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U.S. Naval Postgraduate School Faculty Bulletin, 1966-1978

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1976-05-31

## Naval Postgraduate School Faculty Bulletin, 1976-05-31

Monterey, California, Naval Postgraduate School

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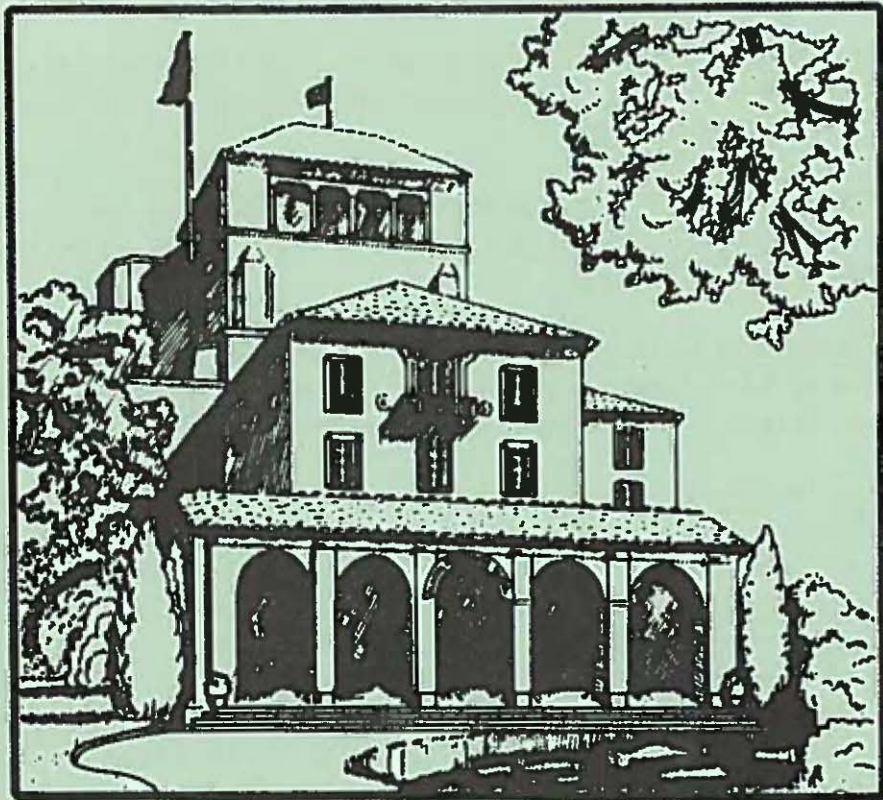
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Naval Postgraduate School

# FACULTY BULLETIN

MONTEREY  
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ISSUE NO. 5-76

31 May 1976

## DEAN'S LIST

The Dean's List for Quarter III, Academic Year 1975-76, has been published and congratulatory letters have been sent to those students attaining this honor.

Of the total 975 students whose records were screened during this quarter, 274 students were named on the Dean's List.

## DISTINGUISHED VISITORS

During the past month the School has been visited by several distinguished visitors representing various commands and foreign countries. Among them are the following:

The Superintendent and his staff, Iranian students and their wives, were visited by Captain A. Fouroghizadeh, Iranian Navy, Iranian Embassy, Washington, D. C. on 27 April 1976.

The Honorable William K. Brehm, Assistant Secretary of Defense for Legislative Affairs, addressed the Flag/General Defense Management Systems Course on Thursday, 29 April 1976.

Captain George O'Donnell, USN, Assistant Commander, Naval Intelligence Command for Resource Management visited the School on 28-30 April 1976, to discuss Postgraduate Support of the NAVINTCOM efforts to develop a comprehensive intelligence training and education plan for the Department of the Navy.

On 4 and 5 May 1976 Lieutenant General Sir David Willison, KCB, OBE, MC; Ministry of Defense, United Kingdom, addressed the faculty and students of the Naval Intelligence and National Security Affairs Curricula.

The speaker for the Aviation Safety Officer Graduation Ceremony on 7 May 1976 was Commander Larry Zbitnew, Canadian Forces.

