

MAE Interns Take on the World

by Charles Zhang, Newsletter Co-Editor

For many of us, landing an internship is one of the most exciting moments of our undergraduate careers. But along with the job search comes the anxiety of not knowing what to expect from the internship—after all, the tasks assigned and the work environment can make or break the experience. One thing, however, is for certain: regardless of the job function, MAE students will be able to make good use of what we learn both inside and outside of the classroom.

Junior Ankith Harathi, who worked for Boeing near Seattle over the past summer, explained that much of his work involved material and skills from his sophomore MAE classes. “My work involved extensive use of MATLAB to simulate force, hydraulic, and vibratory loads,” he said. For other tasks Harathi “used formulas learned in MAE 2120 regarding fatigue and failure analysis [and] used MATLAB to model the air cycle machine and efficient heat exchanger design, in which I applied a lot of my knowledge learned in ENGRD 2210, Thermodynamics.”

This work was applied to Boeing’s 787 Dreamliner, the company’s newest commercial aircraft. “I worked with the propulsion and electrical subsystems analyzing the performance of a clutch mechanism between the engine gear box and variable frequency starter generator,” Harathi said.

M.Eng. student Lijia Wang also found an internship within the aerospace industry, working for SpaceX near Los Angeles. “I worked as a mechanical design intern in the Avionics department, where I was



responsible for the design, analysis, and testing of secondary structural components that mount electrical hardware. I also was responsible for designing tooling components and test fixtures,” he said.

Senior Alex Toy applied his skills to an entirely different industry while interning at Unilife, a medical technology company. Speaking of his experiences, he related, “As part of a company that designs and manufactures injectors for drug delivery, I worked on a design for automating the assembly of an auto-injector, which can inject a drug and retract the needle with a press of a button.” Toy’s work involved creating CAD models of the assembly fixture, and testing the more complex aspects of his designs. “The concepts I came up with are now being used in order to create a prototype,” he said.

For Toy, it was “a great experience learning about automation, pneumatics, and manufacturing.” Similarly, Harathi commented that his time at Boeing was, “An amazing experience due not only to the environment of the company but to the fact that I was able to directly call upon class material I had learned and solve ‘real’ problems.”

Wang, on the other hand, had a bit of a rougher time. “On average, I worked from 9 am to 9 pm—often times I would get out later,” he explained, “But it was also rewarding, especially since I gained quite a few useful skills that I could not have learned in school. And on the plus side, I got free dinner every day.”

Upcoming ASME Events

Volunteering at Boynton Middle School

Boynton Middle School Science Olympiad is seeking volunteer mentors in early March to help kids prepare. Contact asme@cornell.edu if interested.

