Graduate Education in the Navy Overview '81-'82

Monterey, CA; Naval Postgraduate School

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In the past year a great deal of thought and effort has been spent on the challenge to revitalize and expand the U.S. Navy and re-establish a strong sense of pride and professionalism in the members of the Naval Service. A part of the professionalism of the Navy is the maintenance of an officer corps that not only excels in its warfare specialty but also possesses the technical and managerial subspecialty skills and experience required to plan and manage the complex, highly technological organization that is the US Navy. Meeting the demand for subspecialist officers educated at the graduate level in the operational, technical and management skills necessary to function as leaders of a professional Navy is the main task of the Naval Postgraduate School. Dedicated to providing officers with graduate education that will enhance their professional careers and fulfill the Navy's need for proven subspecialists, the Naval Postgraduate School, because of the quality of its programs and its distinguished faculty, is meeting that challenge.

Each year the NPS Annual Report focuses on a different aspect of postgraduate education. The 1979-80 report covered student and faculty research, and last year's highlighted the programs of study available at the Navy Postgraduate School with particular emphasis on their applicability to preparing students for their future role in their services. This report deals with the officer students as a critical element in the education equation. It highlights graduates of the Naval Postgraduate School whose careers demonstrate the requirement for and utilization of officers who have proven their value and leadership to their service through their warfare and subspecialty development. Where we go from here in developing our officer corps for the future depends in large measure on whether the junior officer of today accepts the challenge and opportunity that graduate education offers.

I invite you to review the report and to send me your constructive comments regarding Naval Postgraduate School efforts to provide quality education to quality officers.
MEETING THE CHALLENGE

INTRODUCTION

The growing complexity of today's Navy is the result of an ever increasing level of technology. The officer corps must be cognizant of the capability and use of a wide range of present and future high technology. From planning, to operations and subsequent analysis of programs and equipment, it is essential that officers with the required education be available in sufficient numbers to satisfy the billet requirements that are measured in terms of the number and kind of subspecialty billets within each community.

Professional development for many of today's officers emphasizes a dual development path, in a warfare or other specialty, and in a subspecialty. Qualification in their specialty is the foundation on which each officer establishes further growth. As an officer progresses there are certain career milestones that reflect achievement of standards of managerial competence and leadership skills which enhance an officer's opportunity for promotion. While no single criterion such as a graduate degree, a particular specialty or subspecialty, or an assignment to service college guarantees success in the Navy, a blending of these and other career elements characterizes the career pattern of officers who have contributed most effectively to the dynamic needs of the Navy.

Graduate education has become increasingly important to an officer's professional development. Congress in recent years has been supportive of Navy needs, and the CNO has voiced strong support of graduate education. Over the past few years the number of officers who have been assigned to graduate education has continued to increase. For example, the planned input for FY82 is 600 officers, and is programmed to increase to 700 officers in FY83. With rising retention rates, it is anticipated that the figure will continue to increase to ensure that the Navy's subspecialty requirements will be met.

PERCEPTIONS

Despite repeated statements of CNO's strong support for graduate education, some officers still feel that graduate education and a subspecialty designation are not in their best career interests. A close examination of the facts, however, would show that such a perception is false. To emphasize the importance of graduate education, time is allocated during an officer's first or second shore tour for graduate education as indicated in the Career Planning Guidebook. NPS is geared to accommodate officers with varied backgrounds and is sensitive to problems that arise when an officer has been
away from the academic environment for a considerable period of
time. Personalized attention is provided each officer so that he can
complete the necessary requirements for a selected program in the
minimum amount of time. Promotion statistics promulgated by the
Commander Naval Military Personnel Command (NMPC), consist-
tently show that selection opportunity for graduate educated
officers is considerably higher than those for officers without graduate
education. This trend has held true with each selection board.
Regarding utilization tours, the record indicates that a subspecialty
designated officer is in great demand, and an officer's assignment
spectrum is broadened because of graduate education. He qualifies
for all the billets that a non-subspecialty coded officer is eligible for
plus all the billets which call for an officer with his particular sub-
specialty designator. Finally, it should be recognized that an officer
with graduate education brings into whatever billet he may be
serving a broader capacity for original thought and problem solving, an
improved ability to communicate his ideas, and a better under-
standing of the principles upon which complex systems of ships and air-
craft that he operates depend. For the reasons cited above it should
be evident that graduate education is clearly in the best career inter-
ests of an officer.

THE ROLE OF NPS IN GRADUATE EDUCATION

NPS is responsive to the Navy's education requirements to a degree
not possible in a civilian institution. It's programs are specifically
designed to meet subspecialty sponsor educational skill require-
ments and the NPS faculty are in constant contact with the Navy in
general and the subspecialty sponsor in particular. Course offerings
and programs clearly reflect the unique educational institution-cli-
ent relationship which exists between NPS and the Navy. All pro-
grams, and especially the operational curricular programs such as
AntiSubmarine Warfare, Electronic Warfare, Command, Control
and Communications are responsive to Navy needs. Graduate ed-
ucation at NPS is provided in an atmosphere where the entire facul-
ty and student body are focused on Navy/DoD systems and prob-
lems. Classified material is available for certain courses and in re-
search. Additionally, NPS operates a full class schedule throughout
the entire year, with entry and graduation four times a year in recog-
nition of officer assignment constraints and the optimum use of the
officer student's time away from operational requirements. The
faculty and staff are attuned to the need to provide the officer the
required education to meet the sponsor's educational skill require-
ments in the minimum period of time.

NPS provides high quality education; several of its academic de-
partments are recognized as among the very best in their field world-
wide. In all fields, NPS has faculty with national and international
reputations.
PROGRAMS OF STUDY

Each of the Navy's programs of study leads to a specific specialty/subspecialty code that identifies the officer skills in the assignment process. Curricular reviews are conducted by the sponsor and NPS every other year to ensure currency of the programs in meeting the sponsor's educational skill requirements.

Current programs at NPS demonstrate a strong Navy/military Department of Defense (DoD) orientation, and include:

**Administrative Science**
- Anti-Submarine Warfare
- Command, Control and Communications
- Communications Engineering/Systems
- Computer Science/Systems
- Electronic Warfare
- Engineering Electronics
- Intelligence
- National Security Affairs
- Naval Engineering
- Operations Analysis
- Weapons Systems
- Engineering/Science
- Underwater Acoustics

**Material Movement**

**Acquisition & Contract**

**Systems Inventory**

**Material Logistics Support**

**Financial Management**

**Manpower/Personnel**

**Training Analysis**

**Human Resources Management**

**Aeronautical Engineering**

**Air-Ocean Science/Oceanography**

**Meteorology**

**Civilian University Programs include:**

**Chemistry**

**Facilities Engineering**

**Forensic Science**

**Joint Intelligence**

**Law**

**Logistics Management**

**Naval Construction and Engineering**

**Nuclear Effects**

**Nuclear Engineering**

**Ocean Engineering**

**Petroleum Engineering**

**Petroleum Management**

**Politico-Military**

**(Western Hemisphere)**

**Public Affairs**

**Religion**

**Retailing**

**Subsistence Technology**

**Supply Acquisition and Distribution Management**

Admiral Elmo J. Zumwalt (Ret) addresses students in Naval Engineering Program.
International Day...

An annual celebration of cultural exchange between representatives of the twenty-five nations having students at the Postgraduate School. During the afternoon officers and their families exhibit costumes, travel literature and foods of their respective homelands in a bazaar-like setting around the periphery of King Hall. At night they present some of the culture of their countries via songs and dances.

GRADUATE EDUCATION AT THE NAVAL POSTGRADUATE SCHOOL

Preface

Graduate Education for officers of all services is a process of defining requirements, establishing a selection process, educating officers in certain technical and managerial skills, and then utilizing them in subsequent assignments during their career. Officers normally receive their subspecialty graduate education during the first half of their careers. The following paragraphs explain how requirements for graduate education are derived, the officer selection and assignment procedures and a description of the student body. Examples are provided of officer graduates who utilized the skills in subsequent assignments. Also included is a list of active duty flag and general officers who are alumni of NPS.

Graduate Education Requirements

Each service identifies military billets that require specific graduate level education for successful performance. Requests to establish these billets originate with commanders responsible for the positions. Requests are reviewed by successive levels in the chain of command and ultimately by a designated military sponsor. A formal board (Subspecialty Review Board in the Navy) meets periodically to review these requests. If approved, the billet becomes a part of the validated billet requirements used to determine an inventory objective.
CAREER MANAGEMENT OF SUBSPECIALISTS

Officers who have received Navy sponsored graduate education are assigned to a utilization tour as soon as practicable, but normally not later than the second tour following graduate school. A waiver is required if an officer is to be assigned in other than an operational or subspecialty utilization billet. The subspecialty control officer and the assignment officers work together to ensure that the final assignment of an officer is consistent with the needs of the Navy, his career needs and preferences. Assignment procedures which may limit the utilization of an officer's graduate education are directly related to constraints placed on the distribution process in the areas of career development, inventory shortage, fiscal constraints and the individual officer's considerations.

The dual development path today for the professional development of the Navy's officer corps is sound and proven. If both paths are developed with vigor and initiative an officer's opportunity to succeed is greatly enhanced. The CNO issued a message in July 1981 which contained the following statement: "It is critically important that short term expediencies do not preclude consideration of PG School at appropriate points in their (junior officers) careers. We all need to make a concerted effort to ensure our obligation in this vital area is fulfilled for the good of our Navy's future."