Major General Frank J. Simokaitis, USAF, Commandant Air Force Institute of Technology, Dr. Faiman, Colonel Kelley, USAF, and Captain Garber, USAF, met with the Superintendent, RADM Linder, and his staff, on 5-7 May 1976 to discuss Graduate Education.

The Financial Management Curriculum Review was conducted on 11-12 May 1976, with Captain George Zeberlein, SC, USN (OP-924) and other interested staff in attendance.

The Naval Postgraduate School was pleased to be visited on 14 May 1976 by Dr. Clement Chang, President, Tamking University and Deputy Speaker of the Taipei City Council. He was escorted by Dr. Peter C. C. Wang, of the NPS Department of Mathematics.

The review of the Electronic Warfare Systems Technology Curriculum was conducted May 17 and 18, 1976. Distinguished members of this review team were: Captain J. W. Akins, USN, COMNAV ELEXSYSCOM (Elex-095), Captain R. F. Dreesen, USN, COMFEWSG; Captain J. L. Krumwiede, USN, OP-351; Dr. Frank Shoup, CNA Analyst; Mr. R. M. Ottensmeyer, CINCPACFLT (Code 02E); Mr. C. M. West, CNET (N-132), and Miss Joan Rose, COMNAVELEXSYSCOM (Elex-902R). Commander P. S. Roder, USN, NPS, and Professor D. B. Hoisington, NPS, coordinated this curriculum review.

Mr. Raymond Harrison, Head Career Management Division, of the Office of Civilian Manpower Management, visited the Naval Postgraduate School on 17 and 18 May 1976 to discuss the NPS Academic Programs available to the Navy's Civilian Employees.

An on-site review of the School's Civilian Personnel Management Program was conducted by representatives of the Western Field Division of the Office of the Civilian Manpower Management and of the Chief of Naval Education and Training during the period 17-26 May 1976.

Mr. James S. Campbell, Special Assistant for Systems Integration to the Assistant Secretary of the Navy (Research and Development) was at the Postgraduate School on 20 May 1976 for an orientation visit.

Major General Hector Vidal Galarza, Director, Peruvian Air Ministry and members of his official party, met with the Superintendent, Naval Postgraduate School, and his staff, on 21 May 1976 to discuss educational matters. Discussions were also held with the Peruvian students attending the Naval Postgraduate School.

## FACULTY PROFESSIONAL ACTIVITIES

Associate Professor James K. Arima, Department of Operations Research and Administrative Sciences, presented a paper entitled "Measuring the Fit between Person and Equipment" at the Annual Meeting of the Western Psychological Association held in Los Angeles, California, 8-11 April 1976.

Associate Professor James K. Arima, in addition to the above, has been elected a Fellow of the Inter-University Seminar on Armed Forces and Society, an international organization concerned with the development and dissemination of research on military institutions, civil-military relations, war, and peace-keeping.

Professor T. Sarpkaya, Mechanical Engineering Department, presented a paper titled "In-Line and Transverse Forces on Cylinders in Oscillatory Flow at High Reynolds Numbers" at the Offshore Technology Conference held in Houston, Texas, on 3-6 May 1976. The meeting was attended by 60,000 people and the presentations were televised throughout the conference complex.

Professor N. F. Schneidewind, ORAS Department, has been awarded the "Certificate in Data Processing" by the Institute for Certification of Computer Professionals after having passed all five parts of the certification examination.

Professor Schneidewind, ORAS/Computer Science Group, has been appointed Editor of the Newsletter of the IEEE Simulation Technical Committee.

## FACULTY PUBLICATIONS

Franke, R.

On the convergence of an algorithm for rational Chebyshev approximation. Rocky Mountain J. of Math 6 (1976) 227-236.

Abstract: An algorithm for rational Chebyshev approximation based on computing the zeroes of the error curve was investigated. At each iteration the proposed zeroes are corrected by changing them toward the abscissa of the adjacent extreme of largest magnitude. The algorithm is formulated as a numerical solution of a certain system of ordinary differential equations. Convergence is obtained by showing the system is asymptotically stable at the zeroes of the best approximation. With an adequate initial guess, the algorithm has never failed for functions which have a standard error curve.

Franke, R.

