

Issued every 2nd and 4th Friday of the month.

Material for inclusion in the 23 February **NEWS** should be submitted to Dian Gay, Room 606, by Friday, 16 February.

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NEWS

NEWSLETTER OF THE APPLIED PHYSICS LABORATORY • UNIVERSITY OF WASHINGTON

New Polar Science Center Research Assistant

Dian Gay



Linda Marsh presents new-employee materials to Ferdinand

As you may recall from an article in the April 14, 2000 edition of the APL Newsletter, the Polar Science Center received funding from the National Science Foundation to establish a long-term environmental observatory at the North Pole. The first of five expeditions occurred in April 2000 when the North Pole Station was established. Now, the North Pole Team is preparing for their second expedition, in March 2001, when they will add drifting buoys and a deep-ocean mooring to the North Pole Station.

Recently, the North Pole Team added a new member, Ferdinand Depenguin. Ferdinand, a research assistant, joined APL on 28 November 2000. Ferdinand is originally from Wales and he joined the team to collaborate on an educational outreach component for the North Pole Station. Ferdinand works for a web-based educational outreach project on conservation and wildlife protection issues. The outreach project was founded at the University of the West of England, Bristol, by Guy Wooles. Ferdinand encourages you to visit the website and view his postings on the North Pole Station (<http://www.khern.freemove.co.uk/OpeningPage.htm>). Ferdinand is very excited about his upcoming trip to the North Pole and has frequently been seen modeling his new arctic gear down APL hallways.

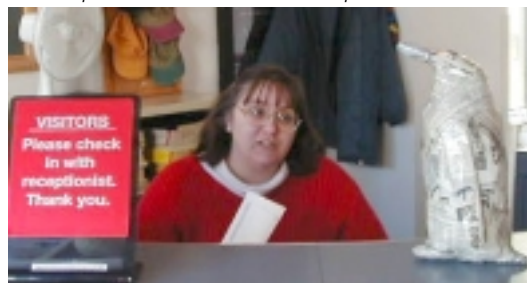


Size checking his foot gear

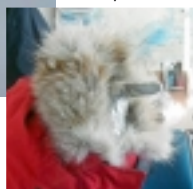


Ferdinand prepares for his assignment by studying information graphics

Mariann provides orientation at the reception area



Parka practice



When he's not hard at work preparing for his upcoming trip to the North Pole Station, Ferdinand spends quite a bit of time at local country-western hang-outs doing what he loves best, line dancing. He also enjoys spending time listening to music, his favorite groups are The Beatles and Pink Floyd. He is also kept busy trying to stay in touch with his many brothers and sisters (eighteen in all!), all of whom are also avid environmentalists.

Please give Ferdinand a warm APL welcome.



Mean Time Between Failure: The Broken Spoke Method

The following was sent to Bob Spindel.

**This came from a colleague. It's true.
(I've changed names to protect the guilty.)**

"My company recently released an industrial flow meter for measuring the level of liquids in tanks (like found in a chemical plant, or in food processing, etc.). We supply this flow meter to a foreign partner that markets the flow meter under their own name. I've become good friends with the foreign engineer, Mel, who was in charge of the project on their end.

He visited the week before last and while we were having beers at a local, rundown honky-tonk called the "Broken Spoke," he told me that he was under the gun to

come up with the MTBF (Mean Time Between Failure) for the flow meter, because it was required for a big contract they were trying to get for not only the flow meter but many of their other instruments. Now it is impossible to get a reasonable estimate of MTBF, so we decided that we would make up a number. So we declared the MTBF to be 10 years (in other words, infinity) and continued our beer drinking. The next day we sent his boss an email stating that through careful analysis based on the "Broken Spoke" method, we calculated the MTBF to be ten years.

Mel called me last week to relate that in a big internal meeting, his boss was chewing people out for failing to give him the required MTBF for all the instruments. He then praised my friend for getting him the required information, saying that Mel had applied a new technique called the Broken Spoke method to determine the MTBF, and that he wished the rest could follow Mel's example! I can't wait to see how Mel gets himself out of this one."



Agnes Sieger's Retirement Send-Off



After 34 years at APL, Agnes Sieger took the plunge into retirement on 31 January!

We all wish her the best in exploring new avenues of fun and fulfillment.