The Honorable Lawrence Korb, Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics) gives the graduation address to the graduates and guests at the summer commencement.

ITEMS IN THE NEWS

PROGRAMS

NPS/TPS COOPERATIVE MASTERS DEGREE PROGRAM

For over ten years, the Department of Aeronautics at NPS and the Naval Test Pilot School (TPS) at Patuxent River have carried on a dialogue concerning the feasibility of a Cooperative NPS/TPS Masters Degree Program. Such a program is desirable because a number of billets are dual-coded to require graduates of both schools. The NPS/TPS program received final approval at the Aeronautical Engineering Curricular Review in early 1981, and the first student is scheduled to enroll in the program in October, 1981.

The objective of the NPS/TPS program is to expand the Aero Department's offering in the flight evaluation field by taking advantage of the extensive facilities at the Naval Test Pilot School. Prospective students must have an undergraduate engineering degree with grades of B or better. One or two students will enter the program every six months. One year will be spent in residence at NPS to complete a modified Aeronautical Engineering Curriculum, followed by three months of jet refresher training in preparation for entry into the eleven-month Test Pilot Program. In addition to the academic instruction at TPS, each pilot completes approximately 50 project flights and submits over 22 reports. During the course, students will fly 12-14 different types of aircraft. The final exercise at school is a simulated Navy Preliminary Evaluation (NPE) of an aircraft with which the student has no previous experience.
Upon satisfactory completion of both the NPS and TPS phases of the program, students will be granted a Master of Science in Aeronautical Engineering and will be assigned dual subspecialty codes of XX71P and XX73G.

INSTALLATION OF NEW COMPUTER SYSTEM

The installation of the new main computer was accomplished on schedule. The old machine, an IBM 360/67, was retired on 5 December 1980 after almost 14 years of continuous service. Its replacement, the IBM 3033AP system, was installed by 22 December. It was not possible to overlap operation of the systems during the installation because of the severe limitations of space and the physical facilities. On 5 January 1981, the first day of the winter quarter, the students and faculty returned to a much-improved computing environment. All users are now terminal-oriented and have access to private file space on removable tape cartridges housed in the IBM 3850 Mass Storage System. The most popular mode of access to the system is via 120 IBM 3278 storage displays connected by coaxial cable, or a variety of non-IBM, asynchronous video and hardcopy terminals. Most of the IBM 3278s presently installed in Ingersoll Hall will be distributed in the other academic buildings as soon as the necessary cable runs are made. The terminals will be installed in clusters in strategic locations. Each cluster, or work station, will include IBM 3278 terminals, one IBM 3277/Tektronix 618 graphics terminal and an IBM 3262 printer.

From a terminal the user has access to a wide range of modern software tools and capabilities including many programming languages, a full-screen editor, powerful command language, interactive application packages and system utilities. Interactive computing is supported by CMS (Conversational Monitor System) running under the operating system VM/370 (Virtual Machine). VM also supports batch processing under MVS (Multiple Virtual Systems).

The master plan for upgrading the School's computing facilities included replacement of the XDS 9300 system in the Computer Laboratory with a DEC VAX 11/780. This installation should be made in October 1981. The final phase of the plan will be the connection of the VAX and IBM 3033 to the School's node on the ARPANET (Advanced Research Projects Agency Network).

NAVY SPACE SUBSPECIALTY CREATED

Recent actions of OP-094 and OP-01 have approved a subspecialty for officers supporting the Navy's programs in space. This community will be largely concerned with the role of satellite systems related to communication, navigation, and surveillance missions. NPS curricula in Electrical Engineering and Avionics are closely related to existing requirements for this community. The introduction of several courses specifically related to military science and applications in space are underway in response to the educational requirements of the community.

TACTICAL ANALYSIS

Beginning with the March 1981 student input, the Operations Analysis curriculum has been revised to put more emphasis on tactical and combat analysis. Five new or thoroughly restructured courses are being added: (1) Weapons Systems and Weapons Effects; (2) Combat Models and Gaming, (3) War Gaming Analysis, (4) Campaign Analysis, and (5) Introduction to Operations Analysis, the course content of which has been doubled. All Navy Line officer
students will take the revised program. The revised curriculum will prepare them better for duty on key fleet staffs, while continuing their sound education for force planning and weapon procurement analysis ashore.

**PEOPLE**

**NPS PROFESSOR HONORED**

Dr. Allen E. Fuhs, a professor here, is the 1981 recipient of the Society of Automotive Engineering (SAE) Ralph R. Teetor Award, an award presented for excellence in teaching Engineering.

Dr. Fuhs joined the faculty of the Naval Postgraduate School in November 1966 teaching in the Department of Aeronautics. He is currently the American Institute of Aeronautics and Astronautics Vice President for Publications.

Dr. Fuhs received the degrees of Master of Science in Mechanical Engineering (MSME) in 1955 and Ph.D. in 1958 from the California Institute of Technology, with a major in jet propulsion and gas dynamics and a minor in physics. Since 1955 he has published in the fields of laser technology, airbreathing propulsion, combustion, gas dynamics, and reentry physics. He was also author of a book on *Instrumentation for High Speed Plasma Flow* in 1965 and editor of several books including *Instrumentation for Airbreathing Propulsion* (MIT Press, 1973).

**NPS PROFESSOR WINS US NAVAL INSTITUTE AWARD**


**PROFESSOR LOU SCHMIDT IN OFFICE OF ASSISTANT SECRETARY OF THE NAVY (RE&S)**

Professor Lou Schmidt of the Department of Aeronautics has spent the last year as Assistant for Engineering Technology in the Office of the Assistant Secretary of Defense for Research, Engineering, and Systems. In this position, Professor Schmidt serves as principal advisor to the Deputy Assistant Secretary on all aspects of current and proposed basic and applied research in the fields of propulsion, aerodynamics, hydro-mechanics, materials, structures, and weapons technology. The research programs associated with these technology areas cover approximately one-third of the technology base program of the Navy.
PROFESSOR ARTHUR L. SCHOENSTADT RECEIVES AWARD FOR TEACHING EXCELLENCE

The Rear Admrll John Jay Schieffelin Award for Excellence in Teaching, presented annually at the June commencement exercises was awarded to Professor Arthur L. Schoenstadt of the Mathematics Department. A committee of faculty members, appointed by the Superintendent recommended him for the award after carefully polling NPS students. In addition to a monetary award, made possible through a grant to the Naval Postgraduate School Foundation in memory of RADM Schieffelin, Professor Schoenstad's name will be added to that of previous winners on a plaque in the School's Dudley Knox Library.

Dr. David A. Schrady, Acting Provost and Academic Dean, presents award to Professor Arthur L. Schoenstadt

NPS PROFESSOR RECIPIENT OF ROCKEFELLER AND COUNCIL ON FOREIGN RELATIONS FELLOWSHIPS

Jiri Valenta, Associate Professor and Coordinator of Soviet-East European Studies for the Department of National Security Affairs at the Naval Postgraduate School in Monterey, has been named one of nine recipients of the Rockefeller Foundation’s 1981 International Relations Fellowships.

He has also received appointment as an International Affairs Fellow from the Council on Foreign Relations, marking the first time that one recipient has been simultaneously awarded both of these prestigious fellowships. In addition, he has been appointed Associate of the Research Institute at Columbia University where he will be located during the period of his research.

Valenta, 35, a native of Czechoslovakia and a graduate of the Industrial School of Nuclear Techniques and the Vysoka Skola Ekonomick (Prague School of Economics) in Czechoslovakia, was present during the 1968 invasion of Czechoslovakia by the Soviet Union.

His project under the Rockefeller fellowship will be "A Comparative Study of Soviet Invasions: Implications for International Security."

Valenta has been with NPS since 1975 and has written and studied extensively in the field of Soviet national security decision-making, the Soviet-Cuban military involvement in Africa, and Soviet relationships with both Eastern and Western European countries.

Over 5,000 subspecialty coded billets presently are identified in the Navy. Quotas for officer inputs to graduate education programs are generated annually to ensure that a sufficient number of officers with subspecialty codes will be available to meet current and projected billet requirements. Sponsors such as NAVSEA and NAVAIR identify the skill requirements for subspecialty coded billets and the Naval Postgraduate School administers curricular programs to meet the promulgated skill requirements. More than one officer with graduate education is needed to man a validated billet to allow for sea/shore, warfare specialty/subspecialty rotation. For unrestricted line officers, two to three subspecialty coded officers must be available for each validated billet because of the sea/shore rotation requirement. For restricted line/staff officers, experience has shown that a figure greater than one is required to maintain an adequate inventory. The manning factor for URL or RL/Staff officers is multiplied by the number of validated billets for each designator to determine the total requirements for officers with graduate education. This total, along with the current inventory in a given field, is used to develop the annual quota for graduate education in that field.

Selection Process — Navy

The Naval Postgraduate School maintains the academic records of all naval officers. Upon receipt of an officer's undergraduate record after his commissioning, the NPS develops an abstract of the officer's academic record and states pertinent portions in terms of a three digit code called Academic Profile Code (APC). Each officer is informed of his APC and the graduate programs for which he is eligible. He is also informed how he may enroll in self-study courses available from NPS so that he can improve his APC and thereby make himself eligible for a greater number of curricula.

