Title
Joel Cooper Resume

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JOEL I. COOPER

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PERSONAL:

Age: 58	**Height:** 5'8"	**Weight:** 152 lbs	
Birthdate: January 23, 1914		**Marital Status:**	Married, two children
Birthplace: Baltimore, Maryland		**Clearance:**	SECRET

EDUCATION:

Baltimore City College, June 1929

College of San Mateo, San Mateo, California
Awarded AA in Engineering, June 1955

Stanford University, Stanford, California
Course work in Industrial Engineering, Summer 1955

San Jose State College, San Jose, California
Awarded BA in Industrial Engineering, 1957 (with great distinction)

San Jose State College, San Jose, California
MS in Experimental Psychology (less thesis), February 1959

Claremont College, Claremont, California
MBE in Economics, June 1967. Continuing on PhD in Economics

EXPERIENCE:

July 1966 to present:

LITTON SHIP SYSTEMS – AMTD, Culver City, California

Project Manager, Systems Research – Areas of responsibility include all aspects of Human Factors Engineering, Industrial Engineering, and Systems Research on the FDL, LHA and DD projects. Was responsible for the development of the computerized OSD (Litton Proprietary), and wrote the training manual for diagraming computerized OSD's. Responsible for analysis and design of vehicle flow for fast on-off load in the FDL Ship. Designed semi-automatic galleys to improve and speed up food service for large personnel groups. Developed Manning/Automation for the DD project and the computerized OSD model for the LHA. Project Manager for special study on "Manning Automation Through Function Allocation" for Naval Air Systems Command. Developed Materials Handling flow process for movement of sugar cane. Project Manager for special study on "Guide to Use of Design Work Study in Navy System Design" for Naval Ship Engineering Center.

November 1963 to January 1966:

NORTHROP NORTRONICS, Anaheim, California

Senior Scientist – Responsible for research and analysis projects in the areas of:

Systems Support for Deep Submergence Systems Project
Integrated Logistic Support
Imagery Interpretation
Intelligence Systems
Operations Analysis in Shipyard Modernization Program
Cost Effectiveness Considerations in Tactical Battlefield Reconnaissance
Operations Analysis on Air Force Organization, Procedural, and Decision Structure Techniques
Proposal Preparation in a Variety of Analytical Studies
Man-Machine Interface Requirements
Shipboard Maintainability

February 1962 to November 1963:

THIOKOL CHEMICAL CORP., HUMETRICS DIVISION, Los Angeles, California

Manager, Research Applications – Responsible for planning new research and development projects and integrating these with on-going programs and areas within the capabilities and interests of Humetrics' personnel. Prepared customer briefings and made presentations. Initiated and prepared proposals. Areas of work included:

Development of man-machine methodologies
System design for maintainability
Training considerations

All aspects of physiology and bio-engineering
Approaches to total system analysis
Elements of behavioral psychology
Verbal and nonverbal communication
General human factors problems

July 1959 to February 1962:

NORTHROP CORP., NORAIR DIVISION, Hawthorne, California

Senior Scientist, Human Engineering Analysis – Responsible for directing and participating in research, analysis, and proposal preparation on:

Approaches to and design for maintainability
Methods for identification and classification of skills
Classification methods for operations
Procedures for function and task analysis
Design criteria for automatic test equipment
Integration of man-machine systems
Reporting methods in malfunction analysis
Identification and criteria of capability
Market analysis in ground support systems

September 1954 to July 1959:

STANFORD RESEARCH INSTITUTE, Economics and Engineering, Menlo Park, California

Engineering Psychologist, Systems Analysis Group – Responsible for research and analysis on:

Methods for failure reporting
Missile system malfunctions traceable to human error
Analysis of failure reporting methods
Selection procedures for skills classification
Development of methods for classifying operations
Future skill needs determination
Development of general system models

February 1952 to September 1954:

DALMO-VICTOR COMPANY, San Carlos, California

Equipment Engineer, Microwave Research Laboratory – Responsible for maintenance and calibration of test equipment associated with testing microwave antennas.

February 1951 to February 1952:

USNRDL, NUCLEONICS INSTRUMENTATION BRANCH, Hunters Point, San Francisco, California

Instrumentation Engineer, Calibration Section – Responsible for testing, maintaining and calibrating instruments for radiation detection.

