

COMPUTER-ASSISTED RATIONAL DRUG DESIGN • “GETTING THE ANGLES RIGHT” BUILDING TRANSMISSION CASES • SHOCK WAVES! SEISMIC INTERPRETATION • DISTRIBUTED COMPUTING ENVIRONMENTS • COMPUTATIONAL FLUID DYNAMICS • SIMULATORS: REAL-TIME COMPUTING SYSTEMS • FLUID VECTORS IN BOILERS • OPTIMIZATION IN MANY FIELDS • PARALLEL PROCESSING SYSTEMS • NEW INROADS INTO NUMERIC-INTENSIVE PROBLEMS • SEISMIC SECTIONS • MONTE CARLO INVESTIGATION INTO THE STRUCTURE OF ATOMS • POWERFUL MATHEMATICAL SOFTWARE PACKAGES • SCIENTIFIC VISUALIZATION: BRINGING THE COSMOS OF SCIENCE INTO VIEW • METAPHORS OFFERED BY SCIENTIFIC VISUALIZATIONS HAVE REAL VALUE • SIMULATING BONE, FLESH AND STEEL • HEALING WATER • ACETYLCHOLINESTERASE: MOLECULES TAKE VISUAL FORMS • SPIN-SPIN FORCES; TENSOR FORCES • ENGINEERING AND SUBROUTINE LIBRARY • MYSTERIES OF OCEANIC CIRCULATION • COMPUTER-INTENSIVE FUNCTIONS IN SEISMIC DATA PROCESSING • MOUNTAINS OF THE MIND: SYMBOLIC MATH • SIMPLE COMMANDS PRODUCE GRAPHICAL OUTPUT IN SPEAKEASY • MATHEMATICA: VISUALIZING MANY AND DIVERSE TASKS • WORK SMART, PLAY SMART: ALIAS ANIMATION SOFTWARE • EUROPE IN SPACE: STRUCTURAL MECHANICS IN SATELLITES • COOPERATIVE RESEARCH: A GROWING TREND • ENGINEERING ANALYSIS MUST CHANGE: ENGINEERING “REASONABLE TIME” • FLOW-FIELDS: NUMERICAL SPACE • ROHR: CAD/CAM IN CONCURRENT PRODUCT DEVELOPMENT • MANUFACTURING GAS TURBINE ENGINES • SKIN FRICTION IN AIRCRAFT AIRFLOW AND SHARKSKIN • ON A WING AND A BOUNDARY LAYER: ROTARY WING STUDIES • BOEING’S “PAPERLESS” 777: FIRST AIRCRAFT BUILT WITHOUT BLUEPRINTS • CATIA, AND A NEW WING DESIGN • SOUTHAMPTON’S PARALLEL APPLICATIONS CENTRE • PUTTING ALL FACTORS INTO THE PROTO-DESIGN DATABASE • MOLECULAR DYNAMICS, A CELL’S “WINDOW TO THE WORLD” • NETWORKING A UNIVERSITY (GENEVA) • CLIMATE CHANGE MODELLING (CANADA) • WEATHER DATA, SATELLITES AND FORECASTING (EUROPE) • MAPPED: THE DAILY RISE AND FALL OF GROUND LEVEL OZONE • MAPPING AIR POLLUTION IN CALIFORNIA • RADARSAT MAPS ANTARCTICA • PARALLEL PROGRAMMING MADE EASY • CONTAINER MOLECULES OPEN GATES TO DISCOVERY • IMAGINING CHEMICAL COMPOUNDS • ATOMIC REACTIONS IN ENZYMES • A CONSORTIUM-WIDE COMMON PRODUCT DEVELOPMENT SOFTWARE PLATFORM • PARTS SMARTS: THE RACE TO TOTAL VEHICLE DESIGN • FINITE ELEMENT ANALYSIS IN CAR DESIGN • RAISING “OUR LADY” OF DRESDEN: CATIA IN ARCHITECTURAL DESIGN • ENGINEERING SOFTWARE IN ARCHITECTURE • SIMULATING FLOW IN WATER TURBINES • FINE-TUNING AERODYNAMIC SURFACES / MAGNETIC INEQUIVALENCY • SURVEYING FISH LARVAE IN CORAL REEFS • CRASH TESTS AND COMPUTATIONAL CHEMISTRY • SHARING COMPLEX CALCULATION FACILITIES • COMPUTER-ASSISTED VIRTUAL ENVIRONMENTS: CAVE-SPACE • IMMERSIVE VIRTUAL REALITY CHAMBERS: VIRTUAL SOFTWARE WITH 3-D MOTION TRACKING • THE MAUI HIGH PERFORMANCE COMPUTING CENTER • A VIRTUAL 1000° INCINERATOR • PULLING SECRETS FROM THE AIR: ATMOSPHERIC GAS ANALYSIS BY A SATELLITE-BORNE SPECTROMETER • AIR TRAFFIC CONTROL: TRAINING IN VIRTUAL REALITY • A FLY-THROUGH ACCELERATOR FOR VIRTUAL ANALYSIS • PARALLEL PATHS: MATHEMATICS IN ROBOTICS, VISION SYSTEMS, APPLIED MATH... • FLUID DYNAMICS IN ATMOSPHERIC MAPPING AND ANALYSIS • VISUALIZATION OF A MOLECULAR DYNAMIC SIMULATION • FORECASTING FUTURE ENVIRONMENTS AFTER CLIMATIC CHANGE • DATA EXPLORER, FLYING UNDERGROUND: VISUALIZING SEDIMENTARY STRATA • MARCHING CUBES: CREATING A COMPLEX 3-D SURFACE (SUCH AS THE INTERIOR OF A SKULL) • THE PRINCIPLE OF MAGNETIC INEQUIVALENCY (MATTAR’S RULE) • A STEP TO FUSION ENERGY ON EARTH: DESIGN OF AN ITER TOKOMAK (FUSION) REACTOR • DATA ACQUISITION FROM REMOTE MONITORS ALONG EXTENDED STRUCTURES • MAPPING A NETWORK: CITY UTILITY ARTERIES • REBUILDING THE ARK: CONSERVATION OPTIMIZATION IN CALIFORNIA • MAPPING AND MANAGING FORESTS VIA RELATIONAL DATABASE MANAGEMENT SYSTEMS • OIL AND GAS RESERVOIR SIMULATION AND DRILL POSITION OPTIMIZATION • OIL AND GAS RESERVOIR MODELLING • GEOSCIENCE MODELLING FOR OPTIMIZING DRILL POSITION AND ANGLES IN A HARDROCK GOLDMINE • MODELLING AND VISUALIZING MANTLE CONVECTION FLOW PATTERNS (PARALLEL INTERACTIVE VISUALIZATION) • SOLAR POWER: THE SOLAR VEHICLE RACE ACROSS AUSTRALIA • MOVING IONS THROUGH MEMBRANES: COMPUTATIONAL SCIENCE IN ORGANIC CHEMISTRY • DARK STAR: AN UNMANNED DRONE BUILT IN RECORD TIME WITH STRUCTURAL DESIGN AND STRUCTURAL ANALYSIS SOFTWARE • OPTIMIZATION REVISITED, FOR PARALLEL COMPUTING • (FEATURE) PUSHING THE LIMITS OF BUSINESS INTELLIGENCE • (FEATURE) THE INTEGRATION IMPERATIVE • (FEATURE) SCIENCE AND DEEP COMPUTING • (FEATURE) CARING FOR HEALTH CARE: DATA MINING IMPROVES CARE AND CUTS COSTS • (FEATURE) IMPORTANCE OF AUTOMATED SUMMARY TABLES IN LARGE DATA WAREHOUSES • (FEATURE) PUTTING SALES INFORMATION WHERE IT NEEDS TO BE • (FEATURE) THE ROLE OF TPC-D BENCHMARK RESULTS IN CHOOSING A SERVER • SWORDS INTO PLOWSHARES, BLASTS INTO BYTES: SIMULATING NUCLEAR WEAPON BLASTS (DOE’S ‘OPTION BLUE’) • *WAIT! THERE’S MORE. NO. JUST KIDDING*