

Vehicle for Mars exploration

BEHREND-Dr. Henry Stone, technical manager of automation and control at the Jet Propulsion Laboratory in Pasadena, Calif., will speak in "Designing a MicroRover to Explore Mars" at Penn State Erie, The Behrend College, on Saturday, April 27 at 12:45 p.m. in the Reed Lecture Hall located in Reed Union Building. Stone will appear as the keynote speaker for Penn State-Behrend's Research and Industrial Senior Projects '96, planned to showcase the efforts of seniors graduating in mechanical engineering technology, mechanical engineering, electrical engineering technology, electrical engineering, and plastics engineering technology.

The lecture, and presentations which will run from 8:30 a.m. until 12:30 p.m. in the Nick Building, are free and open to the public.

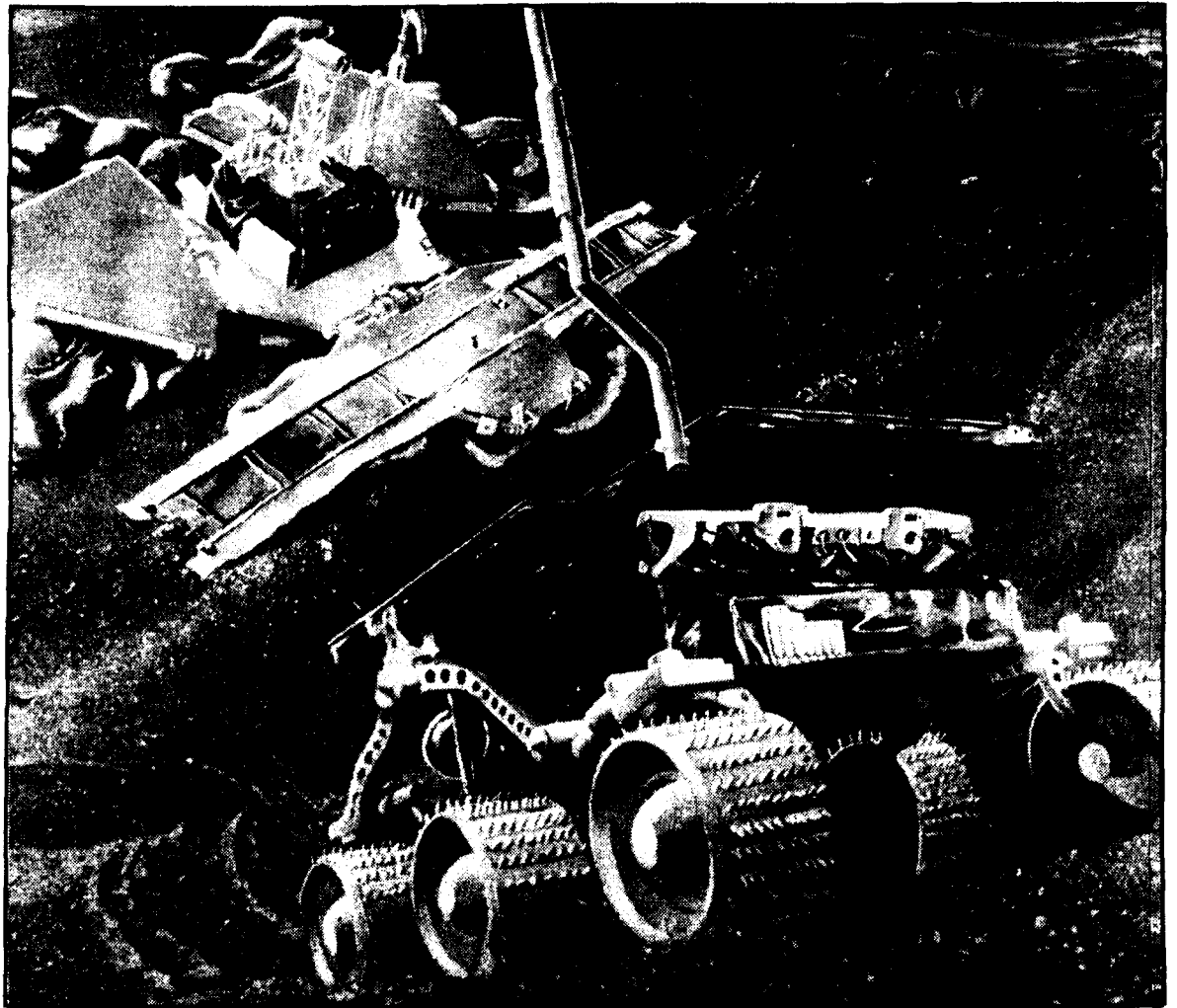
Stone's presentation will include photographs of the actual flight rover, the lander, the spacecraft, and a short videotape.

