

National Science Foundation

Grants and Awards for Fiscal Year 1975

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REICH; CHEMISTRY AND STEREOCHEMISTRY OF HIGH-VALENT ORGANOMETALLOID COMPOUNDS (7412796); 12 MONTHS \$16,900
 DAHL; STRUCTURAL SYSTEMATICS AND BONDING IN ORGANOMETALLIC COMPLEXES (7414455 A01*); 12 MONTHS \$115,000
 DAHL; STRUCTURAL SYSTEMATICS AND BONDING IN ORGANOMETALLIC COMPLEXES (7414455 A01*); 12 MONTHS \$30,000
 HIRSCHFELDER, AND CURTISS; THEORETICAL CHEMISTRY (7417494); 12 MONTHS \$225,000
 GAINES; STUDIES OF TRANSITION METAL METALLOBORANES, MAIN GROUP METALLOBORANES, AND BORANYL GROUP IV COMPOUNDS (7418066); 12 MONTHS \$41,300
 NELSEN; HYDRAZINE OXIDATION INTERMEDIATES (7419688); 12 MONTHS \$31,100
 BERRY; PHOTOACTIVATION OF UNIMOLECULAR REACTANTS (7421667*); 24 MONTHS \$34,400
 BERRY; PHOTOACTIVATION OF UNIMOLECULAR REACTANTS (7421667*); 24 MONTHS \$29,400
 TAYLOR; MOLECULE, RADICAL, AND ION STUDIES IN THE GAS PHASE (7423569); 12 MONTHS \$43,700
 CROSBY; SELECTIVE EXCITATION OF DIATOMIC MOLECULES (7424877); 4 MONTHS \$7,000
 WRIGHT; ANALYTICAL APPLICATIONS OF RARE EARTH LASER SPECTROSCOPY (7424394); 24 MONTHS \$75,300
 EVANS; MECHANISTIC STUDIES IN ORGANIC ELECTROCHEMISTRY (7504350); 12 MONTHS \$52,500

UNIVERSITY OF WISCONSIN-MILWAUKEE

HALL; SURFACE CHEMISTRY AND CATALYSIS (7411539); 12 MONTHS \$45,900

LAYDE; PURCHASE OF AN ELECTRON WIDE-LINE NUCLEAR MAGNETIC RESONANCE SPECTROMETER AND VARIABLE TEMPERATURE ACCESSORIES (7506216); 12 MONTHS \$83,300

COMPUTER RESEARCH

COMPUTER SCIENCE AND ENGINEERING -100 (N)

ARIZONA

UNIVERSITY OF ARIZONA

GRISWOLD; INVESTIGATIONS IN PROGRAMMING LANGUAGES TO FACILITATE DATA STRUCTURE PROCESSING (7501307); 24 MONTHS \$33,600

CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

HANSEN; A PROGRAMMING LANGUAGE FOR THE DESIGN OF HIGHLY RELIABLE CONCURRENT PROCESSING SYSTEMS ON MINICOMPUTERS (7417331); 24 MONTHS \$71,200

STANFORD RESEARCH INSTITUTE

WALDINGER; KNOWLEDGE AND REASONING IN PROGRAM SYNTHESIS (7203737 A01); 24 MONTHS \$109,500

LEVITT, AND ROBINSON; THE VERIFICATION OF HIERARCHICALLY STRUCTURED PROGRAMS (7418661); 24 MONTHS \$150,000

STANFORD UNIVERSITY

HERRIOT; NUMERICAL ANALYSIS (7101996 A04); 12 MONTHS \$64,100

FLOYD; MINIMAL ALGORITHMS, PROGRAMMING LANGUAGES, AND INTERACTIVE LANGUAGES (7203663 A03); 12 MONTHS \$86,300

GOLUB; COMPUTING METHODS IN NUMERICAL ANALYSIS (7203712 A02); 12 MONTHS \$53,300

KNUTH; ANALYSIS OF ALGORITHMS (7203752 A02); 12 MONTHS \$107,600

DANTZIG; MATHEMATICAL PROGRAMMING LANGUAGE (7423014); 12 MONTHS \$27,600

UNIVERSITY OF CALIFORNIA, BERKELEY

BLUM; RESEARCH INTO COMPLEXITY THEORY AND RELATED AREAS (7203725 A02); 12 MONTHS \$40,200

RAMAMOORTHY; LARGE SCALE COMPUTER SYSTEMS (7203734 A01); 24 MONTHS \$69,300

GRAHAM; RESEARCH IN PROGRAMMING LANGUAGE SEMANTICS AND PROGRAM VERIFICATION (7407644 A01); 12 MONTHS \$4,200

KARP; RESEARCH IN COMPUTATIONAL COMPLEXITY AND THE ANALYSIS OF ALGORITHMS (7417680 A01); 12 MONTHS \$36,900

FERRARI; AUTOMATIC IMPROVEMENT OF PROGRAM PERFORMANCE IN A VIRTUAL MEMORY ENVIRONMENT (7418375); 24 MONTHS \$39,300

RAMAMOORTHY; RESEARCH ON THE RELIABILITY AND SECURITY OF SOFTWARE (7421243); 24 MONTHS \$64,500

STONEBRAKER; RESEARCH ON THE CAPABILITIES AND COSTS OF RELATIONAL DATA BASE SYSTEMS (7503839); 24 MONTHS \$57,000

UNIVERSITY OF CALIFORNIA, IRVINE

STANDISH; INTERACTIVE PROGRAM MANIPULATION (7513875); 24 MONTHS \$60,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES

AVIZIENIS, CHU, AND MARTIN; FAULT-TOLERANT COMPUTING (7203633 A03); 12 MONTHS \$199,000

ESTRIN, BERRY, MARTIN, AND UZGALIS; COMPUTER LANGUAGE DESIGN- METHODOLOGY AND MEASUREMENT (7408659); 24 MONTHS \$160,000

CARLYLE, AND GREIBACH; THEORY OF MACHINES, GRAMMARS, AND COMPUTATIONS (7415091); 24 MONTHS \$99,400

MELKANOFF; MADCAP LANGUAGE AND DATA BASES (7423536); 18 MONTHS \$50,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO

