

Dr. Rolf Biernath, PhD

Full Bio

Dr. Rolf Biernath, PhD is a multi-faceted science and engineering consultant who helps companies create their future, with a focus on high growth and profit potential. He is a proven strategic and tactical technical leader spanning scientific development to technology system integration. He drives rapid, multidisciplinary development and works with customers, suppliers, and integrators to bring innovations to market. His proven history of innovation includes 58 issued US Patents and relevant international filings, along with contributions to numerous products on the market.

Clients receive exceptional communication skills with incomparable expertise in customer needs identification, problem definition, and elegant solutions in a broad range of scientific disciplines. In his opinion, the most important thing about what he does is to help companies create their future. His desire is for them to be confident they are on a stronger path to growing their business, with a practical solution going forward.

"I get excited to see new creations solve real problems, making the world a better place. My job is to bring about improvement through creative solutions. I thrive on bringing value into the world."

Rolf has always been a tinkerer, growing up with a deep curiosity about how things work and how their components might be combined to create new things. He went on to receive a B.S. in Chemical Engineering with High Honors from Georgia Institute of Technology and a Ph.D. in Chemical Engineering from the University of California, Berkeley, CA. His electives focused on EE, Polymer Engineering, and Materials Science. He has also received a Mini MBA from University of St. Thomas, Opus School of Business in St. Paul, MN. He received the peer nominated Circle of Technical Excellence and Innovation Award at 3M eight times. He is a Certified Professional Consultant through PATCA.

Rolf has shared his expertise as a volunteer with MentorNet to mentor college and graduate students, with the Minnesota Academy of Science as a ISEF Selection Committee Member, and with IoT Fuse as a IoT Fuse HackDay Officer. He also led the 3M Innovation Award team for the MN State Science and Engineering Fair.

In his down time, a passion for learning finds him enjoying experiments with generative AI, electronics, IoT, programming, and home-brew devices. A favorite quote is, "Creativeness in the world is, as it were, the eighth day of creation" by Nicolas Berdyaev.

CORE STRENGTHS:

Product & Technology Innovation:

Lean Startup & Design Thinking: Innovation Disciplines, Rapid and Iterative Prototyping

Patents & Competitive Analysis: Patentability, Design-Arounds, Claim Strategy, Product Teardowns

INDUSTRIES:

Polymer Science and Engineering:

Polymers, Thermosets, Engineering Polymers, Epoxies, Specialty Films, Adhesives, Silicones, Multilayer Films, Microreplicated Films

Chemical Engineering, Chemicals, and Materials:

Formulation, Coatings & Coating Stresses, Nanomaterials, Characterization, Fracture Mechanics, Diffusion

Optics:

Lighting, Daylighting, Displays, LEDs, Lasers, Optical Films, Window Films, LCD Displays, Projection Displays, Optical Metrology and Characterization, Near-IR Imaging, Retroreflective Films, Birefringent Optics and Films

PROFESSIONAL MEMBERSHIPS:

Product Development Management Association, Minnesota Chapter (PDMA)

Consultants Network of Silicon Valley (CNSV)

Professional and Technology Consultants Association (PATCA)