Initial screening of officers for graduate education is performed three years after commissioning for URL surface officers, four years after commissioning for aviation and nuclear trained officers, and during the three to nine year period for RL and Staff officers. A formal selection board is convened by Naval Military Personnel Command (NMPC) to review and select qualified officers for graduate education. NPS representatives serve as advisors to the board. Academic qualification and professional performance are reviewed by the board, and a list of selectees is provided to NMPC to be "banked" for a period of three years. A number of officers from the "bank" are assigned to graduate education upon completion of their first sea tour. If a selected officer is not ordered to graduate education during this three year period, he is considered again by another selection board that meets three years later. The process normally occurs a total of three times during this first 10 years of commissioned service. Subsequent considerations for assignment to graduate education are unlikely.

RADM Kenneth L. Shugart accompanied by NPS Superintendent, RADM Ekelund, and Acting Provost, Dr. Schrady, on a recent visit to NPS
Assignment to Graduate Education

Shortly after the Postgraduate Selection board reports out, officers are notified of selection for graduate education by the Commander, NMPC congratulating him on his selection, notifying him of his current APC and the curricula for which he is eligible. Unless the officer has taken self-study courses or enrolled in off-duty courses that would change his APC, the information contained in the NMPC letter would be the same as contained in the NPS letter he received earlier.

After updating his preference card, the selected officer establishes a dialogue with his detailer about assignment to graduate education. This normally occurs about six months prior to his projected rotation date to shore duty, and eventual assignment to graduate school occurs anywhere from the fifth through eighth year after commissioning depending upon an officer’s sea duty pattern. The specific curriculum to which an officer is ultimately assigned is based upon the officer’s desires and the Navy’s requirements to educate officers in various subspecialty areas. These requirements are promulgated annually by the Director, Total Force Planning Division (OP-11) of the Commander, Naval Military Personnel Command. Whether an officer is selected to attend NPS or a civilian institution is dependent upon the subspecialty program he is pursuing. The determination of which programs are taught at NPS is the result of a study conducted by a SECNAV Select Study Committee.

NPS Procedures

Upon receipt of an officer’s orders to NPS Curricular Officers and Academic Associates review the officer’s undergraduate records to determine how the officer can complete the requirements in the minimum amount of time. Whenever possible, candidate officers are contacted prior to arrival to discuss their objectives, review their academic program, and answer any questions. Programs of courses to be validated or added to the normal curricula are arranged for each student, resulting in about 700 different individual schedules within the student body of 1200 at NPS. Curricular officers at NPS also work closely with the curriculum sponsor to ensure that educational skills expected of an officer with a particular subspecialty designation are met. They also arrange for experts to speak at seminars, plan field trips, and, in some curricula, administer a sponsored program of student experience tours. During his tour at NPS, an officer will be ordered to a staff or an office to gain practical experience in his chosen field of study. This tour serves as a means of reinforcing skills acquired from academic instruction and provides an opportunity for students to identify “real world” topics for theses.

Upon completion of the required course of instruction, which may vary from 15-27 months depending on the subspecialty field, the officer is graduated and is recommended for a subspecialty designation in his particular area of expertise. Unrestricted line officers are normally assigned to sea duty after NPS to further develop their warfare specialty. If a sea duty billet exists in their subspecialty, they may be assigned to such billets, otherwise they can expect assignments to a subspecialty coded billet on a subsequent shore duty tour.

Present NPS Student Body

About 1,200 officer students are presently enrolled at NPS. They range in rank from LTJG to CDR, US Navy (or other service equivalents), but are predominantly Lieutenant and Lieutenant Commanders. Their average length of commissioned service is 8 years, and they have reported to NPS from their first or second operational tour of duty. Naval Officers are from the surface, air, submarine, restricted line, and staff communities, while non-USN officers are drawn from various warfare specialties. About 60% of the student body are Navy and Marine Corps officers, 25% are from the other services and DoD civilians, with the remainder being allied officers from over twenty different countries. Most officers are returning to the academic environment for the first time since completion of their undergraduate studies. About 15% of the incoming officers require one or two quarters of preparatory work. On the other hand, about 15% of the incoming officers have completed off duty courses of in-
struction prior to arrival. This earlier work enables them to validate courses and substitute electives or complete their graduate education in a shorter period of time.

As evidence of the high calibre of officer students enrolling at NPS, about 100 officers per year or better than 1 in 5 received military awards ranging from Commendation Medals to the Legion of Merit for outstanding service in their assignments immediately prior to arrival at NPS. Furthermore, promotion statistics indicate that virtually all officers in the zone for promotion while assigned at NPS have been promoted and in this past year approximately 5% were selected from below the zone.

Graduates of NPS

Summaries of careers of selected NPS Graduates are presented in this following section. The list of officers includes information on a few flag officers followed by a complete list of NPS flag and general officer graduates. Of the flag officers on active duty many of them have received Navy funded graduate education. Additionally, there are a few current students included to give a sense of the outstanding operational experience our students bring to the subspecialty field.

ADMINISTRATIVE SCIENCE

REAR ADMIRAL JAMES B. BUSEY IV attended the University of Illinois prior to enlisting in the Aviation Cadet Program. He entered the Naval Postgraduate School after several tours in fighter and attack squadrons. He entered NPS in 1964 and earned a B.S. and an M.S. in Management. RADM Busey was then assigned to VA-163 during which he deployed to Vietnam and for his combat action was awarded the Navy Cross. In 1968 he assumed command of VA 216. After another combat deployment he reported to CARDIV-5 as Strike Plans Officer.

Following a tour as CO of VA-125 RADM Busey reported to the Staff of CNO for duty. From 1975-1978 he was CO Naval Air Station, Lemoore. He was promoted to flag rank in April 1978 and became Auditor General of the Navy/Director of the Naval Audit Service. In June 1980 he reported to the Navy Material Command as the Director of Resources Management (Comptroller).

CAPTAIN SARAH J. WATLINGTON, USN, assumed command of the Navy Manpower and Material Analysis Center, Pacific, located in San Diego, CA on 28 June 1979.

Upon graduation from Purdue University in 1960, CAPT Watlington underwent 16 weeks of indoctrination at Officer Candidate School prior to serving her first tour of duty at the Bureau of
Naval Personnel in Washington, D.C. Subsequent tours include U.S. Documents Officer, Headquarters Allied Forces Southern Europe, Naples, Italy; Assistant Security Officer and Assistant for Women at Naval Air Station, Corpus Christi, Texas; Social and Appointments Secretary to the Chief of Naval Operations, Washington, D.C.; Executive Officer, Recruit Training Command (Women), Bainbridge, Maryland and Orlando, Florida; Head, Officer Student Placement Branch, Bureau of Naval Personnel, Washington, D.C.; and Executive Officer, NROTC Unit, Purdue University from January 1976 until May 1979. Upon reporting to Purdue, CAPT Watlington became the first woman officer appointed as an executive officer of a NROTC Unit.

COMMANDER EDWARD CHARLES LONG III, a graduate of Dartmouth, entered NPS in June 1977 after serving as CO, USS McCLOY (FF 1038). He also attended the Armed Forces Staff College. He graduated in December 1978 with a MS in Management. CDR Long’s thesis was entitled, “An Analysis of the Historical Relationship between Current Navy RDT&E and Future Investment in Procurement.”

Since graduation, he has served in two financial management assignments, as Other Procurement Navy Programs for Surface Warfare Office (OP-32) and Sea Control Programs Analyst (OP-90).

AERONAUTICAL ENGINEERING

VICE ADMIRAL ERNEST R. SEYMOUR, a Naval Academy graduate and naval aviator entered the Postgraduate School as a Lieutenant in July 1959. Upon completion of the two year Bachelor of Science, Aeronautical Engineering curriculum he was selected for an advanced program at California Institute of Technology and was awarded the professional degree of Aeronautical Engineer in June 1962. Reporting to Attack Squadron 106 he served as operations officer until he was transferred in 1965 to Experimental Squadron 4 at Point Mugu, California. At Point Mugu, VADM Seymour was Chief Projects and Operations Officer. He directed projects which were concerned with the F-8 Crusader fighter, as well as the evaluation of the F-4 Phantom II fighter aircraft and the Sparrow missile.

Following this tour, he reported to Attack Squadron 56. He then reported to Washington, D.C., where he was, successively, Assistant Program Manager for Logistics for the A-7 aircraft; Deputy Special Assistant to the Chief of Naval Operations for Decision Coordination; Project Manager for the A-7 aircraft; and Executive Assistant and Senior Aide to the Vice Chief of Naval Operations.

Following his promotion to flag rank in 1975, he served as Deputy Commander for Plans and Programs, Naval Air Systems Command, in Washington, D.C., Assistant Deputy Chief of Naval Operations (Air Warfare), and then Vice Chief of Naval Material. VADM Seymour assumed command of the Naval Air Systems Command on 30 April 1980.

CAPTAIN ROBERT J. KELLY, USN, was designated a Naval Aviator in February 1961. In November 1961, CAPT Kelly was assigned to Attack Squadron Twelve (VA-12) followed by assignment to the Naval Postgraduate School in November 1964. His thesis, titled, “An Investigation of the Oxidizer Flow Passages in the ARES Propulsion System”, was a significant contribution toward the development of the Turbo-propulsion Laboratory at the Naval Postgraduate School. He was awarded the professional degree of Aeronautical Engineer in September 1967.