Library Books

The library thanks Pierre Mourad for donating the following books:

Waves in Layered Media, by L.M. Brekhovskikh. (2nd edition) San Diego: Academic Press, Inc., c1980. QC 231 B8513 1980

Fundamentals of Ocean Acoustics, by L. Brekhovskikh and Yu. Lysanov. Berlin: Springer-Verlag, c1982. QC 242.2 B733

Acoustical Oceanography: Principles and Applications, by Clarence S. Clay and Herman Medwin. New York: John Wiley & Sons, c1977. QC 242.2 C55

Complex Analysis: An Introduction to the Theory of Analytic Functions of One Complex Variable, by Lars V. Ahlfors. (3rd edition) New York: McGraw-Hill, c1979. QA 331 A45 1979

A Course of Modern Analysis: An Introduction to the General Theory of Infinite Processes and of Analytic Functions; with an Account of the Principal Transcendental Functions, by E.T. Whittaker. (4th edition) Cambridge University Press, c1927. QA 401 W62 1927

Elliptic Integrals, by Harris Hancock. New York: Dover Publications, c1958. QA 343 H225 1958

Handbook of Integration, by Daniel Zwillinger. Boston: Jones and Bartlett Publishers, c1992. QA 299.3 Z85 1992

Elements of Gasdynamics, by H.W. Liepmann. New York: John Wiley & Sons, Inc., c1957. QC 168 L5

Classical Electrodynamics, by John David Jackson. (2nd edition) New York: John Wiley & Sons, Inc., c1975. QC 631 J3 1975

Atmospheric Convection, by Kerry A. Emanuel. Oxford: Oxford University Press, c1994. QC 880.4 C64 E5 1994

Convection Patterns in the Atmosphere and Ocean, by R.B. Montgomery et al. New York: New York Academy of Sciences, c1947. QC 880.4 C6 1947


Linear Algebra, by Kenneth Hoffman and Ray Kunze. Englewood Cliffs, N.J.: Prentice-Hall, c1971. QA 251 H67 1971

Air-Water Gas Transfer: Selected Papers from the Third International Symposium on Air-Water Gas Transfer, edited by B. Jahne and E.C. Monahan. Hanau: AEON Verlag & Studio, c1995. QC 138 I56 1995

A First Course in Turbulence by H. Tennekes and J.L. Lumley. Cambridge: MIT Press, c1972. QA 913 T44



Funding Requested

- 1/11 EM Profiling Subsystem, Tom Sanford to WHOI
- 1/26 Acoustic Pollock Year-Class-Strength Index, Gordie Swartzman to Coastal Ocean Program Office
- 1/30 Improving the APL Applied Physics Laboratory Map Program, Bruce Howe to the Comprehensive Nuclear Test-Ban Treaty Organization
- 1/30 Robust Passive Sonar Program, Jim Luby to Lockheed Martin Corp.
- 1/31 Diver Evaluation Unit Depot and ISEA Support, Russ Light to EOD Program Office
- 1/31 Diver Evaluation Unit Depot 



APL Winter Seminar Series

Special Seminar, note date and time!
Thursday, 15 February, 10:30 a.m.

Speaker: [James Preisig](#)
 Woods Hole Oceanographic Institution
 Woods Hole, Massachusetts

Title: [THE ANALYTIC CHARACTERIZATION OF ADAPTIVE
 EQUALIZER PERFORMANCE IN THE TIME-VARYING
 OCEAN ENVIRONMENT](#)

Thursday, 15 February, 2:30 p.m.

Speaker: [Paul Marselian](#)
 KPMG, Inc.
 Seattle, Washington

Title: [COUPLING TOPOLOGY OF PHASE OSCILLATORS IN
 THE REPEATED PRISONER'S DILEMMA](#)

Thursday, 22 February – OPEN

Thursday, 1 March

Speaker: [Mark Stoelinga](#)
 Department of Atmospheric Sciences
 University of Washington

Title: [PLANES, RAINS, AND AUTOMOBILES: Improving
 Precipitation Forecasting with the IMPROVE Project
 on the Washington Coast](#)

Thursday, 8 March

Speaker: [Greg Elliott](#)
 Department of Physics
 University of Puget Sound
 Tacoma, Washington

Title: [TBD](#)