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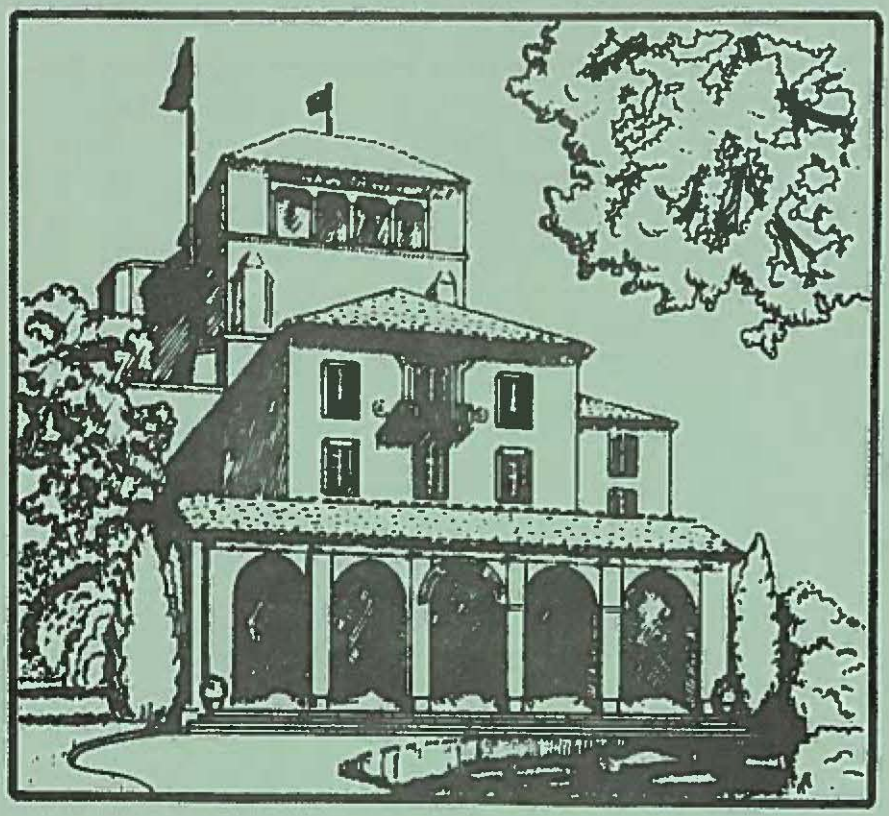
Naval Postgraduate School Faculty Bulletin, 1967-08-07

Monterey, California, Naval Postgraduate School



Naval Postgraduate School

FACULTY BULLETIN

7 August 1967

NEW LIBRARY CONSTRUCTION

The House of Representatives has passed the military construction bill authorizing construction of the Postgraduate School Library in FY 1968. This bill must also pass the Senate, and the funds for the construction must be included in the appropriations bill, which has not yet been voted on. With progress of this legislation to date, it appears that construction on the Library may start as early as February 1968.

ADVISORY COMMITTEE ON THE NPGS OCEAN SCIENCES PLAN

The Advisory Committee of the Postgraduate School's Ocean Science Plan will meet at the Postgraduate School August 10-12. Dr. Arthur Maxwell of Woods Hole Oceanographic Institute will serve as Chairman of the Committee, since Dr. Spilhaus, who had been named earlier as Chairman, will not be able to attend. As tentatively scheduled, the first day of the Committee's meeting will be spent in getting acquainted with the School's facilities in Ocean Sciences, the second day in deliberation and study of the plan, and the third day in preparation of the Committee's report.

NEW NPGS FACULTY

LT Edwin Hammer Bailey, Supply Corps, USN

LT Bailey received the M.S. degree in Management/Data Processing in July, 1967, from the Naval Postgraduate School, and joined the faculty of the Department of Business Administration and Economics upon his graduation. Since his graduation from the Naval Academy in June, 1960, his assignments have included Supply Officer on board the USS Brinkley Bass (DD887), Assistant Supply Officer at NAS Glenview, Illinois, and Supply and Fiscal Officer at Karmursel, Turkey.

LTJG Charles A. Campbell, USNR

LTJG Campbell joined the faculty of the Department of Aeronautics in June, 1967, after receiving the degree of Master of Science in Aeronautical Engineering from the University of Notre Dame. His research was in the field of Flight Mechanics. During the two summers of his graduate work, he did research on the development of free-flight wind tunnel techniques for the U.S. Army Ballistic Research Laboratory at Aberdeen Proving Grounds, Maryland.

LCDR Forrest L. Edwards, USN

LCDR Edwards joined the faculty of Aviation Safety Programs in June 1967 after receiving the B.A. degree from the Postgraduate School. LCDR Edward's assignments have included duty as Aviation Safety Officer with Air Anti-Submarine Squadron Thirty-Eight, and as Electronic Warfare Officer on Carrier Division Five Staff. He completed the Aviation Safety School at USC in 1963.

LTJG Richard K. Lochridge, USNR

LTJG Lochridge received the degree of Master of Business Administration from Stanford University in June 1967. His areas of concentration were accounting and marketing. He joined the faculty of the Department of Business Administration and Economics as an instructor of accounting in June 1967.