WILLIAMSON, AND BENDER; RESEARCH IN COMBINATORIAL ALGORITHMS AND ASYMPTOTICS (7402714 A01*); 24 MONTHS \$40,200

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

POHL; THE THEORY AND PRACTICE OF HEURISTIC SEARCH (7420460); 24 MONTHS \$24,800

HUFFMAN; CURVATURE AND CONVEXITY IN SCENE ANALYSIS PROBLEMS (7512814); 12 MONTHS \$23,800

UNIVERSITY OF SOUTHERN CALIFORNIA

BLUM; THE SEMANTICS AND PRACTICAL COMPLEXITY OF PROGRAMMING SYSTEMS AND COMPLEXITY OF FUNCTIONS (7502373); 24 MONTHS \$50,400

CONNECTICUT

UNIVERSITY OF CONNECTICUT

BOOTH; OPTIMIZATION OF PROBABILISTIC COMPUTATIONAL SYSTEMS (7500084); 24 MONTHS \$45,600

YALE UNIVERSITY

LIPTON; LIMITATIONS AND CAPABILITIES OF SYNCHRONIZATION PRIMITIVES (7412870); 18 MONTHS \$22,700

BOOK; RESEARCH ON THEORY OF COMPUTING (7515945); 12 MONTHS \$25,160

DISTRICT OF COLUMBIA

GEORGE WASHINGTON UNIVERSITY

MAURER; CONTINUED RESEARCH IN ALGORITHM VERIFICATION (7303431 A01); 24 MONTHS \$100,000

FLORIDA

FLORIDA STATE UNIVERSITY

SELMAN, AND BAKER; STUDIES IN NONDETERMINISM AND RELATIVE COMPUTABILITY (7506340); 24 MONTHS \$29,600

IDAHO

IDAHO STATE UNIVERSITY

WATERMAN; A STUDY OF GREATEST COMMON DIVISOR AND LEHMER ALGORITHMS FOR SEVERAL INTEGERS (7507070); 12 MONTHS \$5,700

ILLINOIS

ILLINOIS INSTITUTE OF TECHNOLOGY

WOJCIK; AN INVESTIGATION OF THE STRUCTURE AND OPERATING CHARACTERISTICS OF MULTI-VALUED SEQUENTIAL SWITCHING CIRCUITS (7401409); 24 MONTHS \$53,100

NORTHWESTERN UNIVERSITY

HENSCHEN; AUTOMATED THEOREM PROVING (7303414); 24 MONTHS \$42,400

UNIVERSITY OF ILLINOIS AT URBANA

GILLIES; RESEARCH ON CENTRALIZED NETWORKS CONTAINING A DIVERSITY OF COMPUTING ELEMENTS (7203740 A01); 24 MONTHS \$96,100

SAYLOR; ANALYSIS, EXTENSION AND APPLICATIONS OF ADAPTIVE FACTORIZATION METHODS (7203746 A01); 24 MONTHS \$33,700

KUCK; COMPUTER HARDWARE AND SOFTWARE ORGANIZATION (7307980 A02); 12 MONTHS \$151,900

ROBERTSON; DIGITAL COMPUTER ARITHMETIC (7307998 A01); 24 MONTHS \$110,200

MICHALSKI; VARIABLE-VALUED LOGIC: DEVELOPMENT OF THEORY AND STUDIES OF APPLICATIONS IN MACHING PERCEPTION AND INTELLIGENCE (7403514); 24 MONTHS \$36,100

INDIANA

PURDUE UNIVERSITY

BUCHI; MATHEMATICAL THEORY OF COMPUTATION (7303384 A01); 24 MONTHS \$51,500

IOWA

IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY

ZINGG, AND STEWART; TIME-SHARED COMPUTER SYSTEMS RESEARCH (7203642 A03); 12 MONTHS \$154,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES

UNIVERSITY OF IOWA

FLECK; INVESTIGATIONS IN THE THEORY OF DATA STRUCTURES (7505296); 24 MONTHS \$34,900

MARYLAND

JOHNS HOPKINS UNIVERSITY

BARTELS; STABLE MATRIX-FACTOR UPDATING TECHNIQUES AND DUALITY CONSIDERATIONS AS APPLIED TO APPROXIMATION AND OPTIMIZATION ALGORITHMS (7507817); 24 MONTHS \$32,900

KOSARAJU; ANALYSIS OF FLOW CHART COMPLEXITY (7509904); 24 MONTHS \$35,700

UNIVERSITY OF MARYLAND, COLLEGE PARK

ROSENFELD; PICTURE DESCRIPTION (7203610 A03); 12 MONTHS \$128,700

RHEINBOLDT, AND VANDERGRAFT; THE NUMERICAL SOLUTION OF NONLINEAR SYSTEMS OF EQUATIONS (7203721 A02); 12 MONTHS \$49,500

RHEINBOLDT, AND VANDERGRAFT; THE NUMERICAL SOLUTION OF NONLINEAR SYSTEMS OF EQUATIONS (7203721 A03); 8 MONTHS \$5,300

HECHT; GLOBAL CODE IMPROVEMENT (7408361); 24 MONTHS \$24,000

CHU; LANGUAGE-DIRECTED COMPUTER SYSTEMS (7505505); 24 MONTHS \$104,900

MASSACHUSETTS

BRANDEIS UNIVERSITY

COHEN; SOFTWARE TOOLS FOR THE ANALYSIS OF PROGRAMS (7424569); 24 MONTHS \$46,900

CHARLES STARK DRAPER LABORATORY INC

HOPKINS; CONFIGURATION CONTROL OF DISTRIBUTED FAULT-TOLERANT DIGITAL SYSTEMS (7424116); 24 MONTHS \$110,400

HARVARD UNIVERSITY

HUNT; THEORY OF COMPUTATIONAL COMPLEXITY (7522505); 24 MONTHS \$34,300

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MOSES; INVESTIGATIONS OF COMPUTER ALGORITHMS IN THE THEORY OF FINITE GROUPS (7402482*); 24 MONTHS \$24,500

