

# **R. HANK DONNELLY**

Professor  
War Gaming Department  
Center for Naval Warfare Studies

## **EDUCATION**

Ph.D. in Astronomy and Astrophysics, University of California, Santa Cruz  
M.S. in Astronomy and Astrophysics, University of California, Santa Cruz  
B.S. in Physics and Astronomy, Haverford College

## **WORK TIMELINE**

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| <b>2025-PRESENT</b> | Professor, War Gaming Department, U.S. Naval War College                                        |
| <b>2023-2025</b>    | Associate Professor                                                                             |
| <b>2017-2023</b>    | Research Staff Member, Institute for Defense Analyses (IDA)                                     |
| <b>2018-2023</b>    | Embedded Analyst, Naval Forces Division, CAPE, OSD                                              |
| <b>2005-2016</b>    | Research Analyst, Center for Naval Analyses (CNA)                                               |
| <b>2014-2016</b>    | Principle Research Scientist                                                                    |
| <b>2011-2013</b>    | Senior Research Scientist                                                                       |
| <b>2010-2016</b>    | Director, Analyst Development Group                                                             |
| <b>2008-2010</b>    | Embedded Analyst, Marine Corps Warfighting Laboratory                                           |
| <b>2007-2008</b>    | Embedded Analyst, Assessments Division (N81), OPNAV                                             |
| <b>1995-2005</b>    | Research Astrophysicist, Harvard-Smithsonian Center for Astrophysics                            |
| <b>2003-2004</b>    | Instructor, Department of Astronomy, Harvard College                                            |
| <b>2003</b>         | Assistant Professor, Framingham State College                                                   |
| <b>2000-2001</b>    | Adjunct Professor of Physics, School of Arts and Sciences,<br>Massachusetts College of Pharmacy |
| <b>1993-1995</b>    | Assistant Professor, Department of Astronomy, Wellesley College                                 |
| <b>1993-1995</b>    | Assistant Women's Varsity Lacrosse Coach, Athletic Department,<br>Wellesley College             |
| <b>1989-1993</b>    | Research Assistant, Lick Observatory, UCSC                                                      |
| <b>1992</b>         | Lecturer in Astronomy, Board of Astronomy and Astrophysics, UCSC                                |
| <b>1992</b>         | Lecturer in Astronomy, Office of Summer Programs, UCSC                                          |
| <b>1991-1992</b>    | Lecturer in Astronomy, Department of Mathematics,<br>Cabrillo Community College                 |
| <b>1989-1992</b>    | Residential Preceptor, Crown College, UCSC                                                      |
| <b>1989-1993</b>    | Head Men's Lacrosse Coach, Office of Physical Education, Recreation &<br>Sports, UCSC           |
| <b>1987-1991</b>    | Teaching Assistant, Board of Astronomy and Astrophysics, UCSC                                   |
| <b>1986-1987</b>    | Commercial Whitewater Guide, Peregrine Adventures                                               |
| <b>1983-1987</b>    | Commercial Whitewater Guide, Whitewater Voyages                                                 |

## AWARDS AND COMMENDATIONS

- 2024, 2025** USNWC Performance Award  
**2023, 2024, 2025** USNWC Time off Award  
**2023** Letter of Commendation, VADM Ozama, JMSDF Maritime Material Command  
*Integrating Allies & Partners Capabilities Wargame*  
**2021** Congressional Record, Lt Gen Barrett, Joint Staff J4  
*Joint Force Energy Wargame II*  
**2021** Letter of Commendation, MG Helwig, INDOPACOM J4  
*Bridge Energy Wargame*  
**2019** Letter of Commendation, MG Davidson, INDOPACOM J4  
*Joint Force Energy Wargame*  
**2010** Analyst of the Year, Division of Advanced Technology and Systems Analysis, CNA  
**2005** Chris Award, Columbus International Film & Animation Festival  
*Essential Science for Teachers*  
**2002** Certificate of Distinction for Teaching, Harvard University  
**2000** NASA Group Achievement Award: CHANDRA Operations Team  
**2000** NASA Group Achievement Award: CHANDRA Science Team  
**2000** Special Achievement Award, Harvard-Smithsonian Center for Astrophysics  
**1997** Special Achievement Award, Harvard-Smithsonian Center for Astrophysics  
**1996** Special Achievement Award, Harvard-Smithsonian Center for Astrophysics  
**1993** Coach of the Year, Western Collegiate Lacrosse League  
**1991** Outstanding Teaching Assistant, UCSC  
**1990** Head Teaching Assistant/ T.A. Trainer, Board of Astronomy and Astrophysics, UCSC  
**1990** Achievement Rewards for Collegiate Scientists (ARCS) Scholar, UCSC  
**1985** Charles A. Dana Scholar, Haverford College  
**1984** Charles A. Dana Scholar, Haverford College

## COURSES TAUGHT

### GRADUATE AND POST-DOCTORAL

- UNDERSTANDING WARGAMING* (USNWC)  
*ANALYST DEVELOPMENT SEMINARS* (CNA)  
*STELLAR ASTROPHYSICS* (Harvard College)  
*ASTRONOMY RESEARCH EXPERIENCE FOR TEACHERS* (Harvard College)  
*ASTRONOMY IN THE CURRICULUM* (Framingham State University)

### ADVANCED UNDERGRADUATE

- ASTROPHYSICS II* (Wellesley College)  
*ASTROPHYSICS I* (Wellesley College)  
*ASTRONOMICAL TECHNIQUES II* (Wellesley College)  
*ASTRONOMICAL TECHNIQUES I* (Wellesley College)

### INTRODUCTORY UNDERGRADUATE

- THE ASTRONOMICAL UNIVERSE* (Harvard College)  
*INTRODUCTORY PHYSICS LABORATORY* (Mass. College of Pharmacy)  
*STARS, GALAXIES, AND COSMOLOGY (WITH & WITHOUT LAB)* (Wellesley College)  
*THE SOLAR SYSTEM (WITH & WITHOUT LAB)* (Wellesley College)  
*OVERVIEW OF THE UNIVERSE* (University of California, Santa Cruz)  
*INTRODUCTORY ASTRONOMY* (Cabrillo Community College)

## EXPERIENCE DETAILS

### RESEARCH ACTIVITIES

**Professor**, War Gaming Department, U.S. Naval War College

Game Director for the fourth Naval Contested Logistics War Game (NCLWG IV) for the Chief of Naval Operations, Fleet Readiness and Logistics (OPNAV N4). Work focused on supporting the Chief of Naval Operations and Fleet Commanders in their campaign to develop the next generation of logistical sustainment. Game design was a critical component enabling members of the Navy Logistics Enterprise (NLE) to develop new concepts of operation to support combat readiness. The structure of NCLWG IV also included significant participation by Japanese and Five Eye allies throughout the design, development, and execution in order to best inform the NLE and support U.S. global partnerships. The game design also sought to explore and assess novel modes of game structure and execution

**Embedded Analyst**, Naval Forces Division, CAPE, OSD

Supported Naval Force Division in Department of Defense, Office of Cost Assessment and Program Evaluation (OSD-CAPE). Developed analytical tools for assessing Carrier Strike Group survival, the Thirty-Year Ship Building Plan, Operational Availability of Strike Groups, Air Wings, and Surface Combatants, and Force Generation. Led multi-year study on Submarine Survivability.

