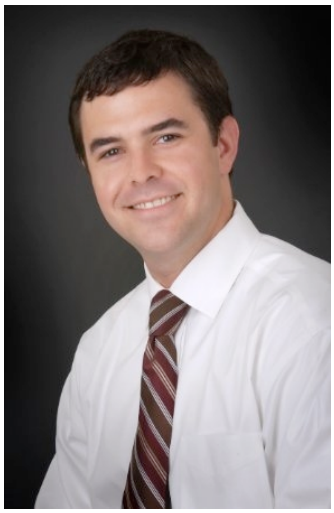
Alumni Spotlight: Henry Bonin

Spring 2014 Newsletter

Joint Graduate Program in Biomedical Engineering
University of Memphis Herff College of Engineering | University of Tennessee Health Science Center



Meet Henry Bonin, MS 2006, worked with Dr. Diangelo.

Q: So what has happened since graduating in your career?

A: I started my career with Medtronic Sofamor Danek, designing custom instruments as a product development intern in the Interbody group. I was hired on as a product development engineer, working in posterior dynamic stabilization and enhanced pedicle fixation at the bone screw interface. An opportunity to experience an additional corporate environment and broaden my exposure to additional surgeon specialties and anatomy presented itself within Smith & Nephew. I joined S&N as a product development engineer working in both Shoulder Arthroplasty and Early Intervention Knee Arthroplasty.

Q: What are a few things that you learned in the program that have helped?

A: I think the thing I learned in the program that has benefited me most in my career is how to transform physiological loading environments into bench-top testing protocols. This skill is often required in the medical devices industry when ASTM testing standards do not exist. I did this for Medtronic Sofamor Danek in order to simulate anterior-posterior shear in a vertebral segment, which occurs not only in conjunction with spondylolisthesis, but also when a segment is destabilized by decompression such as a facetectomy. For Medtronic, I used this skill to answer several unknown questions about less than desirable product performance. As fate would have it, my job at Smith & Nephew also required this skill. Working with an international team of very talented engineers, I helped establish worst case fatigue testing protocols for Shoulder Arthroplasty and testing protocols to simulate falling onto a shoulder prosthesis. This is another area where ASTM test standards could not be referenced. We were able to quickly replicate clinical failure modes in the lab, overcome numerous design challenges, and eventually return the enhanced product to the market.

The ability to objectively review & critically analyze scientific studies (research or clinical) is something we all learned to do in engineering school. Graduate school at UT Memphis gave me the opportunity to exercise this skill, which continues to serve me well.

Another thing that I gained in Dr. DiAngelo's lab was a deep respect for cadaveric tissue. Products that benefit millions of people could not be developed without this sacrifice and I encourage folks to consider donating their bodies to science.

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Q: How did you like coming back to give a seminar:

A: I tell you what; being asked to give a seminar was such an honor. Graduate school was challenging, and envisioning the transition to full time employment was not always clear for me. I hope that my talk helped a student or two realize that graduate school WILL actually end one day, and that working in the medical device industry is a lot of fun.

Q: What are you doing now and what are your goals over the next 5 years?

A: Believe it or not, I now work in marketing as a Senior Global Marketing Manager in the Extremities and Limb Restoration franchise. I'm having a blast in marketing because I get to interact with all facets of the company, domestic and international. I am also gaining a lot of experience to the business side of the industry, which is something my engineering training lacked. I get to work with very technical products that remind me a lot of the Erector sets I grew up playing with. The products are used by pediatric surgeons, foot & ankle surgeons, and traumatologists to do some pretty amazing things, which makes coming to work every day very rewarding.

My goals over the next 5 years are to continue honing my skills as a marketer. Ultimately I plan to continue learning!