BJM Elementary School Science Fair

Wednesday, March 19th,
8:15AM-1PM

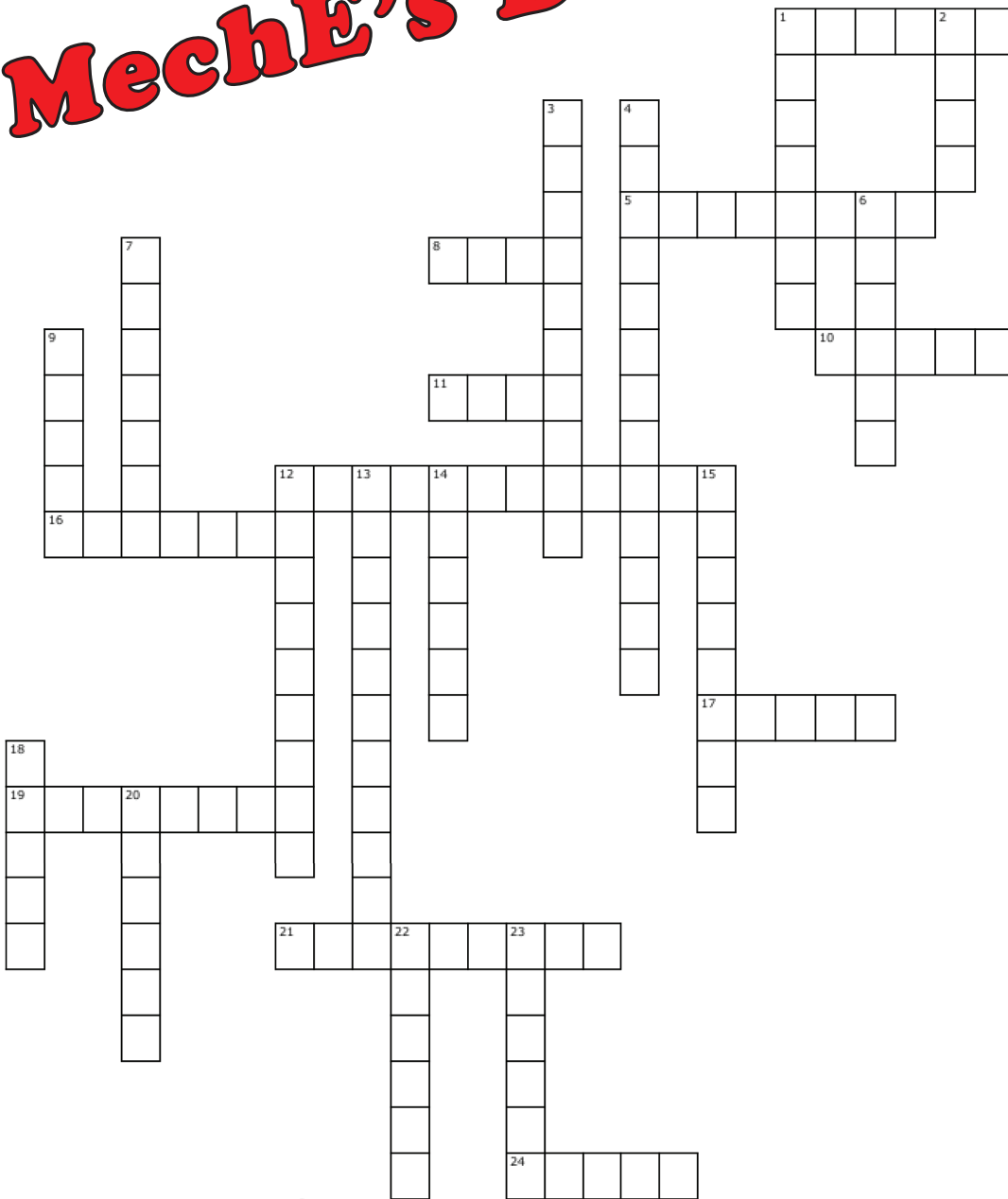
Volunteers wanted! If interested, shoot an email to asme@cornell.edu

Nano Day

Saturday, March 22nd,
12-4 PM, Sciencenter

Sciencenter is looking for 80+ volunteers to lead hands-on activities for Nano Day. If interested, contact us by 3/15.

MechE's Delight



Across

1. ODE 45
5. Engineer chill spot
8. Brand of computers in Upson Lounge
10. FEA software
11. Actual name of what people call "Duffield Atrium"
12. Sumo-bots!
16. Engineers are socially _____
17. Engineers don't get any _____
19. _____ oscillations
21. Right?...Right?
24. Bipedal robot and bikes

Down

1. Cafe in Duffield
2. Professional society of mechanical engineers
3. Mr. Blob
4. Statically _____ structure
6. Find the delightful engineering scent in Upson _____
7. Science rules!
9. Free food!
12. Statics and _____ of solids
13. I can haz
14. Find one in Duffield once in a blue moon
15. Ugh! I am so _____ out!
18. Soup available in Mattin's err day
20. NFL professor
22. Who owns the first law?
23. Don't put a _____ in my day!

*Got the Answers?
Bring them to Nanette in Upson 108.
First correct solution gets a prize!*

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