FISCHER, AND MEYER; ALGORITHMIC COMPLEXITY AND THEORY OF COMPUTATION (7412997 A01); 12 MONTHS \$141,900

PATIL; FUNDAMENTALS OF CONCURRENT SYSTEMS (7421822); 24 MONTHS \$130,400

DENNIS, AND LISKOV; SEMANTIC FOUNDATIONS FOR STRUCTURED PROGRAMMING (7421892); 24 MONTHS \$100,000

DENNIS; DATA-FLOW COMPUTER ARCHITECTURE (7504060); 24 MONTHS \$106,300

UNIVERSITY OF MASSACHUSETTS, AMHERST

ARBIB, AND MANES; CATEGORICAL MACHINE THEORY, WITH APPLICATIONS TO SYNTAX DIRECTED TRANSLATION AND CONTROL THEORY (7203733 A01*); 24 MONTHS \$42,400

STONE; STUDIES IN PARALLEL COMPUTATION (7420025); 24 MONTHS \$55,200

MICHIGAN

MENTAL HEALTH RESEARCH INSTITUTE

REITMAN; NATURAL LANGUAGE COMMUNICATION IN A PERSONAL INFORMATION RETRIEVAL SYSTEM (7102038 A03); 12 MONTHS \$52,200

MICHIGAN STATE UNIVERSITY

PAGE; A THEORETICAL STUDY OF ADAPTIVE PREPROCESSOR FOR LARGE GEOGRAPHIC DATA BASES SERVING MULTIPLE USERS (7419019); 18 MONTHS \$26,400

UNIVERSITY OF MICHIGAN

BURKS, AND HOLLAND; FORMAL MODELING AND SIMULATION OF NATURAL SYSTEMS (7101997 A04); 12 MONTHS \$155,200

ATKINS; THEORY AND IMPLEMENTATION OF DIGITAL ARITHMETIC (7418573); 24 MONTHS \$88,700

MINNESOTA

UNIVERSITY OF MINNESOTA

SAHNI; INVESTIGATION OF POLYNOMIALLY COMPLETE AND HARD PROBLEMS (7410081); 24 MONTHS \$15,700

NEW JERSEY

PRINCETON UNIVERSITY

ULLMAN; CODE OPTIMIZATION (7415255); 24 MONTHS \$66,100

ARDEN; MACHINE INDEPENDENT COMPUTER SYSTEM MODELLING (7418655); 24 MONTHS \$46,300

SZYMANSKI, AND ULLMAN; THEORY OF COMPILER DESIGN (7421939); 24 MONTHS \$124,600

STEVENS INSTITUTE OF TECHNOLOGY

BLOOM; CONFERENCE ON ALGEBRAIC ANALYSIS OF FLOWCHART ALGORITHMS TO BE HELD IN HOBOKEN, NEW JERSEY DURING SUMMER 1975 (7510369); 6 MONTHS \$7,200

NEW YORK

COLUMBIA UNIVERSITY

EILENBERG; AUTOMATA, LANGUAGES, MACHINES & COMPLEXITY (7203703 A01*); 24 MONTHS \$56,300

CORNELL UNIVERSITY-CORNELL UNIVERSITY - ENDOWED

CONSTABLE; MATHEMATICAL SEMANTICS OF VERY HIGH LEVEL PROGRAMMING LANGUAGES (7414701); 24 MONTHS \$59,600

HARTMANIS; COMPUTATIONAL COMPLEXITY (7509433); 12 MONTHS \$57,700

NEW YORK UNIVERSITY

DAVIS; COMPUTATION AND LOGICAL PROOF PROCEDURE (7102038 A03); 12 MONTHS \$59,000

DAVIS; COMPUTATION AND LOGICAL PROOF PROCEDURE (7102038 A04); \$4,800

SCHWARTZ, AND GOLDSTEIN; DEVELOPMENT OF A RESEARCH PROGRAM IN COMPUTER SCIENCE (7509218); 12 MONTHS \$282,000

QUEENS COLLEGE

TILSON; COMPUTABILITY OF COMPLEXITY OF FINITE SEMIGROUPS (7407343 A01*); 24 MONTHS \$7,200

STATE UNIVERSITY AT STONY BROOK

FIDUCCIA, AND ZALCSTEIN; MULTIPLICATIVE COMPLEXITY OF ALGEBRAS (7501998); 24 MONTHS \$54,100

UNIVERSITY OF ROCHESTER

FELDMAN; AUTOMATIC STRUCTURE SELECTION (7424203); 12 MONTHS \$180,000

NORTH CAROLINA

DUKE UNIVERSITY

PATRICK; ALGORITHMS (SEQUENTIAL AND PARALLEL) FOR THE SIMULTANEOUS APPROXIMATION OF ZEROS OF POLYNOMIALS (7410042); 24 MONTHS \$24,700

BIERMANN; CONSTRUCTING PROGRAMS FROM EXAMPLE CALCULATIONS (7414445); 24 MONTHS \$93,300

LOVELAND; MECHANICAL THEOREM PROVING: THEORY AND PRACTICE (7500666); 24 MONTHS \$43,200

PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY

ANDREWS; PROOF PROCEDURES IN PREDICATE CALCULUS AND TYPE THEORY (7101953 A04); 12 MONTHS \$27,200

SIEWIORK; REGISTER TRANSFER LEVEL COMPUTER SYSTEMS DESIGN (7203626 A03); 12 MONTHS \$81,700

SHAW, WULF, AND JONES; SOFTWARE TO SUPPORT WELL-STRUCTURED PROGRAMMING (7404187); 24 MONTHS \$126,200

HABERMANN; TYPE DEFINITIONS AND PATH EXPRESSIONS AS DESIGN TOOLS (7424573); 24 MONTHS \$90,700

PENNSYLVANIA STATE UNIVERSITY

GOLDSTINE; RESEARCH IN FORMAL LANGUAGE THEORY (7506271); 15 MONTHS \$11,400

RHODE ISLAND

BROWN UNIVERSITY

SAVAGE, AND FREY; A STUDY OF ALGORITHMS AND DATA STRUCTURES (7203612 A01); 24 MONTHS \$74,000

FREIBERGER, AND GRENANDER; THEORY AND APPLICATION OF PATTERN ANALYSIS AND RECOGNITION (7417921); 24 MONTHS \$157,700

TEXAS

RICE UNIVERSITY

KENNEDY; AN INVESTIGATION OF COMPILER OPTIMIZATION TECHNIQUES THROUGH THE USE OF A PROGRAMMING LABORATORY (7303365 A01); 24 MONTHS \$59,153