Following duty in Attack Squadron One Hundred Five (VA 105), he reported to Wright Patterson AFB, Dayton Ohio as Deputy Chief, Engineering Division in the USN/USAF Joint Engine Project Office, assisting in the development of the F-400/401 engine. He then became Executive Officer and then Commanding Officer of Attack Squadron Seventy-Two (VA-72). Following a year of nuclear power training, he was assigned to duty with the Director, Division of Nuclear Reactors, Washington, D.C.

CAPT Kelly served on USS Enterprise (CVA-65), commanded USS Paul Revere (LPA-248) and assumed command of the USS Enterprise in February 1981.

LCDR John Bepko demonstrates manpower flow modelling to Mr. E.C. Grayson, Deputy Assistant Secretary of the Navy (Manpower), in connection with student briefings on a class project on manpower issues associated with a 600 ship Navy
LCDR Van Brocklin receives Admiral William Adger Moffett Award from General Jimmy Doolittle.

LIEUTENANT COMMANDER STEPHEN T. VAN BROCKLIN graduated from Clarkson College in 1969 with a Bachelor of Science Degree in Physics. He reported to NAS Pensacola for flight training in the fall of 1969 and received his commission in January, 1970. After completing tours with VS-30 and VS-24 he transitioned to the S-3A before attending the Naval Test Pilot School in Patuxent, MD.

LCDR Van Brocklin was selected to attend the Naval Postgraduate School, Monterey, California where he received his Master of Science Degree in Aeronautical Engineering in March, 1980. LCDR Van Brocklin received the Admiral William Adger Moffett Award for technical excellence in the aeronautical engineering field. He is presently assigned to VS-11.

CAPT STEPHEN G. KEE, USA, a graduate of the United States Military Academy was commissioned a Second Lieutenant in June 1973. After graduation from rotary wing flight school in October 1976, he served as an Aeroscout Platoon Leader in Korea. In 1978, upon his return from Korea, CAPT Kee attended the Armor Officer Advance Course. He subsequently served as Aeroscout Platoon Leader and Troop Operations Officer of an air cavalry troop at Ft Hood, Texas. While at Ft Hood, CAPT Kee was selected to compete in several local helicopter competitions. Based on his successful performance in these competitions he was selected as a team member of the United States Helicopter Team, which was to compete in the 4th World Helicopter Championships. The competition was held 14-23 August 1981 in Piotrokon Trybanalsia, Poland under the auspices of the International Aeronautics Federation. CAPT Kee and his teammate won the individual team championship scoring highest in the four event competition, beating teams from West Germany, Poland, United Kingdom, France, and the Soviet Union. CAPT Kee has recently reported to NPS as a student in the Aeronautical Engineering Curriculum.

Astronauts — The following graduates of the Naval Postgraduate School have been selected as Astronauts for the Space Program:

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<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Springer, Robert C.</td>
<td>LCOL, USMC</td>
<td>Ops Res</td>
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<tr>
<td>Leestma, David C.</td>
<td>LCDDR, USN</td>
<td>Aero Eng</td>
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<td>Hilmers, David C.</td>
<td>CAPT, USMC</td>
<td>Elect Eng</td>
</tr>
<tr>
<td>McBride, Jon A.</td>
<td>CDR, USN</td>
<td>Aero Eng</td>
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<td>Weitz, Paul J.</td>
<td>CAPT, USN Ret</td>
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<td>Overmyor, Robert F.</td>
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<td>Lousma, Jack R.</td>
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<td>Carr, Gerald P.</td>
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<td>Mitchell, Edgar D.</td>
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<td>Coats, Michael L.</td>
<td>CDR, USN</td>
<td>Aero Eng</td>
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</tbody>
</table>
CAPTAIN RONALD E. HUGHES, USN, a naval aviator, entered the Naval Postgraduate School in 1959. In 1961 CAPT Hughes was awarded a degree in Meteorology (with distinction).

Following a tour on the staff of Commander Barrier Forces, Pacific, he served at the Fleet Numerical Weather Facility, Monterey, California and transferred to the restricted line (eventually to be called the Geophysics Community). As a recipient of a National Science Foundation scholarship he pursued graduate studies at the University of Hawaii before serving as Operations Officer and Executive Officer at Fleet Weather Central Pearl Harbor. Following assignments in Washington, D.C. at the Headquarters of the Naval Weather Service Command and the Naval Air Systems Command where he managed allocation of environmental research funds, he assumed command of the Fleet Numerical Weather Central, Monterey, California in June 1976. In 1979 he became Deputy Director, Naval Oceanography Division/Oceanographer of the Navy in the Office of the Chief of Naval Operations. In July 1981 CAPT Hughes became Commander of the Naval Oceanography Command.

Upon graduating CDR Camp was assigned to the Staff of Commander Area ASW for the SIXTH FLEET (CTF 66) as Assistant Chief of Staff for Analysis and Tactical Development & Evaluation where he was involved in planning operational ASW exercises for the SIXTH FLEET. During this tour he was promoted to his current rank and assigned a proven doctorate subspecialty code. He is presently assigned to NMPC in the Sea Duty Component.

CAPTAIN JOHN L. HAYES, USAF, was commissioned in the USAF as a weather officer and forecaster before entering the Naval Postgraduate School in 1975. He graduated with distinction from the Meteorology Curriculum in March 1977. In recognition of his thesis: "Numerical Simulation of Air Flow Over Mountains," he was designated an Advanced Weather Officer/Computer Oriented by the USAF.

Following his graduation he served at the Air Force Global Weather Center, Offutt AFB, Omaha, Nebraska until August 1980 serving as Systems Analyst, Numerical Forecasting Section, Chief, Numerical Forecasting Section, and Operations Staff Officer, Plans and Policy Branch.

In his AFGWC tour following NAVPGSCOL education, CAPT Hayes provided strategy to direct scientific activity of 30 Masters and Ph.D. staff members and directed the design and coding of a numerical prediction model. In October 1980, CAPT Hayes was selected by the USAF to return to NPS where he is pursuing his Ph.D.
COMMAND, CONTROL, COMMUNICATIONS (C3)

LIEUTENANT COLONEL FREDERICK W. JOHNSTON III, USA, was commissioned a Lieutenant in the U.S. Army in 1963. Prior to entering the Naval Postgraduate School in 1978 LTC Johnston served as an Artillery and Intelligence Officer, and in Vietnam — first in the Combined Intelligence Center, Saigon, and later as G-2 Advisor, Capital Military District. Other assignments include the Defense Intelligence Agency, the 101st Airmobile Division and US Exchange Officer to the British Army. His thesis, "An Appreciation of Army Divisional Command and Control," was written to serve as a primer for future C3 students. Upon graduation he was assigned to the C3I Directorate, Combined Arms Combat Development Center, Training and Doctrine Command, USA.

Currently LTC Johnston is Division Chief of the Electronic Warfare and Intelligence Division. In that capacity he has contributed significantly to the integration of intelligence information considerations in the development of C3 systems both within the Army and in Joint Programs. He has also been active within the Army in promoting C3 education.

LIEUTENANT COLONEL ROBERT A. QUEEN, USMC, prior to entering the Naval Postgraduate School in 1977, served as an officer in both the U.S. Navy and U.S. Marine Corps. His assignments in the Marine Corps have primarily been related to artillery and nuclear weapons employment. He was enrolled in the Command, Control and Communications Curriculum and upon graduation was designated a Command, Control and Communications (C3) Systems Officer and assigned to Headquarters, USMC, Washington, DC.

Since being assigned to HQ USMC, LTC Queen has served as Interoperability Officer and Branch Head, Tactical Command and Control Branch of the C4 Systems Division. He has contributed significantly to the development and employment of C3 systems within the Marine Corps as well as insuring interoperability of USMC systems in Joint operations. He has been a major contributor to the C3 Training and Education Joint Program Sponsor Group. Within the Marine Corps he serves as the Command, Control and Communications graduate education sponsor.

LIEUTENANT COLONEL MARK H. SMITH, USAF, was commissioned a Second Lieutenant in the U.S. Air Force in 1964. LTC Smith spent most of his pre-NPS career as a Communications and Electronics (C-E) Officer. Entering the Naval Postgraduate School in 1977 he was a member of the first class in Joint Command, Control and Communications. His thesis, "An Application of Rule-Directed Interactive Transaction Agent (RITA) for the Automated Technical Control of the Defense Communications Systems (CDS)," has been presented to the Washington Chapter of IEEE and is scheduled for presentation to the National IEEE Convention later this year. Upon graduation he was assigned to the C3S Directorate, Office of the Joint Chiefs of Staff.

Currently LTC Smith is serving as Joint Activity Actions Officer, C3 Plans and Programs, C3S Directorate, OJCS. In that capacity he represents the C3S Director at numerous Joint Planning conferences involving existing and developing C3 systems. He also plays a key role in establishing budget priorities for C3 systems.

COMMANDER GARY R. PORTER, USN, was graduated from California State College, Northridge in 1968 with a B.S. in Business Administration. Prior to entering the Naval Postgraduate School in 1977 as a Lieutenant Commander, he served with Patrol Squadron Six, Commander Third Fleet Staff and Patrol Wing One Detachment Agana.

While at NPS his outstanding academic record and timely thesis entitled “An Analysis of the Atlantic Fleet TACAMO Downlink” earned him the distinction of being the first recipient of the "Joint Chiefs of Staff Command, Control and Communications Award for Academic Achievement". Upon graduation he was awarded an M.S. in Systems Technology (C3) and assigned to Patrol Squadron 31.