Review of:

R. B. Saxena. "A note on the rate of convergence of Hermite-Fejer interpolation formulas." *Canad. Math. Bulletin*, 17 (1974) 299-301, in Mathematical Reviews, MR50# 10610, p 1458.

M. J. Marsden. "Quadratic Spline Interpolation." *B. A. M. S.* 80 (1974) 903-906, in Mathematical Reviews 50 #10619, p 1459.

R. E. Odeh and J. O. Evans. "Some rational approximations to the upper percentage points of the normal distribution." *Proc. Second Manitoba Conference on Numerical Math.*, 1972, in Mathematical Reviews MR50 #11726, p 1601.

G. M. Neilson. "Multivariate smoothing and interpolating splines." *SIAM J. on Numer. Anal.* 11 (1974) 435-446, in Mathematical Reviews, MR 50 #13988, p 1917.

P. O. H. Vertesi. "Notes on a paper of G. Grunwald." *Acta. Math. Acad. Sci. Hungar.* 26 (1975) 191-197, in Mathematical Reviews 51 #1206, p 166.

Sarpkaya, T.

In-line and Transverse Forces on Cylinders in Oscillatory Flow at High Reynolds Numbers. Proceedings of the Offshore Technology Conference, OTC-2533, pp. 95-108, May 1976.

Abstract: The paper presents the results of an extensive experimental investigation of the in-line and transverse forces acting on smooth and rough circular cylinders placed in oscillatory flow at Reynolds numbers up to 700,000, period parameters up to 150, and relative roughnesses from 0.002 to 0.02. The drag and inertia coefficients have been determined through the use of the Fourier analysis and the least squares method. The transverse force has been analyzed in terms of its maximum, semi-peak-to-peak, and root-mean-square values. In addition, the frequency of vortex shedding and the Strouhal number have been determined.

Taylor, J. G. and Brown, G. G.

Canonical Methods in the Solution of Variable-Coefficient Lanchester Type Equations of Modern Warfare. Operations Research, Vol. 24, No. 1, January-February 1976, pp. 44-69.

Abstract: This paper develops a mathematical theory for solving deterministic, Lanchester-type, 'square-law' attrition equations for combat between two homogeneous forces with temporal variations in fire effectivenesses. It gives a general form for expressing the solution of such variable-coefficient combat attrition equations in terms of Lanchester functions, which are introduced here and can be readily tabulated.

Thomas, M. U.

Book review:

Introduction to Decision Science. By S. M. Lee and L. J. Moore.  
Interfaces, Vol. 6, No. 2, pp 69-70, 1976.

Williams, R. T. and Kurth, R. P.

Formation of Discontinuities in a Stratified Rotating Atmosphere.  
Journal of Geophysical Research, Vol. 81, No. 6, February 20, 1976.

Abstract: The formation of discontinuities within internal gravity waves in a rotating Boussinesq atmosphere is investigated with a numerical model. The motion is bounded between two rigid horizontal boundaries, and heating and friction are neglected. Special sinusoidal initial conditions are used. The equations are integrated for a range of values of the initial Rossby ( $Ro$ ) and Froude ( $Fr$ ) numbers. Discontinuities are found when the following conditions are satisfied:  $Fr \geq 0.2$  and  $Ro \geq 0.2$ . These results are substantially different from those obtained for a one-layer fluid with a free upper surface.

#### NOTICE

Material for the Faculty Bulletin should be submitted to The Editor, Code 0304. Please limit abstracts to 50 words.