**Research Staff Member**, IDA

Principal Investigator (Director, Designer, Developer, Adjudicator, and Analyst) on Joint Force Energy Wargame, Bridge Energy Wargame, Joint Force Energy Wargame II, and Integrating Allies and Partners' Capabilities Wargame. Led conceptualization, design, development, and adjudication. Directed analysis efforts. Lead analyst developing Test and Evaluation Measurement Plan (TEMP) for DDG-1000. Supported multiple programs including Coastal Battlefield Reconnaissance Analysis (COBRA) mine detection system and Tomahawk Land Attack Missile (TLAM) modernization.

**Principal Research Scientist**, CNA

Principal Analyst and Senior Project Director for the Wargaming Team. Led research teams creating wargames (Logistics Centric Game I-IV; DLA War Game '14 & '16; LOGWAR [precursor to Advanced Globally Integrated Logistics Effort]; MCWL Ground Tactical Simulation; and Analyst Development Group War Game, Maritime & Ground). Included new business development, personnel, and financial management. Sponsors included Chief of Naval Operations Fleet Readiness and Logistics (N4), Defense Logistics Agency, the Joint Staff, U.S. Marine Corps Warfighting Laboratory, U.S. Transportation Command. Assessed topics including resilience, interaction between combat and logistical operations, large scale exercise planning, and prioritization of budget options.

**Senior Research Scientist**, CNA

Analyst and Project Director for the Aviation Systems and Technology Team. Led multi-element research team including sub-contractors and consultant assessing fleet management and usage strategies for naval strike fighters for NAVAIR. Led team performing an analysis of mission roles and requirements for naval rotorcraft for Chief of Naval Operations, Air Warfare (N88).

**Embedded Analyst**, Marine Corps Warfighting Laboratory, CNA

Developed and executed multiple research programs in support of assessment of next-generation technology for U.S. Marine Corps. These systems included Trellisware, DTCS, DOTC-2, CROWS, WASP, and man-portable counter-sniper systems. Worked extensively in the field with Fleet Marine Forces to evaluate system performance in operational conditions.

**Embedded Analyst**, Chief of Naval Operations Assessments Division (N81), CNA

Managed administrative aspects of entire CNA Core research program. Supported Chief of Naval Operations and Fleet Commanders in development of their analytical research programs. Supported Logistics and Readiness team (N814) in assessment of readiness modeling.

**Research Analyst**, CNA

Analyst and Project Director for the Surface Operations and Systems Team . Responsible for a executing and directing projects connected to the Advanced Technology and Systems Analysis Division at The Center for Naval Analyses. Study topics included: the DoD Readiness Reporting System- Navy (DRRS-N/TFIRM), reconstruction of USWEX events, assessment of UAVs for the Marine Corps, modeling technological surprise for DNI, assessing sortie generation capabilities, modeling Time Critical Strike, optimization of Naval Maintenance scheduling.

**Research Astrophysicist**, Harvard-Smithsonian Center for Astrophysics

Calibration Scientist for the High Resolution Camera(HRC) aboard NASA's CHANDRA X-Ray Observatory. Developed the flight performance model of the instrument. Managed and directed team developing and implementing daily planning of calibration measurements during pre-flight assembly. Worked with Instrument teams, NASA Marshall Space Flight Center (MSFC), the Project Science group, and TRW project managers to guide and oversee measurements. Responsible for analysis of HRC data taken during ground calibration at MSFC and integration with Sub-Assembly data. Also responsible for developing user interfaces to the calibration data for the general community.

Created a research program to analyze substructure in Galaxy Clusters. Primary focus has been on the use of temperature maps to identify objects which are undergoing previously undetected merging activity and to search for evolutionary effects. Other areas of research include: the use of a non-circular wavelet analysis to search for filamentary structure in Galaxy Clusters; modeling and quantifying the stability and reliability of standard photometric parameters.

**Research Assistant**, Lick Observatory, UCSC

Designed and developed software for evaluating the performance of multiplexing spectrographic instruments. Developed AI program for performing optimization of target assignment. Developed next generation multi-object fiber optic based spectrograph (AMOS). Conducted an extensive program for the preparation of optical quality surfaces on optical fibers, including measurement of the focal ratio degradation and non-telecentric behaviors of the finished fibers. Adapted dual beam spectrograph for use as primary detector for AMOS. Designed an optical transfer system to mate the fast focal ratio output of the optical fibers to the slow focal ratio input of the spectrograph. Created a research program to study the properties of Abell Galaxy Clusters by collecting deep V and I band photometric data. Adapted software for the study of transient Gamma-Ray bursts.

## EDUCATION ACTIVITIES

### **Professor** War Gaming Department, U.S. Naval War College

Implemented innovative approaches to war gaming design (multiple smaller, simultaneous games) to maximize the opportunity for professional warfighters to build their knowledge of how to plan and fight. Extended Departmental problem, purpose, and objective methodology (via explicit statement of central research question) for concept develop to enable sponsors to articulate commander's critical information requirements. Supported multiple games as a cell facilitator and moderator. Taught (Winter '24-25) elective course *Understanding Wargaming* as a continuation and expansion of the material taught in the department's *Introductory Course*. Collaborated with colleagues in Cyber & Innovation Policy Institute on game design and development. Technical liaison with Joint Military Operations Department.

### **Director, Analyst Development Group** CNA

Developed, implemented, and led broad based training program for all new hires at CNA. The program was built to support their transition from traditional academia to military operations research. Created and taught a series of post-doctoral seminars spanning the first two years of an analyst's tenure at CNA and covering topics from communication, to experiment design, to military command structures. Developed, implemented, and led program to introduce senior and mid-career analysts at CNA to project management. Developed and led post-doctoral seminars covering topics including financial management and budgeting, document development and management, and sponsor relations.

### **Embedded Analyst**, Marine Corps Warfighting Laboratory, CNA

Developed and presented seminars in support of Junior Officer Professional Military Education curriculum. Demonstrated experimental design and analysis methodologies.

### **Research Astrophysicist**, Harvard-Smithsonian Center for Astrophysics

Developed program for Boston area teachers to gain experience in scientific research. Partnered with program graduates to develop and implement modules for high school curriculum in Boston Public Schools. Participated in Harvard forum on Science Education.

### **Instructor**, Department of Astronomy, Harvard College

Co-taught introductory survey courses to undergraduates. Developed course materials and pedagogical approaches.

### **Assistant Professor**, Framingham State College

Developed and taught continuing education course in incorporating astronomy in K-12 curricula.

### **Adjunct Professor**, Massachusetts College of Pharmacy

Directed instructional laboratory in elementary physics. Managed experimental apparatuses.