JUMP; THE THEORY AND DESIGN OF MODULAR COMPUTING SYSTEMS (7414283); 24 MONTHS \$60,700

SOUTHERN METHODIST UNIVERSITY

MATULA; FOUNDATIONS OF FINITE PRECISION ARITHMETIC (7516652); 9 MONTHS \$14,000

TEXAS A & M UNIVERSITY

STROUD, AND BARROW; GAUSS FORMULAS FOR THE APPROXIMATE SOLUTION OF PARTIAL DIFFERENTIAL EQUATIONS (7504545); 24 MONTHS \$40,400

UNIV OF TEXAS AT AUSTIN

BLEDSOE; RESEARCH IN AUTOMATIC THEOREM PROVING (7412866); 12 MONTHS \$42,100

BROWNE; A WORKSHOP ON NEW DIRECTIONS IN OPERATING SYSTEMS ((AUSTIN, TEXAS, 10/13-15/75) (7509955); 12 MONTHS \$6,500

VIRGINIA

NATIONAL TECHNICAL INFORMATION SERVICE

KNOX; COMPREHENSIVE INFOR SRVCS TO INCLUDE DOCUMENT PROCESSING, ANNOUNCEMENT & DISTRIBUTION SRVCS IN PAPER COPY AND MICRO-FICHE, MAGNETIC TAPE SRVCS & BIBLIO DATA SEARCH SRVCS (7508155*); 12 MONTHS \$1,585

UNIVERSITY OF VIRGINIA

PFALTZ; SURFACE NETWORKS, AN ANALYTIC TOOL FOR THE STUDY OF FUNCTIONAL SURFACES (7413353*); 12 MONTHS \$13,700

VIRGINIA POLYTECHNIC INSTITUTE

LEE, AND WESSELKAMPER; APPLICATION OF VDL DEFINITION TECHNIQUES TO THE DESIGN, CHECKING AND VALIDATION OF COMPUTER HARDWARE AND SOFTWARE (7418108); 33 MONTHS \$119,100

GRAY, AND THOMPSON; A STUDY OF FAULT TOLERANCE IN LARGE DIGITAL SYSTEMS (7506543); 24 MONTHS \$72,400

WISCONSIN

UNIVERSITY OF WISCONSIN-MADISON

CRYER; THE NUMERICAL ANALYSIS OF UNKNOWN BOUNDARY PROBLEMS (7203641 A02); 11 MONTHS \$20,200

COLLINS; ALGORITHMS AND SYSTEMS FOR COMPUTATIONS WITH POLYNOMIALS AND RATIONAL FUNCTIONS (7413278); 24 MONTHS \$79,400

MANGASARIAN, MEYER, AND ROBINSON; COMPUTATIONAL ALGORITHMS IN MATHEMATICAL PROGRAMMING (7420584*); 24 MONTHS \$49,100

CRYER; THE NUMERICAL SOLUTION OF DIFFERENTIAL AND INTEGRAL EQUATIONS (7503888); 24 MONTHS \$25,400

UNIVERSITY OF WISCONSIN-MILWAUKEE

DEMILLO, AND VAIRAVAN; FOUNDATIONS OF DETERMINISTIC SCHEDULING OF PROGRAMS FOR PARALLEL EXECUTION (7501773); 24 MONTHS \$23,700

COMPUTER APPLICATION IN RESEARCH - 64

CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

MCCANN; DEVELOP A GENERALIZED METHOD OF MODELING NON-LINEAR BIOLOGICAL SYSTEMS (7303391 A01); 12 MONTHS \$60,000

MCCANN; A SYMPOSIUM ON NONLINEAR IDENTIFICATION THEORY (7507701); 12 MONTHS \$2,500

INSTITUTE FOR THE FUTURE-INSTITUTE FOR THE FUTURE-CALIFORNIA

VALLEE; DEVELOPMENT OF A COMPUTER-BASED SYSTEM INTERACTION AMONG EXPERTS (7203718 A02*); 12 MONTHS \$50,000

STANFORD UNIVERSITY

DUNN; ECONOMICS OF COMPUTER COMMUNICATION NETWORKS (7307973 A02*); 12 MONTHS \$123,500

FEIGENBAUM; THE AUTOMATION OF SCIENTIFIC INFERENCE: HEURISTIC COMPUTING APPLIED TO PROTEIN CRYSTALLOGRAPHY (7423461); 24 MONTHS \$130,000

SMITH, AND CHOWNING; COMPUTER SIMULATION IN ACOUSTICS (7500694); 24 MONTHS \$254,600

BRACEWELL; MAP RECONSTRUCTION FROM LINE SCANS (7515140); 12 MONTHS \$29,900

UNIVERSITY OF CALIFORNIA, BERKELEY

BALDERSTON; OPERATION OF A MANAGEMENT SCIENCE RESEARCH FACILITY (7508177*); 12 MONTHS \$50,000

UNIVERSITY OF CALIFORNIA, LOS ANGELES

VIDAL; COMPUTER METHODOLOGY IN NEUROSCIENCES (7502612); 24 MONTHS \$138,200

FRANE, AND DIXON; COMPUTER SCIENCE AND STATISTICS: THE INTERFACE (7503205); 12 MONTHS \$16,800

UNIVERSITY OF CALIFORNIA, SAN DIEGO

KRAUT; THE AUTOMATION OF SCIENTIFIC INFERENCE: APPLIED TO PROTEIN CRYSTALLOGRAPHY (7500320); 24 MONTHS \$75,000

WILSON; RESEARCH ON COMPUTER SYSTEMS WITH TACTILE INPUT (7505810); 36 MONTHS \$85,000

COLORADO

UNIVERSITY OF COLORADO

WAITE; SOFTWARE ENGINEERING -- PORTABILITY AND ADAPTABILITY (7420427); 24 MONTHS \$70,000

FOSDICK; COLLABORATIVE RESEARCH IN PLANNING A MATHEMATICAL SOFTWARE ALLIANCE (7424547); 12 MONTHS \$24,200

FOSDICK, AND OSTERWEIL; ANALYSIS OF MATHEMATICAL SOFTWARE FOR THE PURPOSE OF VALIDATION AND DOCUMENTATION (7509972); 24 MONTHS \$164,300

