

# Ammon Gallart

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Loves transforming ideas into innovative and user-focused solutions, doesn't settle for less

## PROFESSIONAL SUMMARY

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- Innovative **Mechanical Engineer** with Bachelor's and Master's degrees and **3+ years** of hands-on experience in hard-tech products, specializing in **consumer products, medical devices**, and precision design, driving **product development** from **concept to commercialization**
- Inventor on **3 patent applications**, with expertise in **injection molding, FEA, SolidWorks, DFM/DFA**, and **robust design**, delivering **user-focused solutions** with **regulatory compliance** where needed
- Boosts **operational efficiency** by 20% through **cross-functional collaboration**, creating **cost-effective** designs for **consumer products** and **medical devices**

## CERTIFICATIONS

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- **FE Mechanical Engineering Exam** (2024)
- **Pursuing P.E. Certification**
- **SolidWorks Associate and Professional** (2022-current)

## KEY SKILLS

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- **Design & Engineering:** CAD (SolidWorks), FEA, DFM/DFA, tolerance analysis, injection molding, 3D printing, 3D printing, mechanical and fluid simulation analysis, extensive user-testing and prototyping
- **Product Development:** New product introduction (NPI), concept to commercialization, voice of the customer (VOC), regulatory compliance (FDA), consumer products, medical devices, biomechanical systems, user observation
- **Manufacturing:** CNC machining, pre-preg carbon fiber, prototyping, sterilization, sheet metal, vendor coordination
- **Analysis Tools:** Excel, MATLAB, FEA, ANSYS, Minitab
- **Biomedical Design:** Biomechanical systems, clinical studies, DHF
- **Project Management:** Scheduling, budget, risk communication, multiple concurrent projects/deadlines
- **Languages:** Fluent in English and Spanish

## PROFESSIONAL EXPERIENCE

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<b>Ultradent Products Inc.</b>	<ul style="list-style-type: none"><li>▪ Strengthens <b>part quality</b> and production accuracy for <b>dental devices</b> by achieving consistent specification and <b>cGMP compliance</b>, reducing non-conformances, through rigorous <b>verification</b>, frequent manufacturing/assembly collaboration, and proactive drawing/spec updates</li></ul>	Mar 2026- Present
<i>R&amp;D Development Engineer II</i>	<ul style="list-style-type: none"><li>▪ Ensures FDA/ISO <b>regulatory compliance</b> by developing and executing testing protocols, reports, and DHFs that support successful approvals and audits, while maintaining <b>detailed documentation</b> and change controls in Agile</li><li>▪ Accelerates product revisions and ECOs by streamlining workflows in SolidWorks, <b>PDMworks</b>, and <b>Agile PLM</b>, cutting revision cycle times and documentation errors through multi-departmental <b>design reviews</b> and <b>strong engineering judgement</b></li><li>▪ Drives <b>continuous design-process improvement</b> by proposing system enhancements and refining standards, improving cross-team alignment and <b>product integrity</b> through regular design reviews and <b>ongoing communication</b> with manufacturing/assembly teams</li></ul>	
<i>South Jordan, UT</i>		
<b>BiThermal Aspen Earth</b>	<ul style="list-style-type: none"><li>▪ <b>Optimized part retrieval</b> and QC stations by <b>redesigning layouts</b> and tweaking components, <b>saving operators several hours</b> per shift and improving <b>inspection efficiency &gt;20%</b></li></ul>	Nov 2024- Mar 2026