Currently CDR Porter, a naval flight officer, is serving as Executive Officer, Patrol Squadron 17. CDR Porter has been extremely active in familiarizing the operational community with the uses of the Advanced Research Projects Agency Computer Network facilities.
CAPTAIN CHARLES P. GIBFRIED, SC, USN, a graduate of the University of Illinois, was commissioned an Ensign in 1958 and completed Naval Supply Corps School in 1959. During a period of inactive duty as a Naval Reservist from 1962-1966, CAPT Gibfried was employed by IBM and was selected as their Los Angeles “Man of the Year” in 1964. Upon return to active duty, CAPT Gibfried served as Senior Systems Analyst and Director of Analysis and Programming, Intelligence, on CINCPAC staff and Director, Data Processing at NSC San Diego. CAPT Gibfried began his Naval Postgraduate School assignment in 1971. He was awarded the degree Master of Science in Computer Systems Management with distinction in 1972.

CAPT Gibfried returned to sea duty as Assistant Supply Officer of USS ENTERPRISE (CVN-65). A subspecialist tour as an instructor at Naval Postgraduate School followed. Within this two-year period, he was promoted to the academic rank of Assistant Professor, and Chairman of the Computer Science Department. CAPT Gibfried was assigned in 1978 as Supply Officer, USS ENTERPRISE (CVN-65). During this tour of duty, the ship was awarded the Battle Efficiency “E” and the Supply “E”. CAPT Gibfried is presently assigned as Planning and Data Systems Officer at the Aviation Supply Office. CAPT Gibfried has been named to the New York Times Selection of “Who’s Who in Data Processing” since 1964. He is presently serving as the COMNAVAIRPAC FORCE Supply Officer.

COMMANDER PAUL N. JOHNSON, a Naval Academy graduate reported to the Naval Postgraduate School in 1971. Prior sea tours included First Lieutenant and CIC Officer of USS MADDOX (DD-731), Executive Officer of USS ILLUSIVE (MSO-448) and Commodore of MINEDIV 113 in Vietnam. He was awarded the degree Master of Science in Computer Systems Management upon graduation in 1972.

CDR Johnson returned to sea duty as department head aboard USS MORTON (DD-948). He was subsequently assigned as ADP Project Manager at the CINCPAC World Wide Military Command and Control System site. After an assignment as a student at the Command and Staff Course in 1977 at the Naval War College, CDR Johnson returned to sea duty in 1978 as Commanding Officer of USS BRUNSWICK (ATS-3). During his tour, the ship won the Battle Efficiency “E”, and was awarded the Golden Anchor for recruiting excellence twice.

COMMANDER RICHARD D. VROMAN, USN, completed Navy Supply School “With Distinction” in 1968. After a shipboard tour in 1969 CDR Vroman commenced duties at Navy Supply Corps School as an instructor in Computer Training. He entered the Naval Postgraduate School in the Computer Systems Management Curriculum graduating “With Distinction”.

In 1973, CDR Vroman reported to USS MARS (AFS-1) as Stock Control and ADP Officer. A tour ashore in the Bureau of Naval Personnel followed as Joint Uniformed Military Pay System Liaison Officer, during which this extremely complicated system was brought from concept to operational status. This task involved the transition from millions of manual pay records of commands throughout the world to a centralized, automated system to produce individual leave and earnings statements for each service member. Shipboard assignments as Supply Officer of the Seventh Fleet Flagships USS OKLAHOMA CITY (CG-5) and USS BLUE RIDGE (LCC-19) ensued. CDR Vroman is presently assigned as Integrated Disbursing and Accounting Project Officer at the Fleet Material Support Office. In this capacity he has successfully implemented four Supply Center sites on-time, within cost, “utilizing every aspect of his Postgraduate School education from circuit design to database management to training of operators”. Because of this success with the IDA project, CDR Vroman has been assigned the additional full-time responsibility as Standard Accounting and Reporting System Project officer, developing an automated accounting system for the highest levels of the Navy (CNO, NAVMAT, ONR).
ELECTRONICS AND COMMUNICATIONS

Vice Admiral Gordon R. Nagler, a graduate of Duke University, entered the Naval Postgraduate School as a Lieutenant junior grade. After graduating from the Communications Staff Officer curriculum at Monterey, VADM Nagler resumed his surface warfare career with a tour on the staff of Commander, Mine Force, U.S. Atlantic Fleet and as Commanding Officer of USS PEREGRINE (EAM-373).

VADM Nagler's subsequent sea command tours were as Commanding Officer of USS FORSTER (DER-334), USS MULLINIX (DD-944), USS JOSEPHUS DANIELS (DLG-27), and USS LITTLE ROCK (CLG-4). He has also served as Commander, Cruiser-Destroyer Group TWO. Other assignments have included tours with the CNO staff and with the Office of the Joint Chiefs of Staff. Specifically, his communications tours have included duty as Assistant Communications Readiness and Plans Officer on CINCPACFLT staff, Assistant Chief of Staff for Communications, CINCLANTFLT, and Special Assistant to the Director of Naval Telecommunications. He then served as Deputy Commander and then Commander of the Naval Telecommunications Command before becoming the Deputy Director, Command, Control and Communications (C3) Programs in the Office of the CNO. VADM Nagler's current assignment is as Director, Command and Control (OP-094).

Rear Admiral Henry Duff Arnold, a Naval Academy graduate, entered the Postgraduate School as a Lieutenant after having qualified as a naval aviator and having served in several operational flying billets. While at NPS, RADM Arnold studied Communications Engineering.

His distinguished career since then has included a strong mix of both operational and technical billets. RADM Arnold's aviator command tours include VA-22, Attack Carrier Air Wing 11, Naval Air Station, Whidbey Island, and Commander, Medium Attack Tactical Electronic Warfare Wing, Whidbey Island. His technical billets have included a tour at the Office of Naval Research as Director of Air Programs and as Executive Assistant to the Assistant Secretary of the Navy (Research and Development). In addition, RADM Arnold has served on the CNO staff in the National Policy and Command Organization Branch and as Director of the Tactical Air, Surface and EW Development Division. He served as Vice Commander of the Naval Electronic Systems Command prior to assuming his present position of COMNAVELEX.

Colonel Robert J. Ulses, USMC, entered the Communications Management curriculum as a Major in 1973. Upon completion he earned the subspecialty qualification of Communications Manager. COL Ulses was honored at graduation with the CNO Communications Award in recognition of his outstanding academic performance and exceptional military leadership ability.

Since graduation, COL Ulses served in the Signals Intelligence/EW Branch at Marine Corps Headquarters and became its head prior to reassignment as Communications-Electronics Officer, III Marine Amphibious Force, Okinawa. At present he is assigned to the Headquarters, U.S. Marine Corps.

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Commander Alvin L. Franson entered the Engineering Electronics curriculum at the Naval Postgraduate School as a Lieutenant in 1967. Prior to reporting to NPS, CDR Franson had a career in surface ships. CDR Franson earned his MSEE in 1969 and while at NPS became an Engineering Duty Officer.

Since graduation, CDR Franson has served as NAVELEX liaison officer to CINCUSNAVEUR, London and then was in the Communications Division of the Engineering Directorate of NAVELEX. Following this tour he became the Military Manpower Officer at NAVELEX Headquarters and then served with the NAVELEX Detachment at Cheltenham, MD. He is presently in the Office of the Assistant Secretary of the Navy for Research, Engineering and Systems.
NATIONAL SECURITY AFFAIRS/INTELLIGENCE

COMMANDER MICHAEL W. CRAMER reported to the Naval Postgraduate School in October 1973. Prior to arrival CDR Cramer attended the University of Washington and received a Bachelor of Science degree in Electrical Engineering in 1967. He was commissioned in February 1968 and filled various intelligence jobs prior to entry into the Naval Postgraduate School where he was enrolled in the Intelligence Program. His thesis was titled "Admiral of the Fleet of the Soviet Union Sergei G. Gorshkov: An Operational Code and Thematic Analysis". Upon completion of the postgraduate school course of study, he was awarded a Master of Arts degree in Naval Intelligence with Distinction and Master of Arts degree in National Security Affairs with specific emphasis on Europe/USSR. After NPS CDR Cramer was assigned to duty aboard the USS RANGER (CV 61) as an operation intelligence analyst, served as Naval Attache to the USSR in Moscow and is presently working in OP 009F as an operations intelligence analyst.

LIEUTENANT COLONEL ROBERT BRUCE McCONNELL, USAF, reported to the Naval Postgraduate School in July 1977. LTC McConnell was sponsored by the Director Air Force Attaches and was enrolled in the National Security Affairs Europe/USSR Program.

LTC McConnell participated in this program with specific emphasis on the USSR and the Russian language. He was awarded a Master of Arts degree in National Security Affairs in June 1978. Upon completion of the Naval Postgraduate School LTC McConnell was assigned duty as the Senior Air Attaché to Moscow. His present assignment is as the Country Officer for East/Central European Division for the Assistant Vice Director for Attaches and Training at the Defense Intelligence Agency. LTC McConnell was recently selected for the rank of colonel.