CONNECTICUT

YALE UNIVERSITY

HARTIGAN; CLUSTERING ALGORITHMS (7508374); 12 MONTHS \$95,900

DISTRICT OF COLUMBIA

OPTICAL SOCIETY OF AMERICA

QUINN; MEETING ON IMAGE PROCESSING FOR 2-D AND 3-D RECONSTRUCTION FROM PROJECTIONS, STANFORD, CALIFORNIA, 08/04-07/75 (7517089); 9 MONTHS \$10,000

ILLINOIS

ARGONNE NATIONAL LABORATORY

COWELL; COLLABORATIVE RESEARCH IN PLANNING A MATHEMATICAL SOFTWARE ALLIANCE (7421785); 12 MONTHS \$24,200

UNIVERSITY OF CHICAGO

ROBERTSON, AND COHEN; THE CONTROL OF DEVELOPMENT (7509403); 8 MONTHS \$16,500

INDIANA

PURDUE UNIVERSITY-AGRICULTURAL EXPERIMENT STATION

HARRINGTON, AND GIESE; MIRACLE II, A HIERARCHICAL INTERACTIVE DATA ACQUISITION SYSTEM (7419493); 12 MONTHS \$70,000

MARYLAND

NATIONAL BUREAU OF STANDARDS

PYKE; ISSUES IN NETWORK OPERATION--SOFTWARE PRODUCTION, ACCESS ASSISTANCE AND NETWORK INTERCONNECTION (7201206 A05*); 7 MONTHS \$55,000

PYKE; ISSUES IN NETWORK OPERATION--SOFTWARE PRODUCTION, ACCESS ASSISTANCE AND NETWORK INTERCONNECTION (7201206 A05*); 7 MONTHS \$35,000

JEFFERY; PLANNING AND PILOT DEVELOPMENT FOR A SOFTWARE ENGINEERING HANDBOOK (7411520 A01); 12 MONTHS \$25,000

MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

VERCOE; TECHNIQUES AND LANGUAGE DEVELOPMENT FOR HUMAN-COMPUTER INTERACTION IN MUSIC COMPOSITION AND (7414426); 12 MONTHS \$20,800

NEGROPONTE; MACHINE RECOGNITION AND INFERENCE MAKING IN COMPUTER AIDS TO DESIGN (7420974); 12 MONTHS \$185,700

NEW ENGLAND BOARD OF HIGHER EDUCATION

MILLER; TO DEVELOP AND IMPLEMENT A NORTHEAST ACADEMIC SCIENCE INFORMATION CENTER (NASIC) (7308366 A02); \$80,000

NEW ENGLAND REGIONAL COMPUTING PROGRAM

KURTZ, AND MORSE; RESEARCH AND EXPLORATION OF GOVERNANCE, FACILITATING, AND OPERATING NETWORK STRUCTURES (7403791); 12 MONTHS \$109,100

NEW HAMPSHIRE

DARTMOUTH COLLEGE

KURTZ; COLLABORATIVE RESEARCH IN PACKAGE OF EXPLORATORY DATA ANALYSIS TECHNIQUES IN AN INTERACTIVE COMPUTER SYSTEM (7417857); 14 MONTHS \$14,500

NEW JERSEY

EDUCOM INC

EMERY; SIMULATION AND GAMING PROJECT FOR INTER-INSTITUTIONAL COMPUTER NETWORKING (7503634*); 36 MONTHS \$150,000

FAIRLEIGH DICKINSON UNIVERSITY-TEANECK CAMPUS

LESK; APPLICATION OF COMPUTER-GRAPHIC TECHNIQUES TO X-RAY STRUCTURE DETERMINATIONS OF BIOLOGICAL MACROMOLECULES (7424390); 24 MONTHS \$11,900

PRINCETON UNIVERSITY

TUKEY; A PACKAGE OF EXPLORATORY DATA ANALYSIS TECHNIQUES IN AN INTERACTIVE COMPUTER SYSTEM (7417858); 14 MONTHS \$13,500

RUTGERS UNIVERSITY

GORENSTEIN; FINITE GROUP THEORY (7507512*); 12 MONTHS \$10,000

NEW YORK

BROOKHAVEN LABORATORY

KOETZLE; COLLABORATIVE RESEARCH - DEVELOPMENT OF CRYSTALLOGRAPHIC COMPUTING NETWORK WITH THREE-DIMENSIONAL DISPLAY CAPABILITY (7507702); 3 MONTHS \$31,300

COLUMBIA UNIVERSITY

SAVAS; U.S. EFFORTS IN THE U.S.-U.S.S.R. COOPERATIVE PROGRAM FOR COMPUTER APPLICATIONS TO THE MANAGEMENT OF LARGE CITIES (7408921 A01); 12 MONTHS \$187,200

SCHWARTZ; COMPUTER-COMMUNICATIONS NETWORKS (7417152 A01*); 12 MONTHS \$12,200

STANFORD UNIVERSITY

CORNELL UNIVERSITY

MORAFF; PERSONNEL MOBILITY ASSIGNMENT (IG00058-008) (7307713 A03); 1 MONTHS \$3,034

CORNELL UNIVERSITY-CORNELL UNIVERSITY - ENDOWED

GREENBERG; DEVELOPMENT OF COMPUTER GRAPHIC TECHNIQUES AND APPLICATIONS (7414694*); 12 MONTHS \$137,400

CORNELL UNIVERSITY-CORNELL UNIVERSITY - STATE

FRANCIS; COLLABORATIVE RESEARCH ON THE EVALUATION OF STATISTICAL PROGRAM PACKAGES (7513373); 18 MONTHS \$79,800

NATIONAL BUREAU OF ECONOMIC RESEARCH

MEYER, MC MAINS, AND SMITH; U.S.-U.S.S.R. PROGRAM ON SCIENTIFIC AND TECHNICAL COOPERATION IN THE FIELD OF APPLICATION OF COMPUTERS TO MANAGEMENT (7413801 A02*); 12 MONTHS \$62,260

