## Saving the Earth, Forecasting the Future

By Kennda Lynch



very decade seems to have one definitive space movie that inspires a generation.
The 70s had "Star Wars," the 80s had "E.T.: The Extra-Terrestrial," and the 90s had "Contact." Now, the 21st century has "WALL•E," the newest animated feature from Disney and Pixar

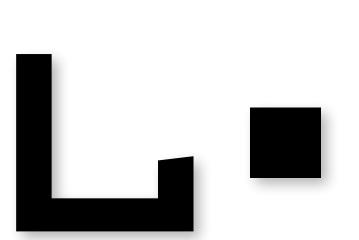
Animation Studios, about a determined little robot that discovers his purpose in life while taking a fantastic journey across the galaxy.

WALL•E, an acronym for "Waste Allocation Load Lifer Earth-Class," is the last robot left on Earth and is programmed to clean up the planet, one trash cube at a time, while the humans are away on a luxury space cruise. However, after 700 years, he's developed one little glitch: a personality. WALL•E is extremely curious and highly inquisitive and amasses a treasure trove of artifacts while he dutifully compacts cubes of human trash every day. Aside from the companionship of his pet cockroach Hal, WALL•E is alone. Then, one day, he meets EVE (Extraterrestrial Vegetation Evaluator), a sleek, state-of-the-art search robot that was sent to check on Earth by the humans. EVE befriends WALL•E and quickly realizes he holds the key to the planet's future. WALL•E and EVE take off on a comic adven-

ture across the galaxy, along with a crew of ragtag robots they meet along the way.

#### **TIMELY MESSAGE**

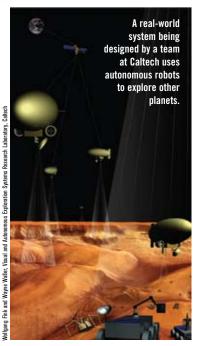
The latest film from Academy
Award-winning writer-director Andrew Stanton ("Finding Nemo") and
the ninth feature film from Disney/Pixar,
"WALL•E" touches on several currentday issues, such as the protection of our



home planet, exploration of the universe and self-realization, and is filled with surprises, action, humor and heart.

WALL•E is brought to life by the stateof-the-art computergenerated (CG) animation that Pixar is famous for. The look of WALL•E is inspired by NASA paintings from the 60s and 70s and by original concept paintings done for Disneyland's Tomorrowland by Disney Imagineers. Pixar went one step further and recruited the talents

of Ben Burtt, who is the acclaimed sound designer of the "Star Wars" movies, "E.T." and the "Indiana Jones" trilogy and the creator of the voice of R2-D2. Burtt cre-



close we are to a world of real WALL•Es, and our quest ended at the door of Wolfgang Fink, Ph.D.

### **JUST HOW REAL?**

Dr. Fink is an applied theoretical physicist who does research for NASA's Jet Propulsion Laboratory, the University of Southern California and the California Institute of Technology (Caltech). But his interests go beyond physics to fields including astrobiology and robotic exploration of other planets.

To fully explore

a planet such as Mars, or to explore objects in the solar system that humans cannot access, such as Europa, a moon of Jupiter, "autonomous robots" must ing targets and transmit that information back to us."

Not only is this concept useful for exploring other planets, autonomous robots may eventually affect our daily lives here on Earth.

"I think (this technology) will move into the social aspects," Dr. Fink says. "In Asia, for example, you have service robots that help take care of the home."

Dr. Fink says the robots being used today still rely on humans heavily for their decision-making, but the eventual goal is to reach true autonomy and have a machine system that can actually learn on its own, like WALL•E.

#### **SCI-FI INSPIRATION**

Dr. Fink recalls how movies such as "Stars Wars" and "E.T." and TV shows such "Babylon 5" and "Battlestar Galactica" inspired him when he was a child and continue to inspire him today. And he hopes "WALL•E" will inspire today's children to be aware of environmental issues, robotics and exploration.

# "WALL E" debuts in theaters on June 27 and comes during NASA's 50th anniversary celebration of space exploration.

ates a range of expressive robotic voices that, coupled with the emotive look of WALL•E, provides a depth of character and identity that will draw audiences in.

WALL•E debuts in theaters on June 27 and comes during NASA's 50th anniversary celebration of space exploration (www.nasa.gov) and less than a year from the first scheduled flight of the first commercial space company, Virgin Galactic (www.virgingalactic.com). The intersection of these events led *NSBE Bridge* to find out just how

be created — robots that can think and make science decisions for themselves. As the founder and head of the Visual and Autonomous Exploration Systems Research Laboratory at Caltech, Dr. Fink and his colleagues are working on a next-generation system called Tierscalable Reconnaissance, which uses robots of this type.

"It's like the robot probe from the movie 'The Empires Strikes Back,' " Dr. Fink says. "Eventually, we want a robot that will go to a planet, find the interestIn essence, "WALL•E" is about finding who you are and what kind of difference you can make in the world.

Dr. Fink points out that it took courage for WALL•E to leave earth and venture out into something unknown.

"'WALL•E' shows you that you are not just put into one drawer and labeled," he says. "There's always a possibility for you to break out into new adventures."

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