### **Assistant Professor**, Department of Astronomy, Wellesley College

Prepared and taught semester-long courses in Astronomy at introductory and advanced levels for both majors and non-majors. Developed and taught a cross-curriculum writing course for the First Year (Freshman) Writing Program. Served as Quantitative Reasoning Advisor for First Year Advising Team.

**Assistant Women's Varsity Lacrosse Coach**, Athletic Department, Wellesley College

Goal tending and defensive coordinator. Supported Head Coach in design of practices and management of team during training sessions and intercollegiate contests.

**Lecturer in Astronomy**, Board of Astronomy and Astrophysics, UCSC

Prepared and directed regular term general overview course at the introductory level. Responsible for all aspects of the course including supervision and evaluation of three Graduate Student teaching assistants.

**Lecturer in Astronomy**, Office of Summer Programs, UCSC

Prepared and directed summer term general overview course at the introductory level. Responsible for all aspects of the course.

**Lecturer in Astronomy**, Department of Mathematics, Cabrillo Community College

Prepared and directed multiple regular term general overview courses at the introductory level. Responsible for all aspects of the course.

**Head Men's Lacrosse Coach**, Office Physical Education and Recreation, UCSC

Founded intercollegiate club program. Instructed at all levels of experience from novice to veteran. Managed all administrative, organizational and training activities of the team. Led team to league championship in 1993.

**Residential Preceptor**, Crown College, UCSC

Supervised co-educational dormitory of 60 Freshman. Developed and implemented program of social and educational activities.

**Teaching Assistant**, Board of Astronomy and Astrophysics, UCSC

Prepared out of class assignments and exams for the general introductory overview course for non-majors. Led multiple discussion sections of 25-40 students each. As Head TA/TA-Trainer supervised 13 Teaching Assistants for the Board of Astronomy and Astrophysics. Trained six new Teaching Assistants in writing outside of class assignments, narrative evaluations, exams, etc. Videotaped, evaluated and advised new Teaching Assistants on their teaching styles.

**Commercial Whitewater Guide**, Peregrine Adventures

Led groups on wilderness trips throughout the Eastern Australia. Activities included substantial environmental education component. Instructed colleagues on emergent technologies, wilderness rescue, and whitewater operations.

**Commercial Whitewater Guide**, Whitewater Voyages

Led groups on wilderness trips throughout the California Sierra and Coastal Range, Southern Oregon, and Western Nevada. Activities included substantial environmental education component. Instructed first responders and junior guides on wilderness rescue, and whitewater operations.

SERVICE CONTRIBUTIONS

At USNWC

- Committee Member** on USNWC War Gaming Department Chair Search Committee
- Liaison** and **Coordinator** for War at Sea Game to Joint Military Operations Department
- Advisor** to DARPA collaboration with Cyber & Innovation Policy Institute
- Advisor** to design and development of Persistent Engagement War Game
- Developer** of Summer Program for future War Gamers
- Collaborator** on flag officer training with College of Leadership and Ethics
- Founder** and **Facilitator** of USNWC Wargaming Club
- Reviewer** for *Joint Force Quarterly*
- Facilitator** of East Greenwich High School War Gaming Event
- Facilitator** of Brown University ROTC gaming event
- Advisor** to USNWC Museum on College and Navy Anniversary Events
- Coach** of Falls Church Girls' Youth Lacrosse Club
- Mentor** in Harvard-Smithsonian Summer Research Experience for Undergraduates
- Facilitator** and **Partner** for Project Astro, Kennedy Middle School (Natick, MA)
- Facilitator** and **Partner** for Project Astro, Brighton High School (Boston, MA)
- Mentor** in Wellesley College Summer Research Experience for Undergraduates
- Reviewer** for *The Astrophysical Journal, Letters*
- Reviewer** for *The Astronomical Journal*
- Reviewer** for *Monthly Notices of the Royal Astronomical Society*
- Reviewer** for *Publications of the Astronomical Society of the Pacific*

## LIST OF WAR GAMES

**L** Led**C** Contributed Not Applicable

| Title                                                                 | Sponsor                    | Year | Director | Designer | Developer | Adjudicator | Analyst |
|-----------------------------------------------------------------------|----------------------------|------|----------|----------|-----------|-------------|---------|
| Naval Contested Logistics War Game (NCLWG-IV)                         | OPNAV(N4)<br>VADM Jablon   | 2024 | L        | L        | C         | C           | C       |
| counter-C5ISR War Game (cC5ISR)                                       |                            | 2023 | C        |          |           |             |         |
| Green Game                                                            | CNO                        | 2023 | C        |          |           |             |         |
| Integrating Allies and Partners Capacities Wargame (IAPC-Conflict)    | JS(J4)<br>LtGen Kosinski   | 2023 | L        | L        | L         | L           | C       |
| Integrating Allies and Partners Capacities Wargame (IAPC-Competition) | JS(J4)<br>LtGen Kosinski   | 2023 | L        | L        | L         | L           | C       |
| Joint Force Energy Wargame (JFEW II-Conflict)                         | JS(J4)<br>MG Maxwell       | 2022 | L        |          |           | L           | L       |
| Joint Force Energy Wargame (JFEW II-Competition)                      | JS(J4)<br>MG Maxwell       | 2022 | L        | L        | L         | L           | L       |
| The IDA Move                                                          | IDA<br>Dir. Op. Eval. Div. | 2022 | L        | L        | L         |             |         |
| Bridge Energy Wargame (BEW)                                           | IP(J4)<br>MG Helwig        | 2021 | L        |          | L         | L           | L       |
| Joint Force Energy Wargame (JFEW)                                     | IP(J4)<br>MG Davidson      | 2019 | L        | L        | L         | L           | L       |
| TRANSCOM Wargame (USTCW)                                              | USTC<br>Gen McDew          | 2016 | L        | L        | L         | L           | L       |
| Defense Logistics Agency War Game (DLAWG-16)                          | DLA<br>VADM Busch          | 2016 | L        | L        | L         | L           | L       |
| Analyst Development Group Wargame (ADGWG-Maritime)                    | CNA, Dir. of Research      | 2016 | L        |          |           | L           |         |
| Logistics Centric Game (LCG-IV Futures)                               | OPNAV(N4)<br>RDML Verastro | 2015 | L        |          | L         | L           | L       |
| Logistics Wargame (LOGWAR [later AGILE])                              | JS(J4)<br>LtGen Ruark      | 2015 | L        | L        | L         | L           | L       |
| Analyst Development Group Wargame (ADGWG-Ground)                      | CNA, Dir. of Research      | 2015 | L        | L        | L         | L           |         |