HOLLAND, AND KLEMA; A SUBROUTINE LIBRARY FOR ROBUST STATISTICS (7508802); 12 MONTHS \$113,200

POLYTECHNIC INSTITUTE OF NEW YORK

SMITH, AND BOORSTYN; COMPUTER-COMMUNICATION NETWORKS (7304232 A01*); 12 MONTHS \$27,500

STATE UNIVERSITY AT STONY BROOK

STROKE; RECONSTRUCTION OF CRYSTAL STRUCTURES FROM THEIR DIFFRACTION PATTERNS USING 'OPTICAL COMPUTING' SYNTHESIS (7518200); 12 MONTHS \$50,000

OHIO**OHIO STATE UNIVERSITY**

CSURI; REAL TIME ANIMATION AS A TOOL FOR RESEARCH (7400768 A01); 12 MONTHS \$156,600

BROWN; MACHINE CONSTRUCTION OF THE GRAPHS OF ORGANIC MOLECULES (7412646); 12 MONTHS \$25,200

OREGON**OREGON STATE UNIVERSITY**

SMITH; RECONSTRUCTION OF THREE DIMENSIONAL OBJECTS FROM X-RAYS AND NEUTRON RADIOGRAPH COMPUTER SCIENCE AND ANALYSIS (7203758 A01); 24 MONTHS \$61,000

PENNSYLVANIA**CARNEGIE-MELLON UNIVERSITY**

EASTMAN; A GENERAL SYSTEM FOR COMPUTER-AIDED DESIGN (7303492 A01*); 12 MONTHS \$31,500

PENNSYLVANIA STATE UNIVERSITY

DEMAINE; DESIGN AND IMPLEMENTATION OF A CHEMICAL RATE ANALYSIS MODELING SYSTEM WITH PREDICTOR CAPABILITIES (7303483 A02); 12 MONTHS \$50,400

BLASHFIELD; A CONSUMER REPORT ON CLUSTER ANALYSIS SOFTWARE (7420007); 24 MONTHS \$34,400

UNIVERSITY OF PENNSYLVANIA-WHARTON SCHOOL OF FINANCE AND COMMERCE

LUBIN; COMPUTER-AIDED REFINEMENT AND EDUCATION OF DECISION-MAKING OF HIGH-RANKING EXECUTIVES, US/USSR (7420496 A01); 12 MONTHS \$140,500

HEIBERGER; COLLABORATIVE RESEARCH ON THE EVALUATION OF STATISTICAL PROGRAM PACKAGES (7513994); 18 MONTHS \$56,400

RHODE ISLAND**UNIVERSITY OF RHODE ISLAND**

HEMMERLE; NEW ALGORITHMS FOR STATISTICAL COMPUTATION (7415331); 24 MONTHS \$75,100

LEBLANC, AND MIDDLETON; DIGITAL DISPLAY ENHANCEMENT OF SEISMIC PROFILES USING A MATRIX PLOTTER (7500667); 24 MONTHS \$42,500

SOUTH CAROLINA**CLEMSON UNIVERSITY**

LAMBERT; SIMULATION OF PROCESSES IN THE RHIZOSPHERE (7500323); 24 MONTHS \$117,600

TEXAS**SOUTHERN METHODIST UNIVERSITY**

MATULA; THEORY AND COMPUTATIONAL EFFICIENCY OF SEVERAL GRAPH THEORETIC APPROACHES TO CLUSTER ANALYSIS (7510930); 12 MONTHS \$33,400

TEXAS A & M UNIVERSITY

FAIRLEY; AN INTERACTIVE SYSTEM FOR STUDYING SEMANTIC MODELS OF COMPUTER PROGRAMS (7424546); 12 MONTHS \$56,000

MEYER; COLLABORATIVE RESEARCH DEVELOPMENT OF A CRYSTALLOGRAPHIC COMPUTING NETWORK WITH THREE-DIMENSIONAL DISPLAY CAPABILITY (7507700); 3 MONTHS \$14,100

UNIV OF TEXAS AT AUSTIN

CHANDY; CENTRALIZED COMPUTER NETWORKS (7413302*); 24 MONTHS \$20,100

YEH; 1975 INTERNATIONAL CONFERENCE ON RELIABLE SOFTWARE (7414910); 12 MONTHS \$13,500

UNIVERSITY OF HOUSTON

DONAGHEY; ENHANCEMENT FOR THE CELLSIM COMPUTER LANGUAGE FOR CANCER RESEARCH (7418612); 12 MONTHS \$34,200

UTAH**UNIVERSITY OF UTAH**

BARNHILL, AND RIESENFELD; COMPUTER AIDED GEOMETRIC DESIGN (7413017); 18 MONTHS \$75,000

WASHINGTON**UNIVERSITY OF WASHINGTON**

MACKAY; COMPUTER PROCESSING OF LANGUAGES USING CONTEXT-SENSITIVE SCRIPTS (7507703); 12 MONTHS \$13,500

WASHINGTON STATE UNIVERSITY

PAYNE; MACHINE COMBINATORIC AND STOCHASTIC ALGORITHM SUBPROGRAM LIBRARY; (7508822); 12 MONTHS \$27,000

WEST VIRGINIA**WEST VIRGINIA UNIVERSITY-SCHOOL OF MEDICINE**

BROWN; GENERAL PURPOSE COMPUTER LANGUAGE FOR NEUROBIOLOGISTS (7424765); 24 MONTHS \$29,100

WISCONSIN**MARQUETTE UNIVERSITY**

BEZDEK; CLASSIFICATION OF ALGORITHMS FOR NON-STATISTICAL DATA (7505014); 12 MONTHS \$15,400

SPECIAL PROJECTS - 26 (1)**CALIFORNIA****INSTITUTE FOR THE FUTURE-INSTITUTE FOR THE FUTURE-CALIFORNIA**

VALLEE; DEVELOPMENT OF A COMPUTER-BASED SYSTEM INTERACTION AMONG EXPERTS (7203718 A02*); 12 MONTHS \$50,000

AMARA; AN INVESTIGATION OF COMPUTER-BASED GROUP COMMUNICATION IN GEOSCIENCE (7505297); 12 MONTHS \$83,100

AMARA; EXTENDED FIELD TESTING OF COMPUTER CONFERENCE, AN INVESTIGATION OF SOCIAL, MANAGERIAL, AND ECONOMIC ISSUES IN COMPUTER-BASED COMMUNICATION (7505298); 12 MONTHS \$50,000