FACULTY TRAVEL ORDERS TO 18 MAY 1976

Supported by Research Funds

Reinhardt, R.A.	14-15Jun76	Reno	Present paper at regional meeting
Schneidewind, N.F.	6-10Jun76	New York	Appear on panel at Nat'l Comp conf
Sherwin, R.G.	24-27May 76	Wash DC	Coordinate research with OCJS-J-5
Less, R.A.	24-27May 76	Urbana	Present paper at 12th annual
		Moffett Fld	conference on Manual Control
Fuhs, A.E.	24-26May76	Moffett Fld	Conduct NPS/NASA/AMES research
Perkins, A.J.	23-27May76	Los Agneles	Conduct short course at UCLA
Cooper, A.W.M.	23-27May76	Inyokern	Attend IEEE & optical soc. conf.
Biblarz, O.	23-26May76	Austin	Attend IEEE Plasma Science conf.
Haney, R.L.	23-24May76	LaJolla	Attend FGGE workshop
Knorr, J.B.	20May-6Jul76	Winter Harb.	Visit Project BULLDOG
Dhlon, J.E.	20-28May76	San Diego	Conduct RFI survey
Gibbons, G.D.	19-20May76	San Diego	Meet with NELC research sponsor
Derr, C.B.	18-19May76	San Diego	Consult with Nav Reg Med Center
Lindsay, G.F.	18-21May76	St. Louis	Attend engineer conference
Arima, J.K.	17-26May76	Various	Obtain data regarding utilization
		Cities	of recruiters
Boyang, C.K.	17-22May76	Wash DC	Brief sponsor on paramedic project
		Boston	Attend conf at Harvard U
Platzer, M.F.	16-21May76	Various	Consult for NAVAIR
		Cities	
Jauregui, S.	16-31May76	Various	Investigate periscope problem
		Cities	Attend various conferences
Russak, I.B.	16-17May76	Pt Hueneme	Discuss research
Pao, T.F.	13-15May76	RedondoBeach	Visit McDonnell Douglas and TRW
Adler, R.W.	12-18May76	San Diego	Conduct RFI survey on USS Horne
Whipple, D.R.	12-14May76	Seattle	Discuss research at U of Washington
Biauque, W.C.	12-14May76	Seattle	"
Fuhs, A.E.	11-13May76	Moffett Fld	Conduct NPS/NASA/AMES research
Schneidewind, N.F.	10-11May76	Los Angeles	Research consultation with CO &
		China Lake	Tech Director of NWC
Powers, V.M.	10-11May76	Keyport	Discuss display system design
Vickham, J.B.	9-10May76	La Jolla	Consultation at Inst. of Oceanograph
Kenard, R.J.	9-16May76	Albany	Attend Meteorological conference
		Omaha	Give presentation to AF staff
Domstock, C.	9-14May76	Denver	Consult at NCAR
Kelleher, M.D.	5-8May76	Wash DC	Discuss research at NRL, NAVSEA
Woods, W.M.	5-9May76	Wash DC	Attend conf on PSI sponsor
Bell, R.W.	4-7May76	San Francisco	Liaison with NASA/AMES
		Los Angeles	Attend Tactical Missiles conference
Moulihan, T.M.	4 May 76	San Carlos	Return equipment & conduct research
Whipple, D.R.	3 May 76	SanFrancisco	Discuss conf arrangements w/H.A.S.
Haupt, U.	3-7May76	Various	Discuss NASC contract at McDonnell,
		Cities	Gen Dynamics, LTV and U of Houston
Biblarz, O.	3-4May76	Palo Alto	Attend AFOSR Contractors Meeting
Adler, R.W.	2-7May76	Various	Visit USCG, NAVELEX, NSWC & other
		Cities	agencies for EM research discussion
Bartho, P.J.	2-6May76	Various	Discuss design methods at Philadel-
		Cities	phia, Annapolis; attend meet. in Wa



ighton, J.W.	1May30Jun76	Various Cities	Conduct Navy Graduate Program in Federal Executive Management
s, A.E.	30 Apr 76	Fullerton	Present review <sub>3</sub> at Hughes Aircraft
mm, C.F.	29 Apr-7May76	Wash DC	Confer with NC <sup>3</sup> A
ng, C.	28Apr-1May76	Wash DC	Attend U.S. MONEX meeting
s, A.E.	27-29May76	Moffett Fld	Conduct NPS/NASA/AMES research
ksdale, G.L.	27Apr-1May76	Wash DC	Attend meeting at NRL
ke, W.M.	26-28Apr76	Seattle	Consult with group health ass'n.
er, R.W.	26-28Apr76	San Diego	Conduct shipboard EMC program
midt, L.V.	26Apr-1May76	Various Cities	Discussions re: Air symposium, helicopter design, Aerodynamics
ttenden, E.C.	26Apr-7May76	China Lake	Give CE course at NWC
per, A.W.M.	"	"	"
es, C.R.	23Apr-1May76	Raleigh	Research consultation at Duke U
		Wash DC	Present short course at SSPO
dsey, G.H.	22 Apr 76	Palo Alto	Attend fracture testing seminar
ck, J.E.	21-22Apr76	Albuquerque	Discuss research at Kirtland AFB
ton, R.E.	21-22Apr76	"	"
pper, D.F.	20-23 Apr76	Wash DC	Participate in Steering Comm. Meet.
s, A.E.	20-22Apr76	Moffett Fld	Conduct NPS/NASA/AMES research
sting, J.R.	25Mar-2Apr76	Wash DC	Visit research sponsors and attend
		Philadelphia	ORSA meeting in Philadelphia