# DONNELLY CURRICULUM VITAE

| Title                                                           | Sponsor                     | Year | Director | Designer | Developer | Adjudicator | Analyst |
|-----------------------------------------------------------------|-----------------------------|------|----------|----------|-----------|-------------|---------|
| Analyst Development Group<br>Wargame<br>(ADGWG-Maritime)        | CNA, Dir. of<br>Research    | 2015 | L        |          | L         | L           |         |
| Logistics Centric Game<br>(LCG-III)                             | PACFLT (N4)<br>RDML Skubic  | 2014 | L        | L        | L         | L           | L       |
| Defense Logistics Agency War<br>Game<br>(DLAWG-14)              | DLA<br>VADM Harnitchek      | 2014 | L        | L        | L         | L           | L       |
| Analyst Development Group<br>Wargame<br>(ADGWG-Ground)          | CNA, Dir. of<br>Research    | 2014 | L        | L        | L         | L           |         |
| Analyst Development Group<br>Wargame<br>(ADGWG-Maritime)        | CNA, Dir. of<br>Research    | 2014 | L        |          |           | L           |         |
| Logistics Centric Game<br>(LCG-II)                              | C7F<br>VADM Aucoin          | 2013 | L        |          | L         | L           | L       |
| Analyst Development Group<br>Wargame<br>(ADGWG-Ground)          | CNA, Dir. of<br>Research    | 2013 | L        | L        | L         | L           |         |
| Analyst Development Group<br>Wargame<br>(ADGWG-Maritime)        | CNA, Dir. of<br>Research    | 2013 | L        |          |           | L           |         |
| MCWL Ground Tactical Experiment<br>Simulation<br>(2014 KTA AWE) | MCWL-Experiment<br>Division | 2012 | L        | L        | L         | L           | L       |
| Analyst Development Group<br>Wargame<br>(ADGWG-Maritime)        | CNA, Dir. of<br>Research    | 2012 | L        |          |           | L           |         |
| Logistics Centric Game<br>(LCG)                                 | OPNAV(N4)<br>VADM Busch     | 2012 | L        | L        | L         | L           | L       |
| Analyst Development Group<br>Wargame<br>(ADGWG-Maritime)        | CNA, Dir. of<br>Research    | 2011 | L        | L        | L         | L           |         |

## LIST OF PUBLICATIONS

[citations preceded by a [C] are classified]

### GAMES AND GAME DEVELOPMENT

1. [C] *The Naval Contested Logistics War Game: Final Report*, U.S. Naval War College War Gaming Department, J. Mroszcyk, R. H. Donnelly, J. Vecoli, C. Ratkovic, 2025.
2. [C] *The Naval Contested Logistics War Game: Rulebook and Player Reference*, R. H. Donnelly, A. Goodrich-Houska, M. Muehlbauer, J. Vecoli, C. Ratkovic, J. Mroszcyk, U.S. Naval War College War Gaming Department, 2025.
3. [C] *The Naval Contested Logistics War Game: Quicklook Report*, U.S. Naval War College War Gaming Department, 2024.
4. [C] *The Integrating Allies and Partners Capacities War Game (Conflict Event) Quicklook Report*, R. H. Donnelly, J. Mantua, J. Di Scipio, C. Metts, C. Miller, J. Huckabey, IDA Informal Memorandum, 2023.
5. [C] *The Integrating Allies and Partners Capacities War Game (Competition Event) Quicklook Report*, R. H. Donnelly, J. Di Scipio, J. Huckabey, C. Metts, N. Mease, P. Nero, M. Reed, A. Venegas, J. Mantua, C. Miller, M. Roday, W. Weinfield, C. Swann, S. Rice, N. Mithal IDA Informal Memorandum, 2023.
6. [C] *The Integrating Allies and Partners Capacities War Game (Conflict Event) Rulebook and Player Reference*, R. H. Donnelly, J. Di Scipio, J. Huckabey IDA Informal Memorandum, 2023.
7. [C] *The Integrating Allies and Partners Capacities War Game (Competition Event)*, R. H. Donnelly, J. Di Scipio, J. Huckabey IDA Informal Memorandum, 2023.
8. [C] *Draft Concept for Integrating Allied and Partner Capacity Wargame*, R. H. Donnelly, J. Huckabey, J. Di Scipio, and C. Metts, IDA Informal Memorandum, 2022.
9. [C] *Joint Force Energy Wargame II: Final Report*, R.H. Donnelly, C. Miller, C. Metts, M. Rickert, and M. Herrera, IDA Document P-33064, 2022.
10. [C] *Joint Force Energy Wargame: Quicklook Summary*, R.H. Donnelly, et alia, IDA Informal Memorandum 2022-29878, 2022.
11. [C] *Joint Force Energy Wargame II: Conflict Event Rulebook and Player Reference*, R.H. Donnelly, M. Rickert, C. Miller, M. Herrera, J. Di Scipio, P. Nero, and R. Medlin, IDA Informal Memorandum 2022-29835, 2022.
12. [C] *Joint Force Energy Wargame II: Competition Event Rulebook and Player Reference*, R.H. Donnelly, M. Rickert, C. Miller, M. Herrera, J. Di Scipio, and R. Medlin, IDA Informal Memorandum 2022-29827, 2022.
13. [C] *Joint Force Energy Wargame II Competition Event: Qualitative Data Collection Strategy*, R. Medlin, R.H. Donnelly, D. Hellman, C. Fealing, M. Rickert, C. Miller, M. Herrera, and Y. Wong, IDA Informal Memorandum 2021-29038, 2021.
14. [C] *Cyber Assessment Program: Cyber Wargame Development Playtesting Session #1*, S. Brown-VanHoozer, J. Di Scipio, R.H. Donnelly, E. McCroskey, Y. Wong, and B. Taylor, IDA Informal Memorandum 2021-28583, 2021
15. [C] *Joint Force Energy Wargame II Competition Event: Draft Design*, R.H. Donnelly, M. Rickert, C. Miller, M. Herrera, K. Carter, R. Medlin, J. Di Scipio, and Y. Wong IDA Informal Memorandum 2021-28548, 2021.
16. [C] *Summary of Joint Force Energy Wargame II Initial Planning Conference*, R.H. Donnelly, M. Rickert, C. Miller, M. Herrera, and Y. Wong, IDA Informal Memorandum 2021-28238, 2021.
17. *Logistics Wargaming*, R.H. Donnelly, presentation to the MORS Wargaming Community of Practice and the Georgetown Wargaming Society, IDA Document NS D-14304, 2020.
18. [C] *Joint Force Energy Wargame: Design and Results*, R.H. Donnelly, J. Dechant, M. Fitzsimmons, T. Heuring, and T. Wallace, IDA Document NS D-11051, 2020.
19. [C] *Summary of IDA components of Senior Leader Outbriefs*, R.H. Donnelly, J. Dechant, M. Fitzsimmons, T. Heuring, and T. Wallace, IDA Document NS D-10972, 2019.