Joseph L. Percy, Visiting Physicist

Mr. Percy has been employed by the Navy Electronics Laboratory at San Diego, California, since February 1964, where he has been engaged in research on the scattering of acoustic energy from the surface, bottom and volume of the ocean. He received the M.S. degree in Physics from San Diego State College in March 1960. From 1961 to 1964 he was employed by General Dynamics/Astronautics in research involved with the physical properties of materials at cryogenic temperatures. He is on educational leave of absence from the Navy Electronics Laboratory, and joined the faculty of the Department of Physics in July 1967.

Daniel S. Richardson, Assistant Professor of Mathematics

Professor Richardson received his Ph.D. Degree from the University of Bristol, England, in January, 1967. From September, 1965 until June, 1966, he did research at the University in Mathematical Logic. His thesis was entitled "Some Unsolvable Problems Involving Elementary Functions of a Real Variable." He served as Instructor of Mathematics at the University of Illinois from September, 1966 until June, 1967, and joined the faculty of the Department of Mathematics at the Postgraduate School in July, 1967.

FACULTY PUBLICATIONS

Haltiner, George J.

The effects of sensible heat exchange on the dynamics of baroclinic waves. Tellus, A Quarterly Journal of Geophysics, Vol. 19, No. 2, p. 183-198. 1967.

Abstract: A diabatic 2-level model with variable static stability is investigated with respect to dynamic stability and the thermal structure of harmonic perturbations. Exchange of sensible heat is assumed to be proportional to the temperature difference between the air and underlying surface. Such heating reduces (increases) instability of short and medium (long) waves.

Thaler, G.J., and H. H. Choe

Some extensions of Mitrovic's method, Part IV, Frequency response techniques. Automatika, Teoretski Prilog, Journal of Technical Board for Automation of the Yugoslav Committee Etan, T. 2, No. 1-2, p. 39-47. Zagreb, 1966.

Abstract: In many feedback control problems dynamic specifications limit both the transient response and the frequency response. In this paper it is shown that the Mitrovic equations are readily solved to evaluate the closed loop frequency response. For systems in which the closed loop transfer function has no more than two zeros, a simple graphical construction on the Mitrovic plot permits evaluation of the frequency response. Thus, on a single plot both the roots of the characteristic equation and the frequency response are available. In some problems bandwidth is a specific design restriction. Equations for loci of constant bandwidth are derived, and the use of these loci in conjunction with the root locations and frequency response is illustrated.

Thaler, G.J., and H. H. Choe

Some extensions of Mitrovic Method, Part III, Analytic design of compensation. Automatika, Teoretski Prilog, Journal of Technical Board for Automation of the Yugoslav Committee Etan, T. 2, No. 1-2, p. 33-38. Zagreb, 1966.

Abstract: Manipulation of the Mitrovic equations reduces the problem of compensation design to that of simultaneous solution of simple algebraic equations. For the case of a specified root location with specified error coefficient the design of a single section compensator is simply the solution of two first order algebraic equations in two variables (intersection of two straight lines). Graphical interpretations, extension to multiple section compensators and feedback compensators are included, with illustrations.

PRINCIPAL PROFESSIONAL ACTIVITIES

CDR Donald M. Layton, Director of Aviation Safety Programs, served as Chairman and Organizer of the session on Reliability, Maintainability, Safety Aspects of Personnel Training and Certification at the 6th Annual Reliability and Maintainability Conference sponsored jointly by the SAE, ASME, AIAA in Cocoa Beach, Florida, July 17-19.

Dr. R. F. Rinehart attended the initial meeting of the Advisory Board of the Air Training Command at Randolph AFB, San Antonio, Texas, on August 1-3. Following this meeting, he visited the Office of Research Analyses at Holloman AFB, New Mexico, representing the National Research Council in connection with the Postdoctoral Research Associateship Program.

DISTINGUISHED VISITORS

The Honorable Gerhard M. A. M. Huigens, Counselor for the Assembly of the Western European Union, visited the School on 2 August. His schedule included a briefing by School officers and a tour of the buildings and grounds.

Captain J. P. Stevenson, Royal Australian Navy, visited the Postgraduate School on August 1-2. His schedule included a general orientation to the School's facilities and programs, with emphasis on the Navy Management Systems Center courses and the Operations Analysis, Management, and Computer Systems curricula. Captain Stevenson is currently serving with the Office of the Naval Attache, Australian Embassy, Washington.

CALENDAR OF PROFESSIONAL TRIPS

L. V. Schmidt	8/13-8/26	San Diego	Summer Lecture Series NEL
P. F. Pucci	8/6 -8/9	Seattle	Attend Heat Transfer Conference
F. D. Faulkner	7/28-9/25	Fort Collins, Colorado	Attend Navy Mathematic Workshop at Colorado State
		Ann Arbor, Michigan	Discuss research with Math Dept., University of Michigan
G. F. Kinney	8/14-8/18	San Diego	Participate in Explosive Safety Seminar, Armed Services Explosives Safety Board
J. B. Cowie	7/30-8/5	West Point, New York.	Attend ICAF, USMA Computer Workshop
G. A. Myers	8/7 -8/14	Honolulu	Discuss aspects of signal processing; course development
S. H. Kalmbach	8/3 -8/4	Pasadena	Attend mtg of ILCF
W. D. Duthie	8/1 -8/3	Los Angeles	Visit Booz Allen Applied Research, Inc., discuss research for Navy Weather Res. Facility
G. H. Spencer	8/7 -8/10	Santa Barbara	Attend Photochemistry Conference at UC at Santa Barbara, sponsore by ONR
CDR D. M. Layton	8/14-8/16	Pt Mugu	AIAA Technical Commit for Reliability and Maintainability meeting