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Highlighted Categories
Physics (46), Ocean Sciences & Technology (47), Mathematical Sciences (72) and Chemistry (99)

This month, we are featuring technical documents recently received and categorized in the NTIS Subject Categories listed above.

The diversity of the NTIS collection is demonstrated in the Related Categories listed for each document. Related categories listed this month include:

41 Manufacturing Technology 71 Materials Sciences
43 Problem Solving Information for 74 Military Sciences
State & Local Governments 77 Nuclear Science & Technology
48 Natural Resources & 81 Combustion, Engines, Earth Sciences & Propellants
49 Electrotechnology 84 Space Technology
50 Civil Engineering 85 Transportation
51 Aeronautics & Aerodynamics 88 Library & Information Sciences
54 Astronomy & Astrophysics 91 Urban & Regional Technology & Development
55 Atmospheric Sciences 92 Behavior & Society
57 Medicine & Biology 94 Industrial & Mechanical Engineering
62 Computers, Control & Information Theory 96 Business & Economics
63 Detection & Countermeasures 97 Energy
68 Environmental Pollution & Control 99 Chemistry
70 Administration & Management

The list of new titles in these featured categories begins on the next page.

Subject Category Codes/Classification
NTIS classifies citations into 39 subject categories. Each of these subject categories is divided into subcategories. This method provides sorting categories for both hard and soft sciences. All subject categories consist of three character codes: two numerics and one alpha character. The numeric codes represent entire categories, the alpha codes are used to designate subcategories within these broad categories. The number of NTIS subcategories posted to an information product average from one to five, although there are some reports with more.

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## Key to Database Fields Used

The following NTIS database fields are used in this short listing of recently acquired technical reports.

- **NTIS Order Number**
- **Title**
- **Source**
- **Report Year, Page Count**
- **Related Categories/Sub-categories**

(Where the document is also indexed)

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The documents listed here are just some of the newest in the collection. Find information on other new items, legacy documents, as well as ordering and format options in the search area of [http://www.ntis.gov](http://www.ntis.gov).

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### Major Subject Categories

#### New for October

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* For a listing of Scope Notes that defines the specific topical content for each category, go to [http://www.ntis.gov/assets/pdf/scopenotes.pdf](http://www.ntis.gov/assets/pdf/scopenotes.pdf)

** Quantities represent each new report assigned on average to 3-5 categories.
Category: 72
Mathematical Sciences

ADA471819
Fast Randomized Algorithm for the Approximation of Matrices
Department of Defense
2007, 43 pages
Related Categories/Sub-categories:
72B (Algebra, Analysis, Geometry, & Mathematical Logic)

ADA473001
Detection of Daytime Arctic Clouds using MISR and MODIS Data
Department of Defense
2006, 25 pages
Related Categories/Sub-categories:
63C (Infrared & Ultraviolet Detection)
72F (Statistical Analysis)
94K (Laboratory & Test Facility Design & Operation Clouds)

ADA474154
Perceptual Issues of Augmented and Virtual Environments
Department of Defense
2007, 25 pages
Related Categories/Sub-categories:
62B (Computer Software)
72E (Operations Research)

ADA478920
Stochastic Stability of Regional Ocean Models with Uncertainty in Wind Forcing
Department of Defense
2007, 17 pages
Related Categories/Sub-categories:
47C (Physical & Chemical Oceanography)
55C (Meteorological Data Collection, Analysis, & Weather Forecasting)
72E (Operations Research)
72F (Statistical Analysis)

ADA483298
Visual Analysis of North Atlantic Hurricane Trends Using Parallel Coordinates and Statistical Techniques
Department of Defense
2008, 21 pages
Related Categories/Sub-categories:
62B (Computer Software)
72F (Statistical Analysis)
95D (Human Factors Engineering)

Category: 47
Ocean Sciences & Technology

ADA476537
Determination of Primary Spectral Bands for Remote Sensing of Aquatic Environments
Department of Defense
2007, 15 pages

NRL/JA/7330-07-8033
Related Categories/Sub-categories:
47C (Physical & Chemical Oceanography)
63A (Acoustic Detection)

ADA481033
SeaSpider: Automated Information Gathering on Vessel Movements in Support of Maritime Domain Awareness
Department of Defense
2007, 44 pages
Related Categories/Sub-categories:
47A (Marine Engineering)
62 (Computers, Control & Information Theory)
88B (Information Systems)

Department of Commerce
2008, 15 pages
Related Categories/Sub-categories:
47D (Biological Oceanography)
48B (Natural Resource Management)
57H (Ecology)
70F (Public Administration & Government)

DE2008932953
Department of Energy
2008, 22 pages
Related Categories/Sub-categories:
47E (Marine Geophysics & Geology)
68 (Environmental Pollution & Control)
68D (Water Pollution & Control)

PB2008107727
Endangered, Threatened, and Depleted Marine Mammals in U.S. Waters. A Review of Species Classification Systems and Listed Species
Marine Mammal Commission
2007, 88 pages
Related Categories/Sub-categories:
47D (Biological Oceanography)
48B (Natural Resource Management)
57H (Ecology)
57Z (Zoology)

PB2008107942
Preliminary Assessment of Landslide-Induced Wave Hazards: Tidal Inlet, glacier Bay National Park, Alaska
Department of the Interior
2008, 62 pages
Related Categories/Sub-categories:
47B (Dynamic Oceanography)
47E (Marine Geophysics & Geology)
85G (Marine & Waterway Transportation)

PB20081107650
Wave Forces on Bridge Decks: State of the Art and State of the Practice Review
Department of Transportation
2007, 95 pages
RePT-0-5516-1
Related Categories/Sub-categories:
46B (Fluid Mechanics)
50A (Highway Engineering)

PB2008109943
High Altitude Electromagnetic Pulse (HEMP) and High Power Microwave (HPM) Devices: Threat Assessments. (Updated March 26, 2008)
Library of Congress
2008, 19 pages
Related Categories/Sub-categories:
46C (Optics & Lasers)
46H (Radiofrequency Waves)

PB2008112570
Rock Mass Behavior and Support Response in a Longwall Panel Pre-Driven Recovery Room
Department of Health and Human Services
2008, 16 pages
Related Categories/Sub-categories:
46E (Structural Mechanics)
48A (Mineral Industries)
57U (Public Health & Industrial Medicine)
68A (Air Pollution & Control)
68G (Environmental Health & Safety)

PB20081114337
Department of Commerce
2008, 15 pages
Related Categories/Sub-categories:
47D (Biological Oceanography)
48B (Natural Resource Management)
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PB2008110762
Discovery and Investigation of an Early Nineteenth-Century Wooden Sailing Vessel in 2,000 Feet of Water
Department of the Interior
2008, 48 pages
Related Categories/Sub-categories:
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