20. [C] *The Joint Force Energy Wargame: Rule Book and Player Reference*, R.H. Donnelly, J. Dechant, M. Fitzsimmons, T. Heuring, and T. Wallace, IDA Document NS D-10963, 2019.
21. [C] *Joint Force Energy Wargame pre-Wargame Event*, M. Fitzsimmons, R.H. Donnelly, J. Dechant, T. Heuring, and T. Wallace, IDA Document NS D-10938, 2019.
22. [C] *Joint Force Energy Wargame Draft Concept Brief*, R.H. Donnelly, J. Dechant, M. Fitzsimmons, T. Heuring, and T. Wallace, IDA Document NS D-10695, 2019.
23. [C] *Joint Force Energy Wargame -- Initial Planning Conference Summary Report*, R.H. Donnelly, IDA Document NS D-10696, 2019.
24. [C] *USTRANSCOM Contested Environment Wargame: Final Report*, J. Sepinsky, B. Thornton, R.H. Donnelly, J. Solomon, B. Tripsas, CNA Research Memorandum, DRM-2017-C-014797-Final, 2017.
25. [C] *USTRANSCOM Contested Environment Wargame: Event Reportage*, R.H. Donnelly, J. Sepinsky, E. Collins, J. Peachey, J. Solomon, R. Sullivan, and B. Thornton, CNA Research Memorandum, DIM-2017-C-014579-Final, 2017.
26. [C] *Defense Logistics Wargame 2016: Findings and Recommendations*, R.H. Donnelly, N. Chapman, M. Garlasco, T. Humplik, D. Knoll, E. McGrady, S. Smedley, E. Sullivan, and B. Tripsas, CNA Research Memorandum, DRM-2016-C-014578-Final, 2016.
27. [C] *Defense Logistics Wargame 2016: Supporting Appendices*, S. Smedley, T. Humplik, E. Sullivan, N. Chapman, D. Knoll, M. Garlasco, and R.H. Donnelly, CNA Research Memorandum DIM-2016-014577-Final, 2016.
28. [C] *Defense Logistics Wargame 2016: Preliminary Findings and Senior Leader Roundtable Reportage*, R.H. Donnelly, et alia, 2016.
29. [C] *Defense Logistics Wargame 2016: Hotwash Reportage*, R.H. Donnelly, et alia, 2016.
30. [C] *OPNAV N4 Logistics-centric Game: Analysis and Findings from PACFLT 2015 Game*, R.H. Donnelly, E.D. McGrady, E. Collins, S. Smedley, B. Tripsas, CNA Research Memorandum, DRM-2016-C-013281-SR1, 2016.
31. [C] *Logistics-centric Game: Summary for 7<sup>th</sup> Fleet Commanders' Initiatives Group*, R.H. Donnelly, E.D. McGrady, J. Gillespie, B. Messina, C. Norman, J. Peachey, C. Steinitz, C. Trentacoste, W. Trickey, CNA Research Memorandum, DWP-2015-C-01757-Final, 2015.
32. *LOGWAR-15: Analysis Report*, R.H. Donnelly, M. Garlasco, D.N. Mak, K. Mandell, E.D. McGrady, J. Peachey, A. Mandazzo-Matsel, and R. Reesman, CNA Research Memorandum, DRM-2015-U-011940-Final, 2015.
33. [C] *The Defense Logistics Agency Wargame 2014: Analysis and Findings*, R. H. Donnelly, N.W. Woods, and E.D. McGrady, CNA Research Memorandum, DRM-2015-C-009980-Final, 2015.
34. [C] *The Defense Logistics Agency Wargame 2014: Senior Leader Roundtable Reportage*, R. H. Donnelly, E.D. McGrady, S. G. Cuan, E.C. Mushen, CNA Research Memorandum, DWP-2014-C-009369-Final, 2015.
35. [C] *Defense Logistics Agency Wargame 2014: Supporting Analyses*, N.W. Woods, J.W. Gillespie, J.D. Mintz, S.G. Cuan, R. H. Donnelly, E.D. McGrady, CNA Informational Memorandum, DIM-2015-C-010239-Final, 2015.
36. [C] *The Defense Logistics Wargame 2014: Gamebook and Player Aids*, R.H. Donnelly, E.D. McGrady, N.W. Woods, J. Gillespie, S.G. Cuan, J. MIntz, M. Markowitz, E. Mushen, CNA Research Memorandum, DRM-2014-C-008637-Final, 2014.
37. [C] *N4 Logistics-centric Game: Fighting Hurt in an Area Denial Environment*, R.H. Donnelly, E.D. McGrady, C. Federici, S.G. Cuan, C. Trentacoste, A.A. Langham, A. Michelman-Ribeiro, B. Messina, and N.W. Woods, CNA Research Memorandum, DRM-2014-C-006672-Final, 2014.
38. *MCWL Ground Tactical Experiment Simulation: 2014 KTA AWE*, R.H. Donnelly and E.D. McGrady, CNA Research Memorandum, DIM-2014-U-007511-Final, 2014.

## MODELING AND SIMULATION

1. [C] *Submarine Survivability Study: Baseline Results*, P. Jaffke, G. Khoury, R.H. Donnelly, and A. Slawik, *IDA Document P-33034*, 2022.
2. [C] *Submarine Survivability Study: Baseline Results*, R.H. Donnelly, P. Jaffke, A. Slawik, and G. Khoury, *IDA Informal Memorandum 2021-28425*, 2021.
3. [C] *Fourth In Progress Review of Submarine Survivability Study*, R.H. Donnelly, P. Jaffke, A. Slawik, and G. Khoury, *IDA Informal Memorandum 2021-27958*, 2021.
4. [C] *Third In Progress Review of Submarine Survivability Study*, R.H. Donnelly, P. Jaffke, A. Slawik, and G. Khoury, *IDA Informal Memorandum 2021-27957*, 2021.
5. [C] *Second In Progress Review of Submarine Survivability Study*, R.H. Donnelly, K. Galvin, A. Slawik, and G. Khoury, *IDA Informal Memorandum 2020-27269*, 2020.
6. [C] *Relative Estimation of Fleet-Wide Lethality as a Function of Time*, R.H. Donnelly, *IDA Informal Memorandum 2020-27289*, 2020.
7. *SecDef 2022-2026 Shipbuilding Alternatives*. R.H. Donnelly, *IDA Informal Memorandum 2020-26976* 2020.
8. *Operators manual of the Ship Building Plan Comparison Tool*, R.H. Donnelly, *IDA Informal Memorandum 2020-26954*, 2020.
9. [C] *In Progress Review of Submarine Survivability Study* R.H. Donnelly, K. Galvin, and G. Khoury, *IDA Informal Memorandum 2020-26881*, 2020.
10. [C] *Analysis of Force Generation*, R.H. Donnelly, *IDA Informal Memorandum 2019-25412*, 2019.
11. [C] *A Tale of Two Models: A confederated approach to unstructured problem solving*, V. Lillard, B. Ashwell, and R.H. Donnelly, *IDA Document NS D-10562*, 2019.
12. [C] *Summary of Analysis of Carrier Strike Group Survivability*. R.H. Donnelly, B. Ashwell, R. Atkins, and V. Lillard, *IDA Informal Memorandum 2020-26910*, 2018.
13. *Alternative Force Structure Excursions from the Presidential Budget 2019 Shipbuilding Plan*, R.H. Donnelly, *IDA Informal Memorandum 2018-23085*, 2018.
14. *F/A-18 Inner and Outer Wing Future Requirements*, J.E. Phelps, R.L. Kirk, and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-003102-Final*, 2013.
15. *F/A-18 A-F AIM Rate Updates for the Naval Synchronization Toolset: January 2013*, D.A. Doll and R.H. Donnelly, *CNA Information Memorandum, DIM-2012-U-003439-Final*, 2013.
16. *Naval Synchronization Toolset: AIM Data Visualization*, H. Elitzur, J.E. Phelps, C. Trentacoste, A.A. Langham, and R.H. Donnelly, *CNA Research Memorandum, DRM-2013-U-005477-SR1*, 2013.
17. *F/A-18 Activity Based Consumption for Fleet and Support Squadrons*, S. Zenobia, W.R. Trickey, and R.H. Donnelly, *CNA Research Memorandum, DRM-2013-U-005225-Final*, 2013.
18. *F/A-18 Activity Based Consumption for Fleet Replacement Squadrons*, D.A. Doll, W.R. Trickey, and R.H. Donnelly, *CNA Research Memorandum, DRM-2013-U-005425-Final*, 2013.
19. *F/A-18 Service-Life Consumption and Demand Allocation in Fleet Replacement Squadrons*, E. Michlovich, D.A. Horner, and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-000420-Final*, 2012.
20. *F/A-18 Service Life Consumption Rates*, D.A. Horner, R.H. Donnelly, and E. Michlovich, *CNA Research Memorandum, DRM-2012-U-000643-Final*, 2012.
21. *Scheduling Costs Associated with the Master Aviation Plan*, J. Phelps and R.H. Donnelly, *CNA Opinion Paper, DOP-2012-U-000464-Final*, 2012.
22. *F/A-18 Mishap Attrition Rates: Survival Analysis of CAT-I Inventory Strikes*, D.A. Horner and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-000737-Final*, 2012.
23. *Naval Synchronization Toolset v0.5: Instruction Manual*, J. Phelps and R.H. Donnelly, *CNA Information Memorandum, DIM-2012-U-001322-Final*, 2012.