NASA will launch the Mars Pathfinder Spacecraft from Cape Canaveral and place it on a trajectory for Mars, scheduled to land in July of 1997. Stone will supervise the engineering team responsible for the

control and operation of the vehicle on Mars, as well as analysis of the data retrieved.

The spacecraft, which weighs approximately 450 kg, will include an 11 kg, six wheeled robotic vehicle known as Sojourner. Able to freely navigate about the surface of Mars, this vehicle will enable scientists the deploy instruments and collect data at specific locations beyond the reach of the lander. Sojourner will perform a wide variety of technological experiments ranging from analysis of the mechanical properties of the Martian terrain to the evaluation of the rover's unique mobility, hazard avoidance, and navigation systems. These results will be crucial to the design of future planetary rovers, particularly those envisioned within NASA's Mars Exploration Program.

According to Stone, the designing and building of the Sojourner vehicle has been an extremely challenging one. The vehicle needs to be capable of dealing with hazards such as rocks, ditches, and the Martian terrain with a temperature which varies between -110 C/-170 F and 0 C/32 F each day. The designers had to develop new methods and materials for protecting sensitive electronics against thermal damage, new



Spaced Invaders: No, it isn't a galaxy far far away--well, almost. It's an artist's rendition of the Sojourner and MicroRover, the topic for key note speaker Henry Stone. Stone will give his lecture as part of the Research and Industrial Senior Projects '96.

algorithms for navigating and detecting obstacles, techniques for operating with a very limited amount of power, and

means for packaging an entire spacecraft into a vehicle the size of a bread box. For more information on the

lecture, call the Penn State-Behrend School of Engineering and Engineering Technology at 898-6153.

Student Events

Graduates must report to the ground floor of Erie Hall no later than 11:00 a.m. on May 11 for graduation.

If in doubt whether graduation will be held outdoors at 12 noon (one ceremony) or indoors at 12 noon and 2:30 p.m. (two ceremonies), a receptionist will be on duty beginning at 6:30 a.m. on the day of graduation, May 11, at 898-6000 to answer questions.

Spring Commencement will be held on **Saturday, May 11 at 12 noon on the Reed Lawn, weather permitting. Seniors - don't forget to pick up your cap and gown and tickets needed in case of bad weather and two ceremonies.**

Tutor applications in all subjects being accepted now for approval for Fall 1996 semester. Flexible hours / \$5 per hour. Applications are available in 203 Library or the Financial Aid Office.

FUNDED BY SGA

<p>Attention Seniors!!! The Penn State Behrend Lion Ambassadors are sponsoring the Fourth Annual Zero Year Reunion (ZYR) to be held Friday, April 26 from 4-6 p.m. in the apartment quad. You have worked hard these past four years. So, come out and enjoy a BBQ, refreshments, DJ entertainment, prizes, and relax...on us! ZYR is open to graduating seniors only (seventh semester and above). Hope to see you there!</p>	<p>25 - Thursday</p> <p>Take Back the Night March Perry Square</p> <p>Biology Club Reed 3 5:30 pm</p>	<p>26 - Friday</p> <p>Intervarsity Christian Fellowship Band/Choir Room 6:30 - 8:00 pm</p> <p>German Club 12:30 pm Reed 114</p>	<p>27 - Saturday</p> <p>Unity Picnic at the Wilson Picnic Grove 1:00 pm Free Food & Drink Sponsored by ABC</p>
<p>27 - Sunday</p>	<p>29 - Monday</p>	<p>30 - Tuesday</p>	<p>1 - Wednesday</p>