

TRANSLATING OUR RESEARCH FOR PUBLIC CONSUMPTION: NATIONAL BIOMECHANICS DAY AND BEYOND: THE RISE AND RISE OF NBD



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INTRODUCTION

A play about modern society:

Us: Hello, nice to meet you. What do you do?

Not Us: Nice to meet you. I am an accountant. What do you do?

Us: Oh, that's great. I am a biomechanist.

Not Us: Wow, that's great...uh what is a biomechanist?

The End

With this compelling and poignant one-act drama, I highlight the state of biomechanics today: it is the great but unknown science. Despite the existence of the International Society of Biomechanics, the American Society, the European Society, the Brazilian Society and other such organizations, we have yet to break into the mainstream of consciousness. While most people have a concept of chemistry or physics or geology, or math few lay people can express a knowledge or awareness of biomechanics. How very unfortunate this is because biomechanics has so much to contribute to human society through its very nature, the combination of biology and physics. **Biomechanics science investigates the broad expanse of biology in the physical world and it makes substantial contributions to medicine and health, basic biology, human and animal movement, performance, and existence in the physical world. In short, Biomechanics helps people.** For these reasons, we seek to expand the influence and impact of Biomechanics on human society.

Presently, Biomechanics education occurs almost exclusively at the university level. We propose to broaden the exposure of Biomechanics to high school students through **National Biomechanics Day (NBD)**. The long term goal of NBD is to incorporate Biomechanics into high school curricula around the world. We envision a time when high school students can choose a Biomechanics course as easily as a math course. When Biomechanics advances by stepping backward from a university-initiated to a high school-initiated discipline, more people will receive training in biomechanics, more people will enter university with a knowledge of biomechanics, and more people will ultimately choose to do biomechanics in any of its many manifestations as a career endeavor. **Through NBD we can make Biomechanics the, "breakthrough science of the 21st century."** This is possible due the extensive and growing interest in STEM education and the fact that **Biomechanics is all things STEM: it is science, it is technology, it is engineering, and it is mathematics.**

We created NBD last year and through our efforts, recruited over 170 biomechanists who then recruited over 2,000 high school students and teachers to participate in Biomechanics Labs across the U.S. on or about April 7, 2016, [As Seen Here](#). The short term goal of NBD is to hold annual, nationwide and now worldwide Biomechanics events to introduce high school students and their teachers to this interdisciplinary, fundamental STEM program. NBD 2016 was successful

because it was a unified and synchronized celebration of Biomechanics across the country. My summary of NBD 2016 is, "there were more smiles on more faces in more Biomechanics Labs than ever before." These smiles correlate to increased appreciation of Biomechanics among young people and the future pursuit of Biomechanics as a career. Please also view a television news story on an NBD 2016 event in Scranton, Pennsylvania [HERE](#). This news story identifies the excitement young people have towards Biomechanics and the success of NBD in 2016.

Our big step for NBD 2017 is to go International. As of this writing we have NBDs set in eight countries: Australia, Brazil, Canada, England, Ireland, New Zealand, South Africa and Taiwan. Yes, we now have International National Biomechanics Day. New Zealand is leading this effort with seven NBDs across the country. As of this writing, NBD 2017 will be April 6, 2017 and we are presently organizing this event. Please view the [NBD 2017 Website](#) to see our current efforts. We hope to exceed 3,000 high school students this year and continue to rise into the future. We also increased our sponsorship from three organizations in 2016 to 17 this year:



Our NBD 2017 motto is, "Science meets fun on National Biomechanics Day," as seen on these posters:

