“The human body,” says Pablo Iglesias, a professor in the Department of Electrical and Computer Engineering. “I know it’s not exactly engineered in the traditional sense, but by every other aspect, it’s the most impressive thing I can think of. But that may be cheating, and I certainly don’t ‘own’ it.” On further reflection, Iglesias, who grew up in South America, suggests that his house’s water supply system is the best-engineered object that he owns. “This is not very sexy, but having been to places where there’s not much running water, you realize how important it is,” he says. “It’s one of those things that you don’t think much about at all, which is a good hallmark of a well-engineered system.”

“My golf clubs,” says Edward M. Joffe, the project manager with the Whiting-Turner Contracting Company who is overseeing the construction of the Computational Science and Engineering building on the Homewood campus. “Recently I have been trying to play more than in years past,” he says. “I had been playing with a set of clubs that were handed down from my father, and I think that they were from the time of Arnold Palmer. Old clubs were made in a blade format and had a very small ‘sweet spot.’ That meant that you had to strike the ball with great accuracy in order to have a good shot.

“Today’s clubs are a result of engineering and technological advances; they have larger sweet spots and are more forgiving. I am thankful for this engineering progress; it’s made the game a little less frustrating. Needless to say, I have gone from being a halfway decent golfer to a few-strokes-better golfer ... but I’ll take it.”
We asked a sampling of faculty, students, and staff: What’s the best-engineered object you own?

By Elizabeth Evitts
Photos by Will Kirk ’99 (A&S)

Nikhil Ram Mohan, a rising junior studying applied math and statistics, believes that any well-engineered object should include thoughtful, simple technology. For that reason, this Dubai native picks his DeLonghi espresso maker: “It’s simple, it uses the basic ideas of pressure and heat—things that everyone understands—and it gives you a great cup of coffee in the morning.”

Erin Fitzgerald, a graduate student in the Department of Electrical and Computer Engineering and the founder and chair of Women of Whiting, a graduate student organization to support female students, says she values her tablet PC. The small laptop permits her to operate the computer with a digital pen or a fingertip instead of a keypad and a mouse. “A tablet PC is physically easily manipulated, the screen spins around; I can download papers and PDFs and write on those and store on the soft copy instead of having piles of papers around,” she says. Fitzgerald first started using a tablet PC when her faculty advisor, Frederick Jelinek, the director of the Center for Language and Speech Processing, sent her to work in Prague for a semester. “We thought that if we could write directly on the screen, it would help us work remotely,” she says. “We had Web cameras set up. I could directly draw on the tablet so as we spoke he would have the image appear on his screen.”

If you have a well-engineered object you’d like to tell us about, please send the information—and a photo if you like—to engineeringinfo@jhu.edu. We’ll post our readers’ responses on our website at engineering.jhu.edu/bestengineered.
Walter Krug has been an instrument designer for 33 years for the Department of Materials Science and Engineering. He had a tough time narrowing his list to just one object. “A few items have wowed me in my lifetime,” he says. “As a farm boy growing up in Pennsylvania I was subjected to many different machines. One of these machines was a corn sheller. It was very simple in construction and yet it would remove the kernels from the cob no matter the size or shape of the corn. The second device was a thing called a knottter, on a hay baler. I have studied it many, many times,” Krug says, “and can’t figure out how it works. But it does and quite well.”

In the end, the machinist’s top prize goes to his fishing reel. “Maybe the greatest engineered device I own is a fishing reel. In particular a spinning reel. If I consider all the things it must do—from being able to use it whether you’re right-handed or left, setting variable drag, casting and retrieving the line without it getting tangled, being submerged under water without damage, and being manufactured at a reasonable price—someone did a great job on this.”

M. Gordon “Reds” Wolman ’49 says his walking stick gets the honor of best-engineered object. “I use this walking stick from REI as a cane,” explains the B. Howell Griswold Jr. Professor of Geography and International Affairs in the Department of Geography and Environmental Engineering. “It is lightweight, it has a comfortable handle, it’s very strong, and it’s retractable. It telescopes into a very short length, which fits into a suitcase. It also has the ability to become either a point or rubber at the base. The rubber at the end of the cane has a hole in it so you can rotate a spring coil from one position to another, rotating an inner cylinder that allows the point to come through the rubber. You lock it into that position or rotate it out of that position so that the point retracts again.”
Technological advances to a classic design impress Nicholas Jones, dean of the Whiting School. "I love my new bike," Jones says. "It's great in its simplicity and how it hasn't changed in more than a century. Yet it has evolved in detail. The high-end bikes these days are so superbly engineered in terms of what they contribute relative to their weight and how efficient they are." On the weekends, he enjoys riding his Trek hybrid along the many trails near Baltimore.

Jones, who grew up in New Zealand, didn't get a bike until he was 10—"which is probably a good thing," he says, "because I grew up in quite a hilly region and I could have ended up in a pile at the bottom of a steep hill." (The dean is making up for lost time—he estimates that he logged more than 3,000 miles on his last bike.)

Water is on the mind of Maya Sathyanadhan, an '06 and '07 graduate from the Department of Geography and Environmental Engineering. The president of the Executive Board of JHU's chapter of Engineers Without Borders—USA, Sathyanadhan has traveled to places like South Africa to help supply water to remote villages. "I like my Nalgene bottle," she says. "The product itself has had a lot of materials testing to it because it's considered unbreakable. But the reason I like it is that it allows me to not use plastic bottles, but to reuse this one. I don't own water, but the Nalgene product allows me to carry water without having to buy it."