LIEUTENANT COMMANDER ROBERT WILLIAM PETERSON reported to the Naval Postgraduate School in October 1975. He was one of the first special warfare officers to attend the Naval Postgraduate School in the Intelligence Program. His master's thesis was titled "International Terrorism Threat Analysis." The hypothesis examined in this thesis is that the threat which international terrorism represents to the U.S. national security can be measured as a function of the threat perceptions of experts concerned with combating terrorism and is correlated with terrorist's methods of operation, perceived saliency of the enemy and the treatment of the event by foreign broadcasts.

Upon completion of the Naval Postgraduate School LCDR Peterson was assigned to the Defense Intelligence Agency in the Operations Intelligence Management Division for a period of two years. LCDR Peterson is presently assigned to duty as the Naval Attaché to Israel.
NAVAL ENGINEERING

REAR ADMIRAL WILLIAM E. MCGARRAH, a graduate of the Naval Academy, completed a M.S. in Mechanical Engineering at NPS in 1961. Since his graduation he has been involved in the overall supervision of all USN Ship System Design. His subspecialty utilization tours include duty as Ship Superintendent, Assistant Repair Superintendent for Surface Ships, Assistant Project Manager for Ship Acquisition for the LHA Program, Assistant Chief of Staff for Logistics for Amphibious Forces in the U.S. Atlantic Fleet, Director of Ships Programs for ASN and service as NAVSEA 05 (Deputy Commander NAVSEA for Ship Systems).

COMMANDER BRIAN T. PERKINSON entered the Naval Engineering curriculum of NPS in June 1972. Upon graduation he reported to SUPSHIPS, Newport News, where he was responsible for technical details of assigned project completion for new ship acquisition at Supervisor of Ship Building, Conversion and Repair, Newport News Shipbuilding and Drydock Corporation. Due to the graduate education received at the Naval Postgraduate School, CDR Perkinson has had responsibility for overall technical supervision of assigned elements of multi-million dollar technical projects in ship acquisition and repair. Other major subspecialty tours include Chief Engineer, USS H.R. DICKSON (DD708), COMDESRON 24 (Staff Material), and NAVSEA.

LIEUTENANT COMMANDER GEORGE R. SPEIGHT, USCG, entered the Naval Engineering curriculum in 1978. Upon graduation from the program he reported to Merchant Marine Technical, 8th USCG District, New Orleans, LA. LCDR Speight is currently serving as Chief, Machinery Section, Merchant Marine Technical, 8th Coast Guard District, New Orleans. He reviews all plans for merchant vessels, off-shore vessels, off-shore rigs; reviews/approves piping, piping systems, major propulsion and auxiliary plant plans; conducts strength and pressure calculations. Utilization of his background gained via graduate education is extensive. LCDR Speight states, "There is no question about the usefulness of the education to my job! It requires significant materials expertise."
OPERATIONS ANALYSIS

REAR ADmirAL RICHARD A. MILLER, a Naval Academy graduate and naval aviator, spent the early years of his career in operational billets. He entered the Naval Postgraduate School as a Lieutenant Commander in 1963 in the Operations Research Curriculum. While a student in this curriculum he was recognized for his research on MK-44 Torpedo Mutual Interference. This research culminated in his thesis “ASW Torpedo MK-44 MOD 1, An Analysis of Mutual Interference Efforts on Tactics”. His operations analysis utilization tours include assignments with Anti-Submarine Warfare Systems Project Office in Washington, D.C., and as Deputy Director Systems Analysis Division, Chief of Naval Operations (OP-96).

RADM Miller in his operational tours has served as Commanding Officer, Helicopter Anti-Submarine Squadron Three, Commander, Carrier Anti-Submarine Air Group Fifty-three, Commanding Officer of USS SPIEGEL GROVE (LSD-32) and Commander, Amphibious Squadron Four. Elevated to Flag Rank in June 1978 he became Commander, Anti-Submarine Warfare Wing, U.S. Pacific Fleet. In August 1980 he was appointed by the President as the Director of Budgets and Reports, Office of the Chief of Naval Operations.

BRIGADIER GENERAL JOHN J. YEOSOCK, USA, was commissioned a Second Lieutenant upon graduation from Pennsylvania State University in 1959. He entered the Naval Postgraduate School with the rank of Major in June 1967 and received a Master of Science Degree in Operations Research in October 1969. Since graduating from the Naval Postgraduate School BGEN Yeosock has served operations research utilization tours as an Analyst in the office of the Project Manager for the Reorganization of the Army, Office of the Chief of Staff of the Army and Operations Research Analyst for Management Information Systems Directorate Office of the Assistant Vice Chief of Staff of the Army. His recent operational tours include Project Manager, Saudi Arabian National Guard Modernization, Chief of Staff First Cavalry Division, and Commander 194th Armor Brigade.

CAPTAIN WILLIAM E. DAESCHNER, SC, USN, a graduate of the University of Kansas, was commissioned (SC) in June 1961. He entered the Naval Postgraduate School as a Lieutenant in June 1966, and was awarded the Master of Science Degree (with distinction) in Operations Research. Upon graduation CAPT Daeschner served as an operations analyst with BUPERS and as Supply Officer, USS OKLAHOMA CITY (CLG-5). Reentering the Naval Postgraduate School as a Lieutenant Commander in September 1972, he received his PhD in June 1975.

CAPT Daeschner's recent assignments included positions as Director, Supply Systems Performance Evaluation Department, Senior Analyst, Operations Analysis Department and Director, Project Control Division of the Management Department at Fleet Material Supply Office, Mechanicsburg, Pennsylvania; Head, Operations and Inventory Analysis Staff at Naval Supply Systems Command; and Stock Control Officer at Ships Parts Control Center, Mechanicsburg. While assigned to NAVSUPPSYSCOM, CAPT Daeschner coordinated implementation of the DOD Retail Inventory Management Directive through establishment of retail supply systems for Navy managed material.

COMMANDER JOHN SCOTT REDD, USN, earned a B.S. Degree in Mathematics and Physics from the U.S. Naval Academy in 1966, where he stood second in a class of 870. Selected as a Fulbright Scholar, he then attended the University of Republic at Montevideo, Uruguay for a one-year program.
In December 1976 CDR Redd, then a Lieutenant Commander, reported to the Naval postgraduate School after completing an assignment as Executive Officer of the USS THOMAS C. HART. Entering the Operations Analysis Curriculum as a Burke Scholar, he maintained a nearly perfect 3.99 Quality Point Rating and was selected as winner of the CNO Award for Excellence in Operations Research upon graduating (with distinction) in December 1978. During CDR Redd’s studies at NPS, he completed innovative research directed toward a methodology for estimating Soviet Defense spending.

After graduation CDR Redd reported as Managing Director of Strategy Sub-Panel, CNO Executive Panel (OP-OOK). During this assignment he also served as Head of the Maritime Theater Nuclear Warfare Policy Board. In August of this year CDR Redd reported as Commanding Officer, USS KING (DDG-41).

LIEUTENANT COMMANDER DANA B. MCKINNEY, USN, completed his undergraduate education at UC Berkeley, receiving an A.B. in Political Science and commission as Ensign in June 1969. Designated a Naval Aviator in January 1971, LCDR McKinney completed EA-6B training in August 1972 and reported to VAQ 133.

A tour in EA-6B Replacement Training Squadron followed where he served as Training LSO, instructor pilot and Electronic Warfare Instructor. In September 1978 LCDR McKinney reported to VAQ 138. He was recently selected as NAVAIRPAC “Tailhooker of the Year” for 1981, as a result of his performance aboard the Kennedy.

LCDR McKinney reported to the Naval Postgraduate School in July and is engaged in his first quarter of studies in the Operations Analysis Curriculum.

LIEUTENANT PETER H. DALY, USN, completed his undergraduate education at Holy Cross, receiving an A.B. in Economics in May 1977. Commissioned an Ensign in May 1977, LT Daly reported to the Surface Warfare Officer’s School (Basic), where, in March 1978, he graduated 1 of 128 in his class and received the Admiral Arleigh Burke Award for Professional Excellence. From March 1978 to January 1981, LT Daly served aboard the USS ROARK (FF 1053), homeported in San Diego. As a result of his outstanding performance as a shiphandler with Roark, LT Daly received the CINCPACFLT Junior Officer Award in Shiphandling competition for calendar year 1980. He was awarded the Navy Commendation Medal for meritorious service aboard the Roark.

LT Daly reported to the Naval Postgraduate School in January 1981 and has completed two quarters of the Operations Analysis Program.
WEAPONS ENGINEERING

REAR ADMIRAL KLEBER S. MASTERSON, a graduate of the U.S. Naval Academy, came to NPS in July 1959. While at the Naval Postgraduate School he was assigned to the Weapons Engineering (Physics) program where he was the recipient of the Master of Science degree in Physics. RADM Masterson qualified for admission into the PhD program in Physics and subsequently was ordered to the University of California at La Jolla where he received his PhD in January 1963.

RADM Masterson's subsequent assignments include sea duty in USS WRIGHT (CC-2) and USS LONG BEACH (CGN-9). He served as Executive Officer in USS HORNE (DLG-30) and Commanding Officer of USS PREBLE (DLG-15). Other assignments include a tour in the Secretary of the Navy's Office of Program Appraisal and the CNO's Systems Analysis Group which led to the DD-963, CGN-36 and F-14 programs. In 1974, RADM Masterson, was assigned as Project Manager of the Anti-Ship Missile Defense Systems. Upon completion of that tour he was assigned as Executive Assistant and Naval Aide to the Secretary of the Navy. In July 1978 RADM Masterson was responsible for all Anti-Air and Surface Warfare weapons systems and for Navy ammunition programs in the Naval Sea Systems Command. He was recently assigned to the Chief Study Analysis and Gaming Agency of the JCS.

