% while improving engineering consistency and operational efficiency.

HUGO ZANQUETA

- Lead regulatory and certification strategy for DOE, IEC, and INMETRO compliance, coordinating with certification laboratories and aligning engineering decisions with global market requirements.
- Define and execute global sound quality and EU sound labeling strategies, translating regulatory and customer requirements into product development roadmaps and engineering standards.
- Lead development and deployment of advanced predictive engineering methodologies, including simulation-driven engineering tools, global OSPA framework implementation, and AI-driven analytics initiatives.
- Drive execution of global engineering programs to achieve performance, quality, regulatory, and cost objectives across multiple product platforms.

Electrolux, Brazil

2007 – 2015

Senior Product Development Engineer

- Led development and optimization of complex thermal and acoustic systems using simulation, analytical modeling, and system-level engineering methodologies to improve product performance, energy efficiency, and customer experience.
- Designed and validated predictive engineering models integrating thermodynamics, airflow, heat transfer, and acoustics to support product development and performance optimization initiatives.
- Introduced and scaled Sound Quality methodologies, including psychoacoustics and jury testing, into product development processes, strengthening customer-focused engineering evaluation capabilities.
- Supported global regulatory and certification activities across multiple international markets, ensuring alignment between engineering design, validation, and compliance requirements.
- Conducted advanced acoustic and vibration testing to support product validation, certification, and engineering performance analysis.
- Developed advanced engineering models for complex product applications, supporting performance optimization and engineering innovation initiatives.
- Delivered Six Sigma Black Belt training and continuous improvement methodologies to R&D engineering teams, supporting structured problem-solving and engineering process improvement initiatives.

Akustica & Engenharia, Brazil

2005 – 2015

Consultant and Researcher

- Designed and implemented integrated thermal and acoustic engineering solutions for large-scale commercial and institutional projects, including amphitheaters, educational facilities, and specialized environments.
- Led engineering design, system validation, and performance optimization activities aligned with ISO/NBR standards and project requirements.
- Developed acoustic mitigation and environmental performance solutions, achieving sound reductions greater than 10 dB(A) while supporting regulatory compliance and multidisciplinary project execution.

ADDITIONAL EXPERIENCE

Whirlpool Brazil | Junior Acoustic Engineer | 2002 – 2004

Supported acoustic engineering activities related to product development, testing, and sound performance evaluation for household appliances.

HUGO ZANQUETA

Universidade Estadual de Maringá (UEM), Brazil | Professor – Mechanical Engineering | 2005 – 2007

Universidade Tuiuti do Paraná, Brazil | Professor – Mechanical Engineering | 2011 – 2012

Delivered undergraduate instruction and technical guidance in mechanical engineering-related disciplines, supporting engineering education and technical development.

EDUCATION

Master of Business Administration (MBA), Human Resource Management
Master of Business Administration (MBA), Project Management
Bachelor of Science (B.S.), Mechanical Engineering

ADDITIONAL INFORMATION

- Contributor to 13+ patented innovations related to acoustics, system modeling, product performance, and engineering methodologies.
- Six Sigma Black Belt with experience leading continuous improvement and structured problem-solving initiatives within global R&D organizations.
- Global engineering and cross-functional collaboration experience across North America, Europe, Latin America, and Asia.
- Published author and researcher in Noise Pollution and Acoustic Engineering, including a technical book focused on environmental noise analysis (2019).
- Mentor — Electrolux Mentoring Program (2024–Present)