<i>Design &amp; Manufacturing Engineer</i>	<ul style="list-style-type: none"> <li>▪ Boosted <b>operational efficiency</b> by over 15% via expediting <b>customer bid processes</b> and <b>design reviews</b>, optimizing <b>cost reduction</b></li> <li>▪ <b>Prototyped</b> and refined <b>consumer product designs</b>, with <b>injection molding</b>, CNC machining, stamped metal, die-cast, and adhesives</li> <li>▪ Conducted <b>tolerance stack-up analysis</b> and <b>GD&amp;T</b> for legacy parts, <b>specifying materials and manufacturing processes</b> (injection molding, CNC, sheet metal) to ensure quality acceptance criteria</li> </ul>	
<i>Murray, UT</i>		
<b>Lunir, LLC</b>	<ul style="list-style-type: none"> <li>▪ Led <b>new product introduction</b> (NPI) for patented ratcheting watchband, from concept to commercialization, <b>integrating user observation</b> and competitive analysis for product requirements</li> <li>▪ <b>Built and tested</b> prototypes using 3D printing and <b>silicone</b> molds, achieving 30% part <b>strength increase</b> and 60% <b>profit margin</b> via <b>DFM/DFA</b></li> <li>▪ Managed project <b>schedules, budgets</b>, and vendor coordination for timely delivery; drove <b>process improvements</b> through robust tolerance designs</li> <li>▪ Collaborated with <b>suppliers</b> and clients to ensure regulatory compliance and <b>effective communication</b></li> </ul>	Mar 2023- Mar 2025
<i>Founder, CEO, Head Engineer of R&amp;D and Manufacturing</i>		
<i>Provo, UT</i>		
<b>Intervention Tech., LLC</b>	<ul style="list-style-type: none"> <li>▪ Designed <b>SolidWorks</b> models for <b>artificial heart valves</b>, enabling real-time production for <b>minimally invasive</b> procedures in <b>medical devices</b></li> <li>▪ Documented data for heart valve installation/removal to improve <b>process accuracy</b>, aligning with <b>regulatory requirements</b></li> <li>▪ Collaborated weekly with leadership to set goals, ensuring <b>design verification</b> and <b>validation</b> for <b>clinical applications</b></li> </ul>	Sept 2022- Aug 2023
<i>Engineer</i>		
<i>Remote</i>		
<b>Laguna Tech USA Inc.</b>	<ul style="list-style-type: none"> <li>▪ Developed <b>debubbling/flushing</b> and <b>crimper assembly</b> procedures for <b>artificial heart valve</b> delivery systems, enhancing <b>clinical reliability</b></li> <li>▪ Assisted surgeons with <b>vascular device testing</b> and dilatation of femoral veins and arteries, ensuring <b>design feasibility</b> and regulatory compliance</li> <li>▪ Converted patient <b>CT files</b> to 3D-printed models for <b>preclinical testing</b>, supporting <b>surgical preparation</b> in <b>medical device development</b></li> </ul>	Apr 2022- Aug 2022
<i>Intern</i>		
<i>Consultant</i>		
<i>Irvine, CA</i>		

## KEY PROJECTS

- **Ratcheting Buckle and Watchband:** Designed a **patented**, micro-adjustable watchband with injection molding, achieving a **60% profit margin**
- **3-Way Zip Tie Connector:** Engineered a **cost-effective** and robust connector with no side pulls, meeting **50% profit margin** and high strength requirements
- **Compact Folding Drone:** Developed a **lightweight, foldable** surveillance drone with **telescoping arms** for military use
- **Better Boot:** Created a **medical device** with a variable-height sole and embedded sensors, ensuring level hips, durability, and **biomechanical compliance**
- **Remote Streak Slit Aligner:** Designed a precision **electro-mechanical** mechanism for remote operation of streak slit cameras
- **BABATA Apparatus:** Built a **modular biomechanical** testing device with a 3D-printed **tensegrity** structure for **orthopedic** research
- **Wheelchair Driving Assistance Device:** Engineered a **torso-driven** consumer product for SMA patients, compatible with most wheelchairs

## EDUCATION

Brigham Young University, B.S. & M.S. Mechanical Engineering, Biomedical Emphasis

Dec 2025

- Bachelors in Apr 2024 and Masters in Dec 2025 Provo, UT
- GPA 3.81 | Pell Grant, Half-tuition Scholarship (3 years)
- Awards: **3<sup>rd</sup> place**, Student **Innovator** of the Year (SIOY) for **Ratcheting Buckle Invention**
- NASA Space Consortium Grant recipient
- Relevant Coursework: Product Design, Biomechanics, CAD, Material Science, FEA, Compliant Mechanisms, Biomedical Device Design, Applied Engineering Math

## RESEARCH & PUBLICATIONS

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**Brigham Young University – MS Degree Research** Sept 2024-Dec 2025

*Masters Research* Provo, UT

- **Researched and developed** a tensegrity **arm brace** capable of expanding to and altering the stiffness of the limb it's placed on using **advanced 3D modeling**, component assembly, and good engineering analysis
- Published: A. E. Gallart, J. R. Hill, "Modeling and Optimization of METS: An Wearable Tensegrity Brace for Adaptive Stiffness Control in Human Applications," ASME SMASIS 2025

**Brigham Young University** Sept 2023-Apr 2024

*Senior Capstone Project* Provo, UT

- Designed and assembled a **custom electromechanical apparatus** for Los Alamos National Laboratory, **optimizing** streak slit camera performance via SolidWorks, 3D printing, and **manual machining**

**Brigham Young University** Dec 2022-Apr 2024

*Research Assistant* Provo, UT

- Level 3 MRI Technician; **trained others** on MRI operation and conducted imaging for **biomechanical** studies using **clinical imaging**
- Published: S. Baker, A. E. Gallart, A. E. Bowden, et al., "Correlations of Patient Reported Outcomes Among Patients with Chronic Low Back Pain and Controls," NASSJ

## AWARDS & LEADERSHIP

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- **Awards:** Eagle Scout, Phi Eta Sigma Member, HSF Scholar, **3rd Place SIOY** (Ratcheting Buckle)
- **Leadership:** Director of Finance, Biomedical Engineering Association (4 years)