CAPTAIN GEORGE R. MEINIG, USN, a 1958 graduate of the U.S. Naval Academy, came to NPS from USS DAMATO (DDE-871). While at the Naval Postgraduate School he was assigned to the Weapons Engineering (Materials) program where he was the recipient of the Master of Science degree in Material Science. Upon graduation he was assigned as Commanding Officer USS CLARION RIVER (LSMR-409).

CAPT Meinig's subsequent assignments include Weapons Officer in USS TRUXTUN (DLGN-35) and Head of the Surface Missile Systems Branch in OPTEVFOR. In 1974 CAPT Meinig assumed responsibility as Project Manager of the PHALANX Weapon System which he brought to a highly successful fleet introduction in 1978. Since 1978, CAPT Meinig has served as Technical Director of the AEGIS Shipbuilding Project which not only includes the AEGIS Combat System but the platform on which it is installed, the USS TICONDEROGA (CG-47).

COMMANDER WALTER J. GERARD, a Navy Academy graduate and Navy Flight Officer had served operational assignments in the VP community prior to entering Postgraduate School. CDR Gerard was enrolled in the Anti-submarine Warfare Curriculum.
Using the knowledge he acquired in the Antisubmarine Warfare Curriculum about the fundamentals upon which the AQA-7 Acoustic Signal Processor in P-3 aircraft is based, he was able to recognize an unused capability in that processor. He determined there were several decibels of signal excess available for electronic signal processing which could significantly extend the detection range of the equipment. By using analysis techniques learned at the NPS, coupled with his own operational experience in VP aircraft, he demonstrated that the equipment could consistently perform much better than current expectations. CDR Gerard was subsequently funded by NAVAIR to develop a training plan which could be implemented in VP squadrons to train AQA-7 operators to utilize inherent signal excess. The tactical advantage realized by our airborne ASW forces as a result of this accomplishment is significant. Upon graduation in 1977 CDR Gerard returned to the VP community. He is now Executive Officer of VQ-3.

In the history of the Naval Postgraduate School (NPS), 567 officers who have completed a curricular program at NPS have attained flag rank. The following is a list of those on active duty as of 1 April 1981.

**DISTINGUISHED ALUMNI**

Admiral Hyman G. Rickover
Admiral James D. Watkins
Vice Admiral Lee Baggett, Jr.
Vice Admiral Edward S. Briggs
Vice Admiral "M" Staver Holcomb
Vice Admiral Thomas J. Kilcline
Lieutenant General John H. Miller
Vice Admiral Gordon R. Nagler
Vice Admiral William H. Rowden
Vice Admiral Ernest R. Seymour
Vice Admiral Edward C. Walker, III
Vice Admiral Robert L. Walters
Rear Admiral David M. Altwegg
Rear Admiral Henry D. Arnold
Rear Admiral James W. Austin
Rear Admiral Robert C. Austin
Rear Admiral Richard C. Avrit
Rear Admiral Fred H. Baughman
Rear Admiral John D. Beecher
Rear Admiral Ralph G. Bird
Rear Admiral John C. Bodensteiner
Rear Admiral James B. Busey
Rear Admiral Edward W. Carter, III
Rear Admiral Lawrence C. Chambers
Rear Admiral Karl J. Christoph, Jr.
Rear Admiral Glenwood Clark, Jr.
Rear Admiral Neal W. Clements
Rear Admiral Byran W. Compton, Jr.
Rear Admiral Robert C. Conolly, II
Rear Admiral Peter C. Conrad
Rear Admiral John D. Costello, USCG
Rear Admiral George W. Davis, Jr.
Rear Admiral Henry J. Davis, Jr.
Rear Admiral Tyler F. Dedman
Rear Admiral Paul W. Dillingham, Jr.
Rear Admiral Robert F. Dunn
Rear Admiral Crawford A. Easterling
Rear Admiral Scott W. Ebert
Rear Admiral Donald L. Felt
Rear Admiral Richard K. Fontaine
Rear Admiral Joseph F. Frick
Rear Admiral Paul C. Gibbons, Jr.
Rear Admiral William A. Gureck
Rear Admiral Benjamin T. Hacker
Rear Admiral Warren C. Hamm, Jr.
Rear Admiral David L. Harlow

Rear Admiral Ralph R. Hedges
Rear Admiral Charles F. Horne, III
Rear Admiral Stephen J. Hostettler
Rear Admiral Dempster M. Jackson
Rear Admiral Roger D. Johnson
Rear Admiral Fred W. Johnston, Jr.
Rear Admiral Donald S. Jones
Rear Admiral William A. Kearns, Jr.
Rear Admiral Bruce Keener, III
Rear Admiral Cecil J. Kempf
Rear Admiral Robert E. Kirksey
Rear Admiral Verle W. Klein
Rear Admiral Arthur K. Knoizen
Rear Admiral Leland S. Kollmorgen
Rear Admiral Paul A. Lautermilch, Jr.
Rear Admiral Glen W. Lenox
Rear Admiral Lee E. Levenson
Rear Admiral Walter M. Locke
Rear Admiral Robert C. Mandeville, Jr.
Rear Admiral Kleber S. Masterson, Jr.
Rear Admiral John C. McCarron
Rear Admiral James E. McCord, Jr.
Rear Admiral Paul F. McCarthy, Jr.
Rear Admiral William E. McGarrah, Jr.
Rear Admiral James E. McKenna
Rear Admiral Joseph Metcalf, III
Rear Admiral Wayne E. Meyer
Rear Admiral Richard A. Miller
Rear Admiral Charles J. Moore
Rear Admiral Douglas F. Mow
Rear Admiral Paul J. Mulloy
Rear Admiral Paul J. Mulroy
Rear Admiral Henry C. Mustin
Major General Noah C. New
Rear Admiral William E. Newell, Jr.
Rear Admiral Jack F. O'Hara
Rear Admiral Samuel H. Packer, II
Rear Admiral Walter T. Piotti, Jr.
Rear Admiral Bruno A. Pomponio
Rear Admiral Charles O. Prindle
Rear Admiral Donald F. Roane
Rear Admiral Conrad J. Rorie
Rear Admiral Louis R. Sarosdy
Rear Admiral Harry C. Schrader, Jr.
Rear Admiral Milton J. Schultz, Jr.
Rear Admiral Conrad J. Rorie
Rear Admiral Louis R. Sarosdy
Rear Admiral Harry C. Schrader, Jr.
Rear Admiral Milton J. Schultz, Jr.
CONTINUING EDUCATION

Students Enrolled in Self-Study Courses

Military students enrolled in NPS self-study courses are located in countries and ships around the world. These graduate preparatory self-study courses may be taken for the same credit awarded when taken on-campus. Successful completion of these courses may improve a Navy officer's APC, enhance the likelihood of assignment into a curriculum of choice, permit the student to take more advanced courses in fully funded graduate education programs, may shorten time in residency under DUINS, and broaden the educational base of officers in general. Self-study course materials are highly structured with self-tests and other forms of feedback that permit enrollees to determine quickly where their weaknesses are and how much review they need. Nearly all self-study students are matched with local volunteer tutors qualified to assist them. Students may enroll in self-study courses at any time. A catalog of NPS self-study courses is distributed by the Office of Continuing Education annually to all ships and stations, selected commands of other services and to individuals upon request. Approximately 3,000 credit hours of courses were requested by about 900 off-campus students for review and credit study in FY81. Approximately 35% of the students entering NPS have requested NPS self-study courses prior to entry. An average saving of 20% in student coursework is realized for first quarter students due to preparatory work at civilian institutions and the self-study program. These self-study materials are utilized by on-campus students also. Actual benefits realized from taking self-study courses prior to NPS entry is dependent on the student’s previous education and available time to spend on the course. Nearly all students returning materials after NPS entry express appreciation for the self-study courses.

Students in Short Courses

Approximately 630 students participated in 23 short courses in FY81 for a total of approximately 30,000 student-class hours. The most popular short course is Practical Comptrollership, which is given six times a year at NPS. Another short course in Aircraft Combat Survivability drew a large audience at NPS. In off-campus offerings, short courses in Marine Gas Turbines and Electronic Warfare were presented at various locations throughout the United States. Short courses are financed by the benefiting activity or by tuition fees. Short course offerings cover nearly all academic disciplines at NPS.

Counseling Students

Approximately 600 military officers are provided some form of long range educational counseling annually. This is performed by way of a personal letter to officers coming before the selection board who may enhance their chances for selection to graduate education by successfully completing self-study courses. Incoming students are advised by NPS staff on how to prepare for NPS entry when first notice is received of their assignment to NPS. Officers are encouraged to contact appropriate curricular officers or the Continuing Education Office whenever they have questions pertaining to educational aspects of their careers. This year briefings on graduate education were held at major command centers in late FY81 in response to command requests that resulted from a CNO message on the importance of graduate education in the Navy.
AVIATION SAFETY PROGRAMS

The Postgraduate School's Aviation Safety Programs faculty and staff conduct professional programs in the safety disciplines for United States Navy, Marine Corps, sister-service, and United States Department of Defense civilian safety personnel. Authorized programs include: (1) a six-week Safety Officer/Aviation Safety Officer (SO/ASO) short course for officers manning or designated to man such billets in Regular Navy or Marine Corps air squadrons; (2) a special four-week Survey of Aviation Safety (SAS) offered once a year to Navy or Marine Corps Reserve Officers; and (3) an intensive eight-day Aviation Safety Command (ASC) course offered seven times a year to air squadron Commanding Officers and prospective Commanding Officers.

