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Monterey, California, Naval Postgraduate School

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the degree of Master of Science in International Relations from the University of George Washington in September 1972. His research while at the Naval War College and the University of George Washington, was in the field of public diplomacy.

Commander Caswell served from July, 1969, to July, 1971, in the Directorate of Defense Research and Engineering, Office of the Secretary of Defense, specializing in administration and management. In January, 1973, he was designated a Weapons Systems Acquisition Project Manager Specialist.

In November, 1974, after serving as the Commanding Officer, Fleet Composite Squadron SEVEN, NAS, Miramar, San Diego, California, he joined the faculty of the Naval Postgraduate School, Monterey, California, where he is teaching in the Department of Aeronautics.

He is a member of the U. S. Naval Institute, the American Institute of Aeronautics and Astronautics, and the Society of Sigma Xi.

FACULTY PUBLICATIONS

Nguyen, Dong H.

The time-dependent nuclear reactor with feedback. Nuclear Science and Engineering, Vol. 55, 1974, pp. 307-319.

Abstract: The nonlinear neutron dynamics equation with Doppler feedback is solved using the Newton-Raphson-Kantorovich's iterative technique for functional spaces. It is shown that the difference between the first and higher iterates is negligible at all time, and that the neutron spatial distribution during transience is dominated by the fundamental mode. Solutions are obtained for gas-cooled and liquid metal-cooled fast reactors subjected to various initial conditions, and their safety are compared in terms of neutron dynamic behavior.

Perkins, A. J.

Substructure of Cu-Zn-Al Martensite, Metallography 7, pp. 345-356, American Elsevier Publishing Company, Inc., 1974.

Abstract: The internal structure of martensite formed at low temperature in Cu-Zn-Al alloys is examined via in situ transformation using cold stage electron microscopy. The substructure of martensite in these alloys is seen to consist of closely-spaced, parallel, irregularly shaped, stacking faults bounded by numerous partial dislocations. The structure of martensite: matrix interfaces is also reported.

PROFESSIONAL ACTIVITIES

Professor Sydney R. Parker, Chairman of the Department of Electrical Engineering, has been elected a Fellow of the Institute of Electrical and Electronic Engineers (IEEE). His Fellow citation reads "For contributions to circuit and system theory." Professor Parker has also been selected as an official IEEE delegate to the 1975 Popov Society Congress in Moscow. The Popov Society is the USSR equivalent to the IEEE, and the two societies exchange delegates for their annual meetings. The exchange program also includes visits to various research centers, educational institutions, and factories.

Dean of Research & Faculty	* Foundation Research Program	\$ 150,000	Director of Laboratory Programs, Wash., D.C.
P. F. Gaver, Oper. Research Admin. Science	Mathematical Studies of Ship Manning	\$ 22,338	Navy Personnel Research & Development Center San Diego, CA 92122
G. A. Kahn, Computer Sci.	* Project PIXIE Support and Analysis Support	\$ 25,000	Naval Electronic Systems Command, Washington, D.C. 20380
C. B. Mennicke, Electrical Engineering	* Project FITE Support Data Analysis and Debugging Support	\$ 5,000	Naval Electronic Systems Command, Washington, D.C. 20380
F. T. Williams, Meteorology	Preparation of a Global Prediction Model	\$ 10,076	Environmental Prediction Research Facility, Monterey, Calif. 93940
C. R. Jones & M. C. Sovereign, Oper. Research Admin. Science	Isolation for Long-Term Navy Contracts During High Inflation	\$ 18,182	Chief of Naval Research, Arlington, Virginia
D. A. Schady, J. W. Creighton, J. A. Jolly and M. Workman, Oper. Research Admin. Science	Academic Program for Naval Aviator Executive Institute	\$ 87,000	Naval Weapons Engineering Support Activity (62801), Washington Navy Yard, Washington, D.C. 20374
E. B. Dally, Physics & Chem.	* Studies of Radiation Effects on Electronics	\$ 15,000	Defense Nuclear Agency, Washington, D.C. 20305

RESEARCH AWARDS

Following is a listing of sponsored research funds received by the Naval Postgraduate School during the period 1 December - 31 December 1974. Projects indicated by an asterisk are continuations of existing programs.

<u>SOURCE</u>	<u>AMOUNT</u>	<u>TITLE</u>	<u>PRINCIPAL INVESTIGATOR</u>
Chief of Naval Research Arlington, Virginia	\$ 140,000	*Foundation Research Program	Dean of Research & Faculty
Director of Laboratory Programs, Wash., D.C.	\$ 150,000	*Foundation Research Program	Dean of Research & Faculty
Navy Personnel Research & Development Center San Diego, CA 92152	\$ 22,338	Mathematical Studies of Ship Manning	D.P. Gaver, Oper. Research Admin. Science
Naval Electronic Systems Command, Washington, D.C. 20360	\$ 25,000	*Project PIXIE Seatest and Analysis Support	G.A. Rahe Computer Science
Naval Electronic Systems Command Washington, D.C. 20360	\$ 5,000	*Project PIXIE Seatest Data Analysis and Con- sulting Support	C.E. Menneker Electrical Engineering
Environmental Prediction Research Facility Monterey, Calif. 93940	\$ 10,076	*Preparation of a Global Prediction Model	R.T. Williams Meteorology
Chief of Naval Research Arlington, Virginia	\$ 19,146	Escalation for Long-Term Navy Contracts During High Inflation	C.R. Jones & M.G. Sovereign Oper. Research Admin. Science
Naval Weapons Engineering Support Activity (62908), Washington Navy Yard, Washington, D.C. 20374	\$ 37,000	Academic Program for Naval Aviation Executive Institute	D.A. Schradt; J.W. Creighton J.A. Jolly and M. Wortman Oper. Research Admin. Science
Defense Nuclear Agency Washington, D.C. 20305	\$ 15,000	*Studies of Radiation Effects on Electronics	E.B. Dally Physics & Chem

RESEARCH AWARDS (CONT.)

