Five from division participate in national SWE conference

A quartet of division women—and John Bailey of Lanham—were in Seattle recently as participants in the 1983 National Convention of the Society of Women Engineers. More than 700 Society members and students attended the three-day session.

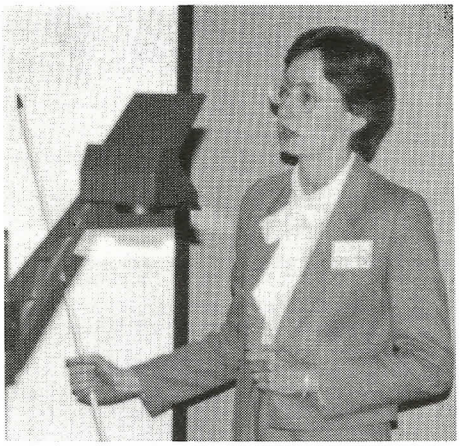
Faust coordinates Landsat presentations

Barbara Faust, systems engineer, Systems Operations, Military Programs Department, Valley Forge and NASA Headquarters' Yvonne Brill served as coordinators of a seven-part technical session devoted to "Landsat: The NASA Earth Resources Program." SSD's Dr. Joan Brooks, Sue Hannan and Penny Masuoka delivered three of the seven talks that made up the presentation.

In the introductory session, Ruth Whitman, program manager, Advanced System Concepts, ORI, Inc., Silver Spring, Md.—and a former 20-year NASA employee—presented an historical overview of satellite remote sensing.

Dr. Brooks provides functional overview of Landsat 4 system

Dr Brooks, manager, Systems Engineering and Analysis at Technical Support Department's Lanham Center Operations, provided attendees with a functional overview of the Landsat 4 system, inlcuding the data acquisition and distribution network, the satellite and its instrumentation, and the ground processing system.



SOFTWARE PSYCHOLOGY AND THE THEMATIC MAPPER—*These interesting topics were addressed by John Bailey (l), Lanham research scientist and Penny Masuoka, a staff geologist at LCO.*

"Building a System to Build a System" was the topic of a paper presented by Sue Hannan, manager, Software Engineering at Lanham. Subjects covered in this session included the management of requirements for the Landsat 4 ground system, system decomposition, the parallel development of hardware and software elements, the management of change, and quality assurance.

Josephson discusses Landsat commercialization

In the fourth session, Diana Josephson, president of the American Science and Technology Association, discussed the commercialization of Landsat and other land resources and weather satellite systems. Issues currently under consideration by the Reagan Administration, the Congress, and cognizant government agencies were reviewed.

Sessions five through seven of the Landsat presentation focused on the use of remotely sensed Landsat data as a supplement to—or replacement for—conventional data sources, and as a means of providing information which was previously unattainable. ORI's Ruth Whitman provided an introduction and background on the applications of Landsat-acquired remote sensing data.

Dr. Diane Evans of the Jet Propulsion Laboratory, Pasadena, Calif., spoke on the use of co-registered radar, visible and infrared images for geologic remote sensing. Data from Landsat 4's multispectral scanner and thematic mapper were combined with data from the Heat Capacity Mapping Mission, the Seasat Synthetic Aperture Radar, and the Shuttle Imaging Radar to provide quantitative information about characteristics of the earth's surface, such as, slope and drainage density, surface roughness and macroscopic differences in geologic composition.

SWE SESSION COORDINATOR—*Systems engineer Barbara Faust, was instrumental in the success of SWE's seven-part session on Landsat.*

In the final session of the Landsat program, Penny Masuoka, staff geologist at Lanham Center Operations, presented some early results of the Landsat 4 thematic mapper. It was shown how the greatly improved resolution permits scientists and other investigators to distinguish between some crops,

(Continued on page 3)