24. *EA-18G Usage Rates*, D.A. Doll, D.A. Horner, and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-002537-Final*, 2012.
25. *F/A-18 Activity Based Consumption*, W.R. Trickey and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-002637-Final*, 2012.
26. *F/A-18 Rate Estimate Update for AIM*, D.A. Doll, D.A. Horner, and R.H. Donnelly, *CNA Research Memorandum, DRM-2012-U-002536-Final*, 2012.
27. *Naval Synchronization Toolset MAP Module: Instruction Manual*, J. Phelps and R.H. Donnelly, *CNA Information Memorandum, D0025408.A1*, 2011.
28. *Naval Synchronization Toolset AIM Module: Instruction Manual*, J. Phelps and R.H. Donnelly, *CNA Information Memorandum, D0026096.A2*, 2011.
29. [C] *Iran's Counterspace Activities: An Open Source Examination*, P.W. Mackenzie, R.H. Donnelly, I.M. Easton, V. Foran-Cain, S.C. Karppi, *CNA Research Memorandum, DRM-2012-C-000424-Final*, 2012.
30. [C] *Quick Response Project: Helicopter Force Structure*, M.W. Price and R.H. Donnelly, *CNA Research Memorandum, D0025255.A1*, 2011.
31. *Multi object Spectroscopy: Engineering and Design Constraints from Fiber Assignment Optimization Studies*, R.H. Donnelly, J.P. Brodie and S.L. Allen, *Publications of the Astronomical Society of the Pacific*, 104, 1992.
32. *Interactive Assignment and Optimization*, R.H. Donnelly, in *Fiber Optics in Astronomy II*, A.S.P. Conference Series, 37, 1992.
33. *Differential Refraction Revisited*, R.H. Donnelly, J.P. Brodie and W.W. Craig, in *Fiber Optics in Astronomy II*, A.S.P. Conference Series, 37, 1992.
34. *Design and Construction of an automated multi-object spectroscopy system (AMOS)*, J.P. Brodie, J.V. Bixler, W.W. Craig, R.H. Donnelly, C.J. Hailey and L.G. Seppala, *Proceedings of the SPIE*, 1235, 1990.
35. *The Implications of Atmospheric Effects for Fiber-Fed Spectroscopy*, R.H. Donnelly, J.P. Brodie, J.V. Bixler and C.J. Hailey, *Publications of the Astronomical Society of the Pacific*, 101, 1989.

#### TEST AND EVALUATION

1. [C] *USS Zumwalt (DDG 1000)-Class TEMP 1560 Revision E Update*, R.H. Donnelly, A. Kirkpatrick, C. Lewis, M. Colci O'Hara, M.R. Rickert, and M.G. Bell, *IDA Informal Memorandum 2018-23080*, 2018.
2. *DDG 1000 Visit*, M.R. Rickert, R.H. Donnelly, S.T. Lane, and G. Khoury, *IDA Informal Memorandum 2018-23484*, 2018.
3. [C] *COBRA ERB Memo*, M.P. Mathis, R.H. Donnelly, and M.R. Herrera, *IDA Informal Memorandum 2018-23465*, 2018.
4. [C] *COBRA BLRIP Draft*, M. Mathis, R.H. Donnelly, M.R. Herrera, and M.G. Bell, *IDA Informal Memorandum 2018-24318*, 2018.
5. [C] *COBRA CVPA*, R.H. Donnelly and M.R. Herrera, *IDA Informal Memorandum 2018-23307*, 2018.
6. [C] *DDG 1000 Tracking Exercise #6*, R.H. Donnelly, *IDA Informal Memorandum 2017-21344*, 2017.
7. [C] *DDG 1000 Joint Strike, Surface Warfare, and AGS Structural Test Fire to WG*, R.H. Donnelly, *IDA Informal Memorandum 2017-21342*, 2017.
8. [C] *DDG 1000 Integrated Undersea Warfare Test Planning Working Group*, R.H. Donnelly, *IDA Informal Memorandum 2017-20783*, 2017.
9. [C] *DRRS-N IOC: At-Sea Assessment Feb-Mar 2007 NIMITZ JTFEX: Results and Recommendations*, R.H. Donnelly, L. Lynn, W.B. Boning, R.E. Sullivan, and H.K. Nguyen, *CNA Research Memorandum, D0016281.A1*, 2007.
10. [C] *Initial Assessment of the Defense Readiness and Reporting System- Navy: Usability and User Training & Guidance*, R.H. Donnelly, L. Lynn, W.B. Boning, and R.E. Sullivan, *CNA Research Memorandum, D0015372.A2*, 2007.