PUBLICATIONS

Bednarchik, L. and J.I. Cooper, "Design Simplicity and Reliability – What Is It?" *Transactions of the Western Region Converence on Quality Control*, Vol. 2, Disneyland, 1961

Bednarchik, L. and J.I. Cooper, "VCL A Tool for Better Reliability," *Industrial Quality Control*, February 1962

Cooper, J.I., *Criteria for the Identification of Capability in an Industrial Organization*, Northrop Corporation, 1961 (Private)

Cooper, J.I., *Design Criteria for Automatic Test and Checkout Systems, Human Engineering Analysis*, Northrop Corporation, NB 61-1, 1961 (Secret)

Cooper, J.I., "Human Initiated Failures in Malfunction Reporting," *IRE Transactions on Human Factors in Electronics*, Vol. 2, No. 2, 1961

Cooper, J.I., F.L. Ankenbrandt, ed., "An Integrated Approach to System Maintainability," *Third EIA Conference On Maintainability*, Engineering Publishers, 1961

PUBLICATIONS (Continued)

Cooper, J.I., ed., *Proceedings of Third Shirt Sleeve Seminar on Maintainability*, Thiokol Chemical Corporation, Humetrics Division, 1962

Cooper, J.I., "Maintainability Design for Troubleshooting," *AIAA, SAE Maintainability-Reliability Conference Notes*, Arlington, May 1963

Cooper, J.I., "Total Replacement Costs – Some Value Aspects," *Joint Technical Conference Proceedings*, Newport Beach, California, Nov. 1964

Cooper, J.I., "An Examination of the Effect of Automatic Test Systems on Total System Availability," paper presented at Human Factors Society 13th Annual meeting, Philadelphia, October 1969

Cooper, J.I., Maintainability research, *First West Coast Maintainability Conference – ASQC*, Stanford University, Stanford, California, March 1962

Cooper, J.I., *Manning/Automation Tradeoffs through Function Allocation*, Contract N00019-70-C-0449, Naval Air Systems Command, Los Angeles, California, 1970

Cooper, J.I., L. Rigby, and W. Spickard, *A Guide to Integrated System Design for Maintainability*, Aeronautical System Division, Wright-Patterson Air Force Base, TR 61-424, 1961

Cooper, J.I., W. Gibson, and R. Highland, "How and What Do You Tell the Design Engineer about Maintainability," *Workbook for Product Maintainability Working Seminar*, 1961

Cooper, J.I., Total replacement costs, some value aspects, *AIAA, ASQC, SAVE, SAE, ASME, Joint Technical Conference*, Newport Beach, California, November 1964

Cooper, J.I., L. Rigby, and W. Spickard, "Human Factors Testing in Weapon and Space Systems," ARS 1646-61, paper read at the American Rocket Society Missile and Space Vehicle Testing Conference, Los Angeles, March 1961

Cooper, J.I., C.T. Ware, and J.S. Hupert, "An Approach to Design for Troubleshooting," paper read at Human Factors Society Meeting, New York, N.Y., November 1962

Cooper, J.I., K.D.L. Caines, J. Goff, and S. Roshal, *A Method for Analysis of a Man-Machine System*, Thiokol Chemical Corporation, Humetrics Division, H-TR-63-2, 1963 (Lockheed Restricted)

Cooper, J.I., G.K. Tallmadge, and L.S. Hoffman, *Planning Study for Design of Electronics Maintenance Research*, Thiokol Chemical Corporation, Humetrics Division, H-TR-63-1, 1963

Rabideau, G.F., J.I. Cooper, and C. Bates, Jr., *A Guide to Function and Task Analysis as a Weapon System Development Tool*, Northrop Corporation, NB 60-161, 1960

Rappaport, M. and J.I. Cooper, *A Preliminary Study of Human Factors Problems Associated with the Operation of the Snark Missile System*, Stanford Research Institute, ID-2274, 1957

Rigby, L. and J.I. Cooper, *Problems and Procedures in Maintainability*, Aeronautical Systems Division, Wright-Patterson Air Force Base, TN 61-126, 1961

Shapero, A., J.I. Cooper, M. Rappaport, K.L. Schaeffer, and C. Bates, Jr., *Human Engineering Testing and Malfunction Data Collection in Weapon System Test Programs*, Wright Air Development Division, Wright-Patterson Air Force Base, TR 60-36, 1960

Cooper, J.I. L. Rigby and W. Spickard, *Shirt Sleeve Seminar on Maintainability*, Northrop Corporation, NOR 60-320, 1960

Cooper, J.I., L. Rigby and W. Spickard, Human Factors testing in weapon and space systems, *American Rocket Society Missile and Space Vehicle Testing Conference*, Los Angeles, ARS 1646-61, March 1961

Cooper, J.I., K. Caines, J. Goff and S. Roshal, *A Method for Analysis of a Man-Machine System*, Thiokol Chemical Corporation, Humetrics Division, H-TR-63-2, 1963