Space Systems Division
This Week
Vol 1, No. 32
August 12, 1983

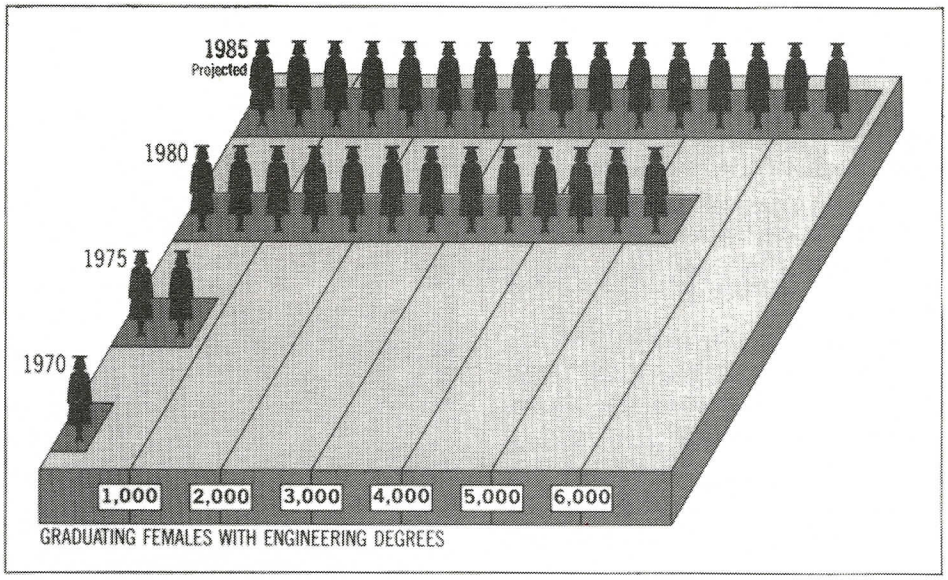
Space Systems Division This Week is published weekly by Division Communication and Public Affairs for the information of General Electric Space Systems Division employees and their families. Dale A. Moffett, editor, Tom Palandro, photographer. Readers' comments are welcomed and encouraged. Address all correspondence to: Editor, This Week, Room U7038, Valley Forge Space Center. DIAL COMM 8* 242-1495.

Division engineers featured in special SWE magazine insert

(Editor's note: A special Aerospace Group supplement—highlighting the dramatic increase in numbers of women in engineering disciplines—was distributed to attendees at the 1983 National Convention of the Society of Women Engineers as the centerspread in the June issue of Pacific Northwest *magazine. The insert, which included photos of SSD's Fran Ruggles, Chris Spejenkowski, Zalpha Hashem and Patricia Scott, contained a wealth of interesting information about women in engineering. A portion of the text is reprinted here.)*

"The woman engineer. Once a rarity, not so anymore.

Back in 1970, less than one percent of the nation's engineering graduates were women. The grand total of 358 women graduated with engineering degrees that year from American universities. Finding a woman engineer within a major company was unusual, and meeting one in a small company virtually impossible.



Different story today

Today, though, it's becoming a much different story.

In 1982, more than 10 percent of all U.S. engineering graduates were women. They made up almot 15 percent of full-time undergraduate engineering students, and 10 percent of graduate students seeking advanced engineering degrees.

From 1970 to 1974, the numbers of undergraduate engineering degrees granted to women doubled after years of remaining stationary.

Projections are that women will make up nearly half of the graduating engineers in this country by the 1990's

Competition intensifying for engineering talent

Technical industries have finally awakened to the facts, and the competition for the best engineering talent—which has a high percentage of women among it—has intensified.

So the woman engineer is in great demand. The reason is that they are good. Among the best. Dedicated, mature, creative. The kind of engineer that companies like General Electric need . . . and want."

Five from division . . .

(Continued from page 2)

snow/clouds, and certain rock types which could not be differentiated in scenes from the multispectral scanner.

A fourth SSD speaker on the convention agenda was Lanham research scientist John Bailey.

Bailey was at SWE as a pinch hitter for his wife, Dr. Betsy Kruesi, manager, Software Management Research at M & DSO's Data and Information Systems organization in Arlington, Va. who was unable to attend due to personal illness.

Making Dr. Kruesi's presentation, Bailey addressed attendees on the application of psychological research methods to the problems of software development and maintenance. Also included was a brief discussion of the division's current study on the use of Ada, the Department of Defense's new programming language.

The division's participation in the Seattle convention was coordinated by Joann DePalantino, specialist, Human Resources Programs, Aerospace Group Staff.

A CHORUS LINE?—*Not at all . . . just happy staffers at the SWE GE exhibit. Shown here (l-r) are: Jan Nelson, Medical Systems; Marilyn Bobo, Aircraft Engine; Mary Palilonus, Nuclear Business Operation; and Rosemary Dechering, Aircraft Engine.*