11. [C] *Initial Assessment of the Defense Readiness and Reporting System- Navy: Business Rules and Algorithms*, R.H. Donnelly, L. Lynn, W.B. Boning, and R.E. Sullivan, CNA Research Memorandum, D0016757.A2, 2007
12. *Enhanced Visual Acuity: Capability Based Assessment*, G. Stewart and R.H. Donnelly, CNA Research Memorandum, D0026089.A2 Final, 2012
13. *Enhanced Visual Augmentation*, G. Stewart and R.H. Donnelly, CNA Research Memorandum, D0025559.A1 Final, 2011
14. *Enhanced Company Operations Limited Objective Experiment 4 (ECO LOE 4): Analysis Report*, R.H. Donnelly, J. Reynolds, M. Schwinghammer, R. Sullivan, and D. Reid, MCWL Analysis Report 10-08, DES-2014-U-009519-Final, 2010.
15. *Enhanced Company Operations LOE 3.2: Analysis Report*, R.H. Donnelly, J. Reynolds, B. Goode, R. Sullivan, and D. Reid, MCWL Analysis Report 10-02, DES-2014-U-009525-Final, 2010.
16. *Enhanced Company Operations—Fires (ECOF) LOE CPX2*, R.E. Sullivan, R.H. Donnelly, B.M. Goode, and D. Reid, MCWL Analysis Report, DES-2014-U-009525-Final, 2010.
17. *CROWS II Remote Weapon Station Limited Technical Assessment: Analysis Report*, R.H. Donnelly and M. Schwinghammer, MCWL Analysis Report 10-06, DES-2014-U-009521-Final, 2010.
18. *Low-Tech, Rapid Precision Targeting Limited Technical Assessment: Quicklook Report*, R.H. Donnelly, MCWL Quicklook Report, 2010.
19. *Man-Wearable Gunshot Detection Limited Technical Assessment*, M.A. Schwinghammer and R.H. Donnelly, MCWL Analysis Report, DES-2014-U-009520-Final, 2010.
20. *Next Generation Command and Control Limited Technical Assessments: Analysis Report*, R.H. Donnelly, MCWL Analysis Report 09-09, DES-2014-U-009527-Final, 2010.
21. *Over-the-Horizon Command and Control (DTCS & DOTC2) Limited Technical Assessments (LTAs) I & II: Analysis Report*, R.H. Donnelly, MCWL Analysis Report 09-01, DES-2014-U-009533-Final, 2009.
22. *Trellisware Limited Technical Assessments (LTAs) I-II: Analysis Report*, R.H. Donnelly, MCWL Analysis Report 09-06, DES-2014-U-009529-Final, 2009.
23. *MCWL RSTA Concept System (MRCS) Limited Technical Assessment*, J.H. Reynolds and R.H. Donnelly, MCWL Analysis Report, DES-2014-U-009532-Final, 2009
24. *BVs (Viking) Limited Technical Assessment: Quicklook Report*, R.H. Donnelly, MCWL Quicklook Report, 2008
25. *WASP Micro-Unmanned Aerial Vehicle (MAV) Block I Limited Technical Assessment*, R.H. Donnelly, MCWL Analysis Report, DES-2015-U-009572-Final, 2006
26. [C] *Exercise Report from UFL-07*, R.H. Donnelly, CNA Information Memorandum, D0016859.A1, 2007
27. [C] *Reconstruction and Analysis of USWEX 06-3*, B. McCue, J.E. Chilton, and R.H. Donnelly, CNA Research Memorandum, D0014733.A2, 2006
28. [C] *USWEX 06-2: Reconstruction and Analysis*, B. McCue & R.H. Donnelly, CNA Research Memorandum, D0014374.A2, 2006
29. *Characteristics of the on-orbit background of the Chandra X-ray Observatory high resolution camera*, M. Juda, R.H. Donnelly, K.T. Hole, A. Kenter, R. Kraft, S. Murray, D. Pease, C. Wilton, and M.V. Zombeck, in *Proceedings of the SPIE, X-ray and Gamma-ray telescopes and instruments for astronomy*, 4851, 2002.
30. *Orbital measurement and verification of the Chandra X-Ray Observatory's PSF*, D. Jerius, R.H. Donnelly, M.S. Tibbetts, R.J. Edgar, T.J. Gaetz, D.A. Schwartz, L.P. VanSpeybroeck and P. Zhao, in *Proceedings of the SPIE*, 4012, 2000.
31. *The absolute effective area of the Chandra high resolution mirror assembly (HRMA)*, D.A. Schwartz, L.P. David, R.H. Donnelly, R.J. Edgar, T.J. Gaetz, D.E. Graessle, D. Jerius, M. Juda, E. Kellogg, B.R. McNamara, R.P. Plucinsky, L.P. VanSpeybroeck, B. Wargelin, S. Wolk, P. Zhao, D. Dewey, H.L. Marshall, N.S. Schulz, R. Elsner, J.

- Kolodziejczak, S.L. O'Dell, D.A. Swartz, A. Tennant and M.C. Weisskopf, in *Proceedings of the SPIE*, 4012, 2000.
32. *In-flight performance and calibration of the Chandra High Resolution Camera Imager (HRC-I)*, A.T. Kenter, R.P. Kraft, G.R. Meehan, S.S. Murray, M.V. Zombeck, R.H. Donnelly, M. Juda, D. Patnaude, D. Pease, G.W. Fraser, J.F. Pearson, J.E. Lees, A.N. Brutton, M. Barbera, A. Collura, in *Proceedings of the SPIE*, 4012, 2000.
  33. *In-flight performance and calibration of the Chandra High Resolution Camera Spectroscopic readout (HRC-S)*, R.P. Kraft, A.T. Kenter, G.R. Meehan, S.S. Murray, M.V. Zombeck, R.H. Donnelly, M. Juda, D. Patnaude, D. Pease, G.W. Fraser, J.F. Pearson, J.E. Lees, A.N. Brutton, M. Barbera, A. Collura, in *Proceedings of the SPIE*, 4012, 2000.
  34. *HRC Calibration*, M. Zombeck and R. Hank Donnelly, *AXAF News*, 6, 1999.
  35. *XRCF Calibration: HRC*, R. Hank Donnelly, in *The AXAF Newsletter*, #5, 1997.
  36. *SubAssembly Calibration: HRC*, R. Hank Donnelly, in *The AXAF Newsletter*, #4, 1996.
  37. *Effective area of the AXAF high resolution camera (HRC)*, D. Patnaude, D. Pease, H. Donnelly, M. Juda, C. Jones, S. Murray, M. Zombeck, R. Kraft, A. Kenter, G. Meehan, R. Elsner, and D. Swartz, in *Proceedings of the SPIE*, 3444, 1998.
  38. *Efficiently mating fibers to spectrographs*, J.P. Brodie, R.H. Donnelly, H.W. Epps, M.V. Radovan, and W.W. Craig, in *Proceedings of the SPIE, Instrumentation in Astronomy VIII*, 2198. 1994.