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berger, R.B.	13-18Jun76	Norfolk	Annual update NAVSAFECEN
yen, D.H.	12-18Jun 76	Toronto	Present paper at American Nuc. Soc.
nz, O.	9-20Jun76	Various Cities	Tech. discussion re: possible programs & short courses at NPS
ers, J.P.	7-10Jun76	West Point	Attend DOD conf on laser Technology
ttenden, E.C.	25-28May 76	Wash DC	Attend IRIS symposium
dley, G.H.	18-20May76	St. Louis	Attend AIIE meeting
tiner, G.J.	17-21May76	"	Attend Meet. re: AF officers
uque, W.C.	17-21May76	Wash DC	Discuss research with sponsor
n, S.M.	16-24May76	Wash DC	Consultation on shipbuilding
		Boston	Attend conference at Harvard U
r, C.B.	13-15May76	Boston	Attend Org. Behavior conference
ds, W.M.	13 May 76	Santa Cruz	Attend Deans/Chairman plann. conf.
i, F.M.	"	"	"
rady, D.A.	"	"	"
tiner, G.J.	"	"	"
s, A.E.	"	"	"
ton, R.E.	"	"	"
ach, L.C.	"	"	"
khart, B.J.	"	"	"
hler, W.F.	"	"	"
hler, K.E.	"	"	"
sum, R.R.	"	"	"
l, R.W.	"	"	"
k, D.E.	13-14May76	"	"
res, U.R.	13 May 76	"	"
pper, D.F.	13-14May76	"	"
sting, J.R.	"	"	"

Arima, J.K.	12-14May76	Wash DC	Visit Hq Navy Recruiting Command
		New York	its advertising agency
Gibbons, G.D.	6-7May76	San Diego	Visit NELC Cen; confer w/sponsor
Powers, J.P.	3-7May76	Colorado Springs	Attend EW conference at AF academi
Thompson, W.C.	3 May 76	Sausalito	Visit with Corps of Engineers
Borsting, J.R.	27-29Apr76	Wash DC	Participate in NAE/NAS meeting
Sovereign, M.G.	25-30Apr76	Wash DC	Present short course at SSPO

Supported by Other Funds

Bomberger, R.B.	19-21May76	San Diego	Give presentation to Helo Ass'n
Adler, R.W.	17-20May76	Wash DC	Attend Tactical Study

No Cost to the Government

Kelly, R.L.	23Jun-2Jul76	Boulder	Attend CODATA conference
Newton, R.E.	19May-21Jun76	London	Conduct research at ONR, at U de
		Compiegne	Technologie; present paper at
		Rapallo	International Symposium
Layton, D.M.	19 May 76	Moffett Fld	Attend reveiw at NASA
Barksdale, G.L.	17 May 76	Moffett Fld	Visit Advanced Res. Proj. Agency
Burns, D.C.	16-18May76	Chicago	Attend auditing conference
Heinz, O.	14-15May76	Palo Alto	Attend seminar/tech. discussions
Laurance, E.J.	6-9May76	Boston	Present paper at conference
Gaskell, R.E.	29 Apr 76	Stockton	Lecture at U of Pacific
Marmont, G.H.	27 Apr 76	Point Sur	Conduct thesis research
Marmont, G.H.	22 Apr 76	Santa Clara	Conference on digital equipment