LAWRENCE LIVERMORE LABORATORY

ABBOTT, AND WEBB; PLANNING STUDY OF AUDITING SOFTWARE APPLICATION PROGRAMS (7518595); 6 MONTHS \$38,250

RAND CORPORATION

JUNCOSA; THREE DIMENSIONAL MODELING: PARTIAL DIFFERENTIAL EQUATIONS (7423901); 12 MONTHS \$48,200

STANFORD RESEARCH INSTITUTE

NIELSEN; COMPUTER SYSTEM INTEGRITY RESEARCH PROGRAM (7423774); 12 MONTHS \$62,500

HOUGH; A TECHNOLOGY ASSESSMENT OF TELECOMMUNICATION-TRANSPORTATION INTERACTIONS (7508884*); 12 MONTHS \$45,000

STANFORD UNIVERSITY

DANTZIG, COTTLE, AND WILSON; COMPUTER OPTIMIZATION OF COMPLEX SYSTEMS (7504544); 12 MONTHS \$60,000

HELLMAN; COMPLEXITY AND INFORMATION THEORY (7510173*); 24 MONTHS \$15,000

UNIVERSITY OF SOUTHERN CALIFORNIA

BELLMAN, AND LEE; INVARIANT IMBEDDING IN ENGINEERING, PHYSIOLOGY, AND APPLIED SCIENCE (7423539); 12 MONTHS \$32,000

COLORADO**COLORADO STATE UNIVERSITY**

JOHNSON; INFORMATION PROCESSING FOR OPTIMIZATION OF ENERGY UTILIZATION IN STRUCTURES (7503578); 12 MONTHS \$63,200

CONNECTICUT**YALE UNIVERSITY**

LIPTON; COLLABORATIVE RESEARCH ON THE THEORY OF PROTECTED DATA BASES (7424193); 12 MONTHS \$13,600

ILLINOIS**SOUTHERN ILLINOIS UNIVERSITY - CARBONDALE**

FETTER; RESEARCH ON COMPUTER GRAPHIC REPRESENTATION OF HUMANS. (7422232); 12 MONTHS \$20,000

IOWA

UNIVERSITY OF IOWA
ROBINSON; TREE CODES FOR DATA SECURITY (7508620*); 12 MONTHS \$10,000

MASSACHUSETTS

HARVARD UNIVERSITY
SCHMIDT, PEUCKER, CHRISMAN, AND TEICHLIZ; TOPOGRAPHICAL INFORMATION SYSTEMS (7414437); 12 MONTHS \$76,300

NEW JERSEY

NEW JERSEY INSTITUTE OF TECHNOLOGY
TUROFF; COMPUTER BASED CONFERENCING SYSTEMS (7501306); 12 MONTHS \$84,100

PRINCETON UNIVERSITY

ARDEN; COMPUTER SCIENCE AND ENGINEERING RESEARCH STUDY (7418460 A01); 12 MONTHS \$85,000

NEW MEXICO

LOS ALAMOS SCIENTIFIC LABORATORY
METROPOLIS, AND WORLTON; INTERNATIONAL RESEARCH CONFERENCE ON THE HISTORY OF COMPUTING (7413193); 12 MONTHS \$21,800

NEW YORK

NATIONAL BUREAU OF ECONOMIC RESEARCH
MEYER AND KUN; THE ENERGY-MODELING PROCESS (7510143*); 24 MONTHS \$350,000
KUH; CONFERENCES ON THE INTERFACE BETWEEN COMPUTER SCIENCE AND ECONOMETRIC MODEL BUILDING TO BE HELD IN VAIL, COLORADO DURING THE SUMMER OF 1975 (7516390); 7 MONTHS \$19,950

PENNSYLVANIA

CARNEGIE-MELLON UNIVERSITY
JONES; COLLABORATIVE RESEARCH ON THE THEORY OF PROTECTED DATA BASES (7507251); 12 MONTHS \$12,100

TEXAS

TEXAS CHRISTIAN UNIVERSITY
DEETER, AND HOFFMAN; A SURVEY OF METHODS OF ANALYSIS OF ERROR PROPAGATION IN ENERGY-RELATED MODELS (7422044); 12 MONTHS \$15,800

UNIVERSITY OF HOUSTON

JOHNSON, AND MCINNIS; INTERACTIVE GRAPHICS ENERGY INFORMATION MANAGEMENT AND OPTIMAL ECONOMETRIC CONTROL SYSTEM (7417282); 12 MONTHS \$68,400

VERMONT

UNIVERSITY OF VERMONT
BROCK; A SYMPOSIUM ON THE MATHEMATICS OF LARGE SCALE SIMULATION (7503830); 6 MONTHS \$4,500

VIRGINIA

UNIVERSITY OF VIRGINIA
PFALTZ; SURFACE NETWORKS, AN ANALYTIC TOOL FOR THE STUDY OF FUNCTIONAL SURFACES (7413353*); 12 MONTHS \$13,700

WISCONSIN

UNIVERSITY OF WISCONSIN-MILWAUKEE
DAVIDA; CRYPTOGRAPHIC ALGORITHMS FOR COMPUTER DATA BASES (7423653); 12 MONTHS \$19,000

ENGINEERING

ENGINEERING CHEMISTRY AND ENERGETICS

ALABAMA

AUBURN UNIVERSITY

LIU; RESEARCH INITIATION - THEORETICAL EXTENSIONS AND PRACTICAL APPLICATIONS OF OBSERVER THEORY FOR THE KINETIC MODELING AND LUMPING ANALYSIS OF COMPLEX REACTION SYSTEMS (7511293); 18 MONTHS \$17,000