#### ASTRONOMY & ASTROPHYSICS

1. *Chandra observations of the x-ray point source population in NGC 4636* J. Posson-Brown, S. Raychaudhury, W. Forman R.H. Donnelly, and C. Jones, *The Astrophysical Journal*, 695, 2009.
2. *UBVRI Light curves of 44 Type Ia supernovae*, S. Jha, et al., *Astronomical Journal*, 131, 2006.
3. *Merging Binary Clusters*, R.H. Donnelly, W. Forman, W. C. Jones, H. Quintana, A. Ramirez, E. Churazov and M. Gilfanov, *The Astrophysical Journal*, 562, 2001.
4. *Mass to Light Ratios in Groups and Clusters of Galaxies*, V. Hradecky, C. Jones, R.H. Donnelly, S.G. Djorgovski, R.R. Gal and S.C. Odewahn, *The Astrophysical Journal*, 543, 2000.
5. *CHANDRA Observation of Abell 2142: Survival of Dense Subcluster Cores in a Merger*, M. Markevitch, T.J. Ponman, P.E.J. Nulsen, M.W. Bautz, R.A. Cameron, L.P. David, R.H. Donnelly, W.R. Forman, C. Jones, J. Kaastra, E. Kellogg, D.-W. Kim, J. Kolodziejczak, P. Mazzota, A. Pagliaro, S. Patel, L. VanSpeybroeck, A. Vikhlinin, J. Vrtilik, M. Wise, and P. Zhao, *The Astrophysical Journal*, 541, 2000.
6. *CHANDRA X-ray detection of the Radio Hotspots of 3C295*, D.E. Harris, P.E.J. Nulsen, T.J. Ponman, M.W. Bautz, R.A. Cameron, L.P. David, R.H. Donnelly, W.R. Forman, L. Grego, M.J. Hardcastle, J.P. Henry, C. Jones, J.P. Leahy, M. Markevitch, A.R. Martel, B.R. McNamara, P. Mazzota, W. Tucker, S.N. Virani, and J. Vrtilik, *The Astrophysical Journal Letters*, 530, 2000.
7. *Reconstructing the Merger History of the A3266 Galaxy Cluster*, M. Henriksen, R.H. Donnelly and D. Davis, *The Astrophysical Journal*, 529, 2000.
8. *Structure in HCG62: CHANDRA Imaging and Spectroscopy of an X-ray Luminous Compact Group*, J.M. Vrtilik, L.P. David, L. Grego, D. Jerius, C. Jones, W. Forman, R.H. Donnelly and T. Ponman, in *Constructing the Universe with Clusters of Galaxies*, 2000.
9. *Filamentary Structures, Alignments and Cluster Formation*, W. Forman, M. Markevitch and R.H. Donnelly, in *Large Scale Structure in the X-Ray Universe*, 2000.
10. *Filamentary Structures, Alignments & Cluster Formation*, W. Forman, M. Markevitch and R.H. Donnelly, in *Large Scale Structure in the X-Ray Universe*, 2000.
11. *A Hot Spot In Coma*, R.H. Donnelly, M. Markevitch, W. Forman, C. Jones, E. Churazov and M. Gilfanov, *The Astrophysical Journal*, 513, 1999.
12. *Temperature Structure in Abell 1367*, R.H. Donnelly, M. Markevitch, W. Forman, C. Jones, L. David, E. Churazov and M. Gilfanov, *The Astrophysical Journal*, 500, 1998.

13. *The Effects of Large Scale Structure on Cluster Substructure and Cluster Temperature Distributions*, W. Forman, M. Markevitch, and H. Donnelly, in *Proceedings of the Moriond Astrophysics Meeting: Clusters of Galaxies*, 1998.
14. *The History of the Coma Cluster in X-rays*, C. Jones, H. Donnelly, W. Forman, M. Markevitch, A. Vikhlinin, E. Churazov, and M. Gilfanov, in *Proceedings of "Untangling Coma Berenices: A New Vision of an Old Cluster"*, 1998.
15. *The ROSAT PSPC Observations of A85 Cluster of Galaxies: The Baryonic and Dark Matter Distributions*, J. Nevalainen, W. Forman, C. Jones, O. Vilhu and R.H. Donnelly, in *Proceedings of the INTEGRAL workshop*, 1996.
16. *Luminosity Functions of Poor Galaxy Clusters*, R.H. Donnelly, in *Clusters of Galaxies, Proceedings of the XXIX Rencontre de Moriond, XIV Astrophysics Meeting*, 1994.
17. *The Properties of Local Poor Abell Clusters and Instrumentation for the Study of Clustered Objects*, R.H. Donnelly, *Ph.D. Thesis, University of California, Santa Cruz*, 1994.
18. *The correlation of X-Ray and optical luminosities of early-type galaxies*, R.H. Donnelly, S. M. Faber and R. M. O'Connell, *The Astrophysical Journal*, 354, 1990.
19. *6 Centimeter Radio Source Counts and Spectral Indices Down to 0.1 milli-Jansky*, R.H. Donnelly, R.B. Partridge, and R.A. Windhorst, *The Astrophysical Journal*, 321, 1987.

#### MISCELLANEOUS

1. *Status Report of Reach-back Support to OSD-CAPE Naval Forces Division*, R.H. Donnelly, *IDA Informal Memorandum 2020-27494*, 2020.
2. *IDA Fuel Logistics Smart Book*, E. Alster, J. Ayers, K. Conly, R. Cubeta, J. Dechant, R.H. Donnelly, M. Dozier, M. Fitzsimmons, P. Ghosh, J. Haroum, T. Heuring, P. Richanbach, J. Robertson, and T. Wallace, *IDA Informal Other 2020-26829*, 2020.
3. *Annual Summary of the Analyst Development Group*, R.H. Donnelly, *CNA Internal Report, DPR-2012-U-003158-Final*, 2012.
4. **[C]** *Future Rotorcraft Mission Roles and Responsibilities*, R.H. Donnelly, J. Phelps, K. Rawls, M-S. Wei, and F. O'Brimski, *CNA Annotated Brief, CAB D0025006.A2*, 2011.
5. *CNA Annual Plan Tool: User and Developer Instructions*, R.H. Donnelly, *CNA Information Memorandum, D0018223.A1*, 2008.
6. **[C]** *China S&T Scoping Study*, C.D. Yung, V. Foran-Cain, and R.H. Donnelly, *CNA Research Memorandum, D0013754.A2*, 2006.
7. *Ship Availability Decision Support Tool (SADST) System Requirements Document*, B.H. Behrens, R.H. Donnelly, and S.G. Dunn, *CNA Information Research Memorandum, D0016089.A1*, 2006.
8. **[C]** *Future Time-Critical Strike Assessment: Final Report*, B. Tripsas and R.H. Donnelly, *CNA Information Memorandum, D0013008.A2*, 2005.
9. **[C]** *Metrics Developed to Assess Carrier Strike Group Readiness for Key Information Operations (IO) Tactical Tasks*, S.C. Karppi & R.H. Donnelly, *CNA Research Memorandum, D0013188.A2*, 2005.