<u>SOURCE</u>	<u>AMOUNT</u>	<u>TITLE</u>	<u>PRINCIPAL INVESTIGATOR</u>
Naval Safety Center Naval Air Station Norfolk, VA 23511	\$ 18,000	An Investigation of the Causes of Increased Major Aircraft Accidents in Specific Months	G. K. Poock Oper. Research & Admin. Sciences
Environmental Prediction Research Facility Monterey, CA 93940	\$ 5,500	*Meteorology Research	R.J. Renard Meteorology
Chief of Naval Research Department of the Navy Arlington, Virginia 22217	\$ 15,000	*NPS-Procurement Methods Research Program	CDR.P. DeMayo Oper. Research & Admin. Sciences
Civil Engineering Laboratory Naval Construction Battalion Center Port Hueneme, CA 93043	\$ 3,000	*Cable Strumming	T. Sarpkaya Mechanical Engineering
	<u>\$465,060</u>		

TRAVEL ORDERS WRITTEN TO 20 JANUARY 1975

Supported by O&MN funds:

Forsting, J. R.	3-7 Mar 75	Honolulu	Represent NPS at the Western Assn of Grad Schools mtg.
Woods, W. M.	5-8 Feb 75	Corona	Teach course at FMSAEG.
Rayachandran, T.	2-8 Feb 75	"	" "
Osary, J. D.	2-5 Feb 75	Corona	" "
Muskirk, F. R.	29Jan-1Feb	Anaheim	Att Ann Physical Society Mtg and present invited paper.
Possum, R. R.	27-31Jan75	Wash DC	Att Defense Sci Bd Mtg and coordinate research.
Lahr, C. H.	22 Jan 75	Mtn View	Att NASA Comp-aided crs.
Siblarz, O.	22-25 Jan75	"	" "
Windsy, G. H.	22-25 Jan75	"	" "
Platzer, M. F.	22-25 Jan75	"	" "
Bank, M.H.	22-25 Jan75	"	" "
Horb, A. M.	21-29 Jan 75	Wash DC	Att mtgs of Ann Math Society
Lodres, U. R.	20-22 Jan 75	Houston	Present paper at symposium on Computer Architecture.
Bell, R. W.	19-25 Jan 75	LA & MtnView	
Whipple, D.R.	15-18 Jan 75	Wash DC	Discuss research with sponsor
Laikie, W. M.	15-18 Jan 75	"	" "
Lenard, R. J.	15-18 Jan 75	Ventura	Att ann mtg of Cooperators in Calif Coop Snow Surveys Prog.
Elster, R. S.	12-17 Jan 75	Newport Wash DC	Coordinate educ. matters with Nav War Col. and visit sponsor
Possum, R. R.	8-11 Jan 75	Pt Mugu	Att Planning mtg of Guided Missile Seminar.
Kline, M. B.	1-4 Jan 75	Los Angeles	Att session on Decision Tree program at UCLA.

No cost to the Government:

Maskell, R. E.	24-30 Mar 75	Honolulu	Att mtg of West. Reg. ASME joint with SIAM.
Parker, S. R.	27-30 Jan 75	Berkeley	Att ann res rev at Berkeley.
Leese, W.	21 Jan 75	Pomona	Visit NPRO, Pomona.
Rayachandran, T.	21 Jan 75	"	" "
Vilde, C. O.	21 Jan 75	"	" "
Kline, M. B.	21 Jan 75	"	" "
Vashburn, A.R.	21 Jan 75	"	" "

Faulkner, F. D.	15 Jan 75	Palo Alto	Att colloquium at Stanford.
Heinz, Otto	10-12 Jan75	Menlo Park Berkeley	Visit Stanford Res. Inst. and UC Berkeley.
<u>Supported by Other Funds:</u>			
Powers, V. M.	19-21 Jan75	San Diego	Accompany thesis students to NELC to discuss research.
Pucci, P. F.	14-19 Jan 75	Wash DC	Att Data Systems Seminar.
Judson, R. R.	10-14 Dec 75	Wash DC	Att Navy/USMC Acquisition Review Committee.
<u>Supported by Research Funds:</u>			
Netzer, D. W.	21-23 Jan 75	San Diego	Participate in AIAA Propellant & combustion tech. com- mittee. Disc. pollution res. at NARF-North Island.
Comstock, C.	21-27 Jan75	Wash DC	Consult at SAED; give talk at NOL, att meeting of MAA committee and AMS mtg.
Fraganza, E. D.	20-24Jan75	Seattle	Participate in METREX mtg at U. of Washington.
Folles, W. M.	20-23Jan 75	China Lake	Consultation w/sponsor.
Platzer, M. F.	19-23 Jan 75	Pasadena	Att Aerospace Sciences Mtg.
Fuhs, A. E.	19-25Jan75	Pasadena & Moffett Field	Att AIAA Pubs Mtg; chair session at Aerospace Sciences Mtg; att design crs at Ames.
Haney, R. L.	16-19 Jan 75	La Jolla	Consult on coop. research.
Gaver, D. P.	16-18 Jan 75	Phoenix	Visit Minneapolis Honeywell & FEDSIM for research.
Parry, S. H.	12Jan-12Mar	San Diego	Teach course at NARF, NI.
Layton, D.	7-9Jan 75	Lake San Antonio	XR-3 Testcraft Operations