TUSKEGEE INSTITUTE

DILLON; DENSITIES OF ALKALI METALS BY A GAMMA RADIATION ATTENUATION TECHNIQUE (7411433); 12 MONTHS \$25,000

ARIZONA

UNIVERSITY OF ARIZONA

RANDOLPH; EXPERIMENTAL AND THEORETICAL STUDIES OF PARTICLE SIZE DISTRIBUTIONS IN CRYSTALLIZATION PROCESSES (7504348); 24 MONTHS \$102,500

ARKANSAS

UNIVERSITY OF ARKANSAS, FAYETTEVILLE

THIBODEAUX; THE QUANTITY OF HIGHLY VOLATILE (A1) CONSTITUENTS IN INDUSTRIAL WASTEWATER (7417316); 12 MONTHS \$16,900

CALIFORNIA

CALIFORNIA INSTITUTE OF TECHNOLOGY

SEINFELD; SIMULATION AND CONTROL OF URBAN AIR POLLUTION (7102436 A01); 24 MONTHS \$63,800
CORCORAN; STUDY OF THE APPLIED CHEMISTRY IN THE SELECTIVE OXIDATION OF SULFUR COMPOUNDS IN THE DESULFURIZATION OF FUEL OIL (7413984); 24 MONTHS \$56,600
GAVALAS; ESTIMATION OF PETROLEUM RESERVOIR PROPERTIES (7503469); 24 MONTHS \$50,000

HUGHES RESEARCH LABORATORIES

BREWER; SYMPOSIUM ON ELECTRON, ION, AND PHOTON BEAM TECHNOLOGY TO BE HELD IN COLORADO SPRINGS, COLORADO DURING MAY 21-23, 1975 (7517595); 12 MONTHS \$2,600

STANFORD RESEARCH INSTITUTE

SHAW, AND BENSON; HEAT CAPACITIES OF ORGANIC LIQUIDS AS A FUNCTION OF TEMPERATURE: (7500263); 12 MONTHS \$25,200

STANFORD UNIVERSITY

BUNEMAN; STABLE ONE-Dimensionally CONFINED PLASMA CONFIGURATIONS (7303722 A01); 12 MONTHS \$41,400
SELF, AND MITCHNER; DIAGNOSTIC TECHNIQUES FOR COMBUSTION MHD PLASMAS (7304116 A01); 24 MONTHS \$99,000
ROBERTSON; MASS TRANSFER IN SHEARED SUSPENSIONS (7414744); 24 MONTHS \$61,700
MADIX; MOLECULAR BEAM STUDIES OF HIGH TEMPERATURE REACTIONS OF REFRACTORY MATERIALS (7415509); 24 MONTHS \$69,500
BOUDART; CATALYSIS BY SUPPORTED METALLIC CLUSTERS (7422234); 24 MONTHS \$126,000
MASON; CATALYTIC DECOMPOSITION OF NOX ON ZIRCONIA BY ELECTROLYTIC REMOVAL OF OXYGEN (7502397); 24 MONTHS \$41,700
MADIX; FUNDAMENTAL SURFACE STUDIES OF CHEMICAL REACTIVITY AND BONDING ON SINGLE-CRYSTAL CATALYTIC METALS (7514191); 12 MONTHS \$70,000

UNIVERSITY OF CALIFORNIA, BERKELEY

OPPENHEIM; DYNAMICS OF EXOTHERMIC PROCESSES IN COMBUSTION SYSTEMS (7304089 A01); 24 MONTHS \$81,100
OSTER; NETWORK ANALYSES OF REACTION SYSTEMS (7415218); 24 MONTHS \$35,800
FOSS; MINICOMPUTER SYSTEM FOR CHEMICAL ENGINEERING RESEARCH (7415494); 18 MONTHS \$15,000
FOSS; ADAPTIVE CONTROL OF FIXED-BED CATALYTIC REACTORS (7422569); 24 MONTHS \$62,400
EVANS; KINETICS OF GAS-SOLID REACTIONS (7500501); 24 MONTHS \$55,600
TALBOT; STUDY OF ELECTRON TEMPERATURE AND METASTABLE ATOMS IN RECOMBINING HELIUM AND ARGON PLASMAS (7502033); 12 MONTHS \$14,000
LYNN; STUDY OF A PROCESS FOR H₂S REMOVAL SUITABLE FOR APPLICATION IN COAL GASIFICATION (7502707); 24 MONTHS \$48,000
FUERSTENAU; INTERFACIAL PHENOMENA IN FLOTATION (7503468); 24 MONTHS \$117,600
MILLER; RESEARCH INITIATION - EFFECT OF A CONDUCTING WALL ON A STRATIFIED FLUID IN A CYLINDER (7510294); 18 MONTHS \$17,000

UNIVERSITY OF CALIFORNIA, IRVINE

GAMO; GAS LASER PARAMETER ANALYSIS FOR HIGH GAIN TRANSITIONS (7503226); 24 MONTHS \$77,100

UNIVERSITY OF CALIFORNIA, LOS ANGELES

KNUTH; RESEARCH IN MOLECULE SURFACE COLLISIONS WITH TRANSLATIONAL ENERGIES UP TO 20 ELECTRON VOLTS (7404116*); 12 MONTHS \$79,800
FREDERICKING; SUPERCRITICAL HELIUM - 4 CONVECTION (7424341); 24 MONTHS \$45,000
WAZZAN; THE EFFECT OF HEAT TRANSFER ON THE SPATIAL STABILITY AND TRANSITION OF COMPRESSIBLE TWO-DIMENSIONAL BOUNDARY LAYERS (7505559); 24 MONTHS \$73,700
ULLMAN; RESEARCH INITIATION: CATALYTIC REACTIONS BY AUGER SPECTROSCOPY: AMMONIA OXIDATION OF PLATINUM (7510651); 18 MONTHS \$17,000

UNIVERSITY OF CALIFORNIA, SAN DIEGO

MILLER; APPLICATION OF FREE-JET SOURCES TO REACTIVE CROSSED MOLECULAR BEAM EXPERIMENTS (7102434 A04); 9 MONTHS \$5,400

UNIVERSITY OF CALIFORNIA, IRVINE