The SO/ASO program consists of some 185 hours of instruction in aircraft accident prevention and investigation, engineering, medicine, psychology, and law, chosen to prepare squadron safety department heads and aviation safety officers to assist their Commanding Officers in conducting aggressive accident prevention programs. Some 300 officers complete this course each year.

The SAS program allows Naval and Marine Corps Reserve squadron personnel to attend the survey program. Attendance is limited to 30 officers.

The ASC program provides squadron Commanding Officers an orientation in the philosophies, and practices of effective command safety programs. Some 200 Commanding Officers, Executive Officers, and prospective squadron COs and XOs attend the ASC program each year.

Aviation Safety Programs cooperates with the Postgraduate School's Department of Aeronautics in conducting a System Safety Management and Engineering Course required of all candidates for aeronautical engineering degrees; the course is also available as an elective to degree candidates in other technical fields. Emphasis is placed on the philosophy of systems safety, with application to the current military standard, as illustrated through examples and case studies. An off-campus version of the systems safety course has also been developed under the sponsorship of Naval Air System Command.

DEFENSE RESOURCES MANAGEMENT EDUCATION CENTER

The Defense Resources Management Education Center (DRMEC) is an activity of the U.S. Department of Defense jointly sponsored by the Assistant Secretaries of Defense for Comptrollership, Program Analysis and Evaluation, Manpower, Reserve Affairs and Logistics, and International Security Affairs. The Secretary of the Navy is the Executive Agent for the Center, and the Superintendent of NPS is the Director. Dr. John E. Dawson is the Executive Director.

Based upon a program of research related to defense resources management education, DRMEC continues to provide a variety of resource management courses designed to enhance the understanding, competence, and capabilities of U.S. and foreign military and civilian personnel in the development, operation, and maintenance of DOD and other government management systems. Emphasis is on analytical concepts and techniques drawn from the disciplines of management decision theory, economics, and quantitative methods as they apply to the allocation and utilization of financial, logistic, and manpower resources.

During Fiscal Year 1981 more than three hundred U.S. students participated in five four-week Defense Resources Management Courses, in residence in Monterey, as well as seven two-week mobile courses taught at Wright-Patterson Air Force Base, Ohio; Naval Weapons Center China Lake, California; Naval Air Station Jacksonville, Florida; Anniston Army Depot, Alabama; Lowry Air Force Base, Colorado; Fort Gordon, Georgia; and Fort Bliss, Texas. During that same period, over two hundred and thirty international students, drawn from thirty countries also received instructions through courses taught in residence in Monterey. Resident courses included two eleven-week International Defense Management Courses, and one four-week Senior International Defense Management Course for fifty-three admirals, generals, and ministerial level civilians from twenty-three nations.

Since its inception in 1965 DRMEC has conducted courses in defense management for approximately 8900 U.S. participants and almost 4200 international students from sixty-six nations.
The Naval Postgraduate School Foundation, Inc. was founded in 1970 by personnel in the local area who desired to provide support to the School, its people, programs and traditions. That desire has manifested itself in several ways including the expansion of the sailing club and the acceptance of both funds and equipments and other activities to further the School's goals. The Foundation also rewarded academic excellence at the professional level.

The Rear Admiral John Jay Schieffelin Award for Excellence in Teaching was presented to Professor Arthur L. Schoenstadt of the Department of Mathematics.

The William R. Church Award for outstanding achievement in the study of mathematics was won by Lieutenant Commander Pierre Vining, a student in the Naval Engineering Department.

The Carl E. Menneken Fellowship for Scientific Naval Research was awarded to Mr. Sheldon R. Tieszen of the University of Michigan whose doctoral dissertation dealt with boiling in narrow crevices in steam generators.

A memorial fund established in honor of the late Dr. H. Paul Ecker, Executive Director of the Defense Resources Management Education Center, has been used to refurbish and enhance a library within the Center.

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RADM Ekelund cuts ribbon for Turbopropulsion Laboratory

Rear Admiral Ekelund graduated from the U.S. Naval Academy in 1949. He received a Master of Science in Systems Analysis from the University of Rochester. He has also attended the Armed Forces Staff College.

Rear Admiral Ekelund earned Warfare Specialties in Submarine and Surface Warfare. He has served in a variety of billets both ashore and afloat including Command of USS GRAYBACK (SSG 574), Chief of Staff to Commander Naval Forces Vietnam, and Command of USS ALBANY (CG 10). Significant duty ashore has included assignments in Strategic Warfare Analysis and as the Dean of Academics at the Naval War College. Previous Flag assignments have been as the Deputy Director of Naval Education and Training and duty with the Central Intelligence Agency. In his last assignment before reporting to Monterey, Rear Admiral Ekelund served as Commander, South Atlantic Force, U.S. Atlantic Fleet.
With the appointment of Provost Jack R. Borsting as Assistant Secretary of Defense (Comptroller) in August 1980, David A. Schrady was appointed Acting Provost and Academic Dean. Dean Schrady's education was in the field of operations research and he received his doctorate from Case Institute of Technology. Prior to this assignment he had been a faculty member in the Department of Operations Research, then Chairman of the Department of Operations Research and Administrative Sciences, and subsequently Dean of Academic Planning and Dean of the Information and Policy Sciences Division. With the exception of a year as Associate Director of the Operations Research Program in the Office of Naval Research in Washington, D.C., Dr. Schrady has been on the faculty of the Naval Postgraduate School since 1965.

Dr. Schrady is a past President of the Military Operations Research Society. He had served as that organization's Vice President for Symposium Operations and served a total of eight years on their Board of Directors. He has also been active in the Operations Research Society of America (ORSA) serving as chairman of the Education Committee, chairman of the Visiting Lecturer Program, chairman of the Data Processing Committee, and general chairman of the Spring 1977 Joint National Meeting. He served three terms as Treasurer and member of the Executive Committee of ORSA. Dr. Schrady's research and publications have been in the areas of logistics and inventory control.
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Dean Emeritus, School and Graduate School of Business Administration, University of Washington; A.B., Luther College, Iowa, 1938; M.S., Iowa State University, 1940; Ph.D. in Economics, Iowa State University, 1960; Honorary D.Sc, Luther College Iowa, 1981; Former President American Assembly of Collegiate Schools of Business.
DR. GERALD J. KIEBERMAN

Vice Provost and Dean of Graduate Studies and Research, Professor Statistics and Operations Research, Stanford University; B.M.E., Cooper Union, 1948; A.M., Columbia University, 1949; Ph.D., Stanford University, 1953; President of the Institute of Management Sciences.

DR. HANS M. MARK

Deputy Administrator for NASA; A.B., Physics, University of California Berkeley, 1951; Ph.D., Physics, Massachusetts Institute of Technology, 1954; Lecturer in Physics, U.C. Berkeley 1957-58; Assistant Professor of Physics, M.I.T., 1950-60; Lecturer in Nuclear Engineering, U.C. Berkeley, 1966-69; Director, NASA Ames Research Center, Moffett Field, CA. from 1969-76; Under Secretary of the Air Force 1976-79; Secretary of the Air Force 1979-81.

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DR. DAVID S. POTTER

Vice President and Group Executive in charge of Public Affairs Group, General Motors Corporation; B.S., Yale University, 1945; Ph.D. in Physics, University of Washington, 1951; U.S. Navy from 1943 to 1946; Former Assistant Secretary of the Navy for Research and Development and Under Secretary of the Navy.

DR. RUSSELL R. O'NEILL

Dean of the School of Engineering and Applied Science, UCLA since 1974; B.S., University of California Berkeley, 1938; M.S., 1940; Ph.D., University of California Los Angeles in Engineering, 1956; Fellow, College of Fellows Institute for the Advancement of Engineering; Chairman, National Research Council Maritime Transportation Research Board.

ADMIRAL JAMES S. RUSSELL, USN (RET) — CHAIRMAN

Retired from active duty on 1 April 1965; after serving as Commander in Chief, Allied Forces, Southern Europe for over three years; B.S., U.S. Naval Academy, 1926; Naval Postgraduate School, 1933; M.S., California Institute of Technology, 1935; part time consultant for Boeing Company.
DR. JOHN B. SLAUGHTER

Director, National Science Foundation; B.S., Kansas State University, 1956; M.S., University of California, Los Angeles, 1961; Ph.D., University of California, San Diego, 1971; Former Academic Vice President and Provost, Washington State University.

ADMIRAL ALFRED J. WHITTLE, JR., USN (RET)

Retired from active duty on 1 July 1981 after serving as Chief of Naval Material from August 1978; B.S., U.S. Naval Academy, 1945; graduate of Nuclear Power School, 1960; attended the Institute of Defense Analysis, Arlington, Virginia.

THE HONORABLE ROBERT C. WILSON

Founder and member, Washington Industrial Team; former Representative of Forty-First Congressional District of California (1953-81), was ranking Republican member of the House Armed Services Committee and the House Select Committee on Intelligence; attended San Diego State College (1933-35) and Otis Art Institute, Los Angeles.
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