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Key issues in stochastic search, *Performance Metrics Symp.*, Gaithersburg, MD (Aug 2004).

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Theoretical comparisons of algorithms, *Performance Metrics Symp.*, Gaithersburg, MD (Aug 2004).

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An object-oriented simulation context to support M-on-N engagements, *AIAA Modeling and Simulation Technologies Conf. and Exhibit*, Providence, RI (Aug 2004).

The following papers were presented at the *Solar, Heliospheric, and Inter-Planetary Environment (SHINE) Workshop*, Big Sky, MT (Jun 2004):

Georgoulis MK, and LaBonteBJ
Reconstruction of a magnetohydrodynamic velocity field vector in solar active regions from a pair of vector magnetograms.

Georgoulis MK, and Rust DM
A comprehensive array of diagnostic tools for vector magnetogram analysis in solar active regions.

Haggerty DK, and Roelof EC
Effective drift velocity and initiation times of interplanetary type-III radio bursts.

COLLOQUIA

The following topics were presented at the weekly APL Colloquium in 2004:

4 Oct
Why Net-Centric? J Stenbit, Former CIO and Assistant Secretary of Defense (C^3I)

15 Oct
The War at Midpassage: Where Do We Go from Here? M Vlahos, APL

29 Oct
Confronting Long-Term Fiscal Challenges, P Heller, Int. Monetary Fund

12 Nov
Diamonds, Weapons and Passports: The Strategic Challenge of Failed States to U.S. National Security, D Farah, author and journalist

19 Nov
Search for Extraterrestrial Intelligence: Pulling Signals out of Cosmic Noise, J Tarter, SETI Institute

3 Dec
Cassini at Saturn: Wonders of the Giant Planet Revisited, S Krimigis, APL

10 Dec
Scenarios and Design Cognition, J Carroll, Pennsylvania State University

17 Dec
Low Energy Nuclear Reactions: Problems, Progress and Prospects, D Nagel, George Washington University

U.S. PATENTS (2004)

Anderson CW, Kerechanin CW II, DeCicco DJ, and Vojtech GL
Expandable Sensor Array, 6801475 (5 Oct)

Anderson CW, Scholl PF, Chappell RG, Bryden WA, Ko HW, and Ecelberger SA
Sample Collection Preparation Methods for Time-of-Flight Miniature Mass Spectrometer, 6806465 (19 Oct)

Asher MS, Linstrom LA, Henderson RL, and Duven DJ
Weak Signal and Anti-jamming Global Positioning System Receiver and Method Using Full Correlation Grid, 6724343 (20 Apr)

Bade PR, Kahn SA, and Verven DM
System, Method, and Computer Program Product for High Speed Backplane Messaging, 6792513 (14 Sep)

Bankman IN, and Ison LW
Method and System for Detecting Small Structures in Images, 6738500 (18 May)

Biermann PJ, Roberts JC, Cain RP, Carkhuff BG, and Kleinberger M
Instrumented Torso Model, 6769286 (3 Aug)

Blodgett DW
Method and Apparatus for Selecting Trees for Harvest, 6829938 (14 Dec)

Bryden WA
Pulsed Laser Sampling for Mass Spectrometer System, 6734423 (11 May)

Cain RP, Carkhuff BG, and Bacon JM
Techniques for Monitoring Health of Vessels Containing Fluids, 6834556 (28 Dec)

Cain RP, Carkhuff BG, and Uy OM
Self-Monitoring Controller for Quartz Crystal Microbalance Sensors, 6706977 (16 Mar)

Champion JL, Osiander R, Givens RB, Wickenden DK, Jablonski DG, Higbie JH, Radcliffe ST, Darrin MAG, Kistenmacher TJ, and Oursler DA
Lorentz Force Driven Mechanical Filter/Mixer Designs for RF Applications, 6819103 (16 Nov)

Charles HK Jr, Beck TJ, Feldmesser HS, and Magee TC
Techniques for Deriving Tissue Structure from Multiple Projection Dual-Energy X-ray Absorptiometry, 6816564 (9 Nov)

Cusick RT, Walsh RF, and Wickenden DK
Sensor Array System for Position Detection, 6727511 (27 Apr)

Eaton HAC
Single Event Upset Immune Logic Family, 6753694 (22 Jun)

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Franson, JD
Optical Method for Quantum Computing, 6678450 (13 Jan)

Greenberg RS, Cristion JA, Moses EJ, and Sternberger WI
Apparatus and Method for Non-Invasive, Passive Fetal Heart Monitoring, 6751498 (15 Jun)

Hayek CS, and Doss OW III
Threat Identification for Mass Spectrometer System, 6822222 (23 Nov)

Heisler RR, and Ratliff CL
Rapid Prototype Wind Tunnel Model and Method of Making Same, 6796171 (28 Sep)

Higbie JH
Integrated Adaptive Antenna Array and Adaptive Locally Optimum Detection System, 6735427 (11 May)

Jablonski DG, Ko HW, Oursler DA, Smith DG, and White DM
System and Method of Radar Detection of Non-Linear Interfaces, 6765527 (20 Jul)

Lawrence DS, and Sample JL
Cortisol Sensor, 6833274 (21 Dec)

Lee DM, Francomacaro AS, Lehtonen SJ, and Charles HK Jr
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McLoughlin MP, and Carlson MA
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Miragliotta JA, Grossman KR, Frazer RK, and Bamberger RJ Jr
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Murphy JC
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Murray GM
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Murray GM
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Nelson CV
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Nelson CV
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Nelson CV, and Jacobs BC
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Paschalidis NP
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Methods of Producing Electrodes and Methods of Using Such Electrodes to Accumulate and Detect Analytes, 6805789 (19 Oct)

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Long-Life Conductivity Sensor System and Method for Using Same, 6828808 (7 Dec)

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Steerable Three-Dimensional Magnetic Field Sensor System for Detection and Classification of Metal Targets, 773887 (Australia) (23 Sep)

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AUTHOR INDEX

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