

# STEVEN B. HORTON

Las Vegas, NV

[sbhorton@smu.edu](mailto:sbhorton@smu.edu)

---

## Current

Brigadier General, US Army, retired

Professor Emeritus, United States Military Academy

Adjunct Professor, Cox School of Business, Southern Methodist University

Director, Mathematical Contest in Modeling (for COMAP)

## Education

- **B. S., United States Military Academy, 1982**—West Point, NY  
*Concentration in Mathematics*
- **M. S. O. R., Georgia Institute of Technology, 1991**—Atlanta, GA  
*Master's in Operations Research*
- **Ph. D., Georgia Institute of Technology, 1997**—Atlanta, GA  
*Industrial and Systems Engineering (Optimization program option)*
- **M. S., Industrial College of the Armed Forces, 2001**—Washington, DC  
*National Resource Strategy*

## Other Qualification

- **Top Secret - SCI Clearance**—from 1985 until retirement in 2018

## Academic Experience

- **SMU Cox School of Business**—Dallas, TX  
*Adjunct Professor of Marketing (remote) 2019 – present*
  - Teaches Analytics classes remotely in the SMU/Cox MBA program
  - Informal advisor to full time faculty to help them attract quality adjunct faculty
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Professor and Department Head May 2016–June 2018*
  - Responsible for academic, research, and leadership programs for a 68-member department that designs and teaches undergraduate courses to 4,000 cadets annually
  - Develops strategies, justifies funding, and manages over \$1,000,000 in grants and annual budgets
  - Demonstrates needs for donor funding, attracts and sustains relationships with potential donors
  - Attracts, recruits, and hires faculty and staff, and sets conditions for their success and satisfaction

- Oversees three research centers
- Serves as an important member of the Military Academy’s leader team through service on and leadership of important committees and boards
- **USMA Department of Mathematical Sciences—West Point, NY**  
*Professor and Acting Department Head Aug 2013–June 2015*
  - Responsible for academic, research, and leadership programs for a 68-member department that designs and teaches undergraduate courses to 4,000 cadets annually
  - Develops strategies, justifies funding, and manages over \$1,000,000 in grants and annual budgets
  - Demonstrates needs for donor funding, attracts and sustains relationships with potential donors
  - Attracts, recruits, and hires faculty and staff, and sets conditions for their success and satisfaction
  - Oversees three research centers
  - Serves as an important member of the Military Academy’s leader team through service on and leadership of important committees and boards
- **USMA Department of Mathematical Sciences—West Point, NY**  
*Professor and Deputy Department Head Oct 2008–Aug 2013 and June 2015–May 2016*
  - Responsible for academic, research, and leadership programs for a 68-member department that designs and teaches undergraduate courses to 4,000 cadets annually
  - Develops strategies, justifies funding, and manages over \$1,000,000 in grants and annual budgets
  - Demonstrates needs for donor funding, attracts and sustains relationships with potential donors
  - Attracts, recruits, and hires faculty and staff, and sets conditions for their success and satisfaction
  - Oversees three research centers
- **USMA Department of Mathematical Sciences—West Point, NY**  
*Professor and Acting Deputy Department Head Jul 2006–Oct 2008*
  - Responsible for academic, research, and leadership programs for a 68-member department that designs and teaches undergraduate courses to 4,000 cadets annually
  - Develops strategies, justifies funding, and manages over \$1,000,000 in grants and annual budgets
  - Demonstrates needs for donor funding, attracts and sustains relationships with potential donors
  - Attracts, recruits, and hires faculty and staff, and sets conditions for their success and satisfaction
  - Oversees three research centers
- **Naval Postgraduate School—Monterey, CA**  
*Sabbatical Jun 2005–Jul 2006*
  - Taught in the Department of Defense Analysis

- Research with Defense Analysis and Applied Mathematics faculty
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Associate Professor Jan 2004–Jun 2005*
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Associate Professor and Acting Deputy Department Head Dec 2002–Jan 2004*
  - Responsible for academic, research, and leadership programs for a 67-member department that designs and teaches undergraduate courses to 4,000 cadets annually.
  - Develops strategies, justifies funding, and manages over \$1,000,000 in grants and annual budgets.
  - Responsible for faculty and staff hiring
  - Oversees three research centers.
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Assistant and Associate Professor and Program Director for Probability and Statistics Jul 1997–Jun 2000 and Jul 2001–Dec 2002*
  - Responsible for academic and leadership programs for 20 faculty teaching the core probability and statistics course to 1000 cadets annually.
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Assistant Professor Jul 1992–Jul 1994*
- **USMA Department of Mathematical Sciences**—West Point, NY  
*Instructor Jul 1991–Jul 1992*

## Academic Ranks Earned

Adjunct Professor of Marketing, Southern Methodist University, 2019  
 Professor Emeritus, United States Military Academy 2018  
 Professor, United States Military Academy 2008  
 Full Professor (Professor of Operations Research) 2006  
 Associate Professor 1999  
 Assistant Professor 1993  
 Instructor 1991

## Field Army Experience

- **4th Engineer Battalion (Combat), 4th Infantry Division**—Fort Carson, CO  
*Company Commander, Battalion Adjutant, 1986–1989*
  - Company Commander of E Company, responsible for all activities of a 126 man assault float bridge Engineer company
  - Battalion Adjutant, responsible for all personnel matters for a 904 man divisional combat engineer battalion
- **US Army Field Station Sinop**—Sinop, Republic of Turkey  
*Deputy Director of Engineering and Housing, 1985–1986*

- Construction planning and management with a multi-million dollar annual budget
- Facilities maintenance and maintenance planning
- Daily engineering operations including electrical power, water, sewer, etc.
- Host nation coordination and engineering support
- **92nd Engineer Battaion (Combat Heavy)**—Fort Stewart, GA  
*Platoon Leader, 1982–1984*
  - Platoon Leader of 1st Platoon, C Company, 92nd Engineer Battalion, responsible for all activities of a 33 man Combat Heavy Engineer platoon

## Military Education

Industrial College of the Armed Forces (M.S.) 2001 (Honor Graduate)

Command and General Staff College (constructive credit) 1995

Combined Armed Services Staff School 1989

Engineer Officer Advanced Course 1986

Engineer Office Basic Course 1982

## Courses Taught

Analytics 2 (ITOM6274) (at SMU)

Analytics 1 (MAST6474) (at SMU)

Mathematical Modeling for Special Operations (at NPS)

Discrete Dynamical Systems (MA103)

Univariate Calculus and DEs (MA104)

Differential Calculus (MA114)

Advanced Multivariable Calculus (MA153)

Multivariable Calculus (MA205)

Probability and Statistics (MA206)

Discrete Mathematics (MA372)

Applied Statistics (MA376)

Nonlinear Optimization (MA381)

Graph Theory and Networks (MA461)

Applied Combinatorics (MA462)

Mathematical Statistics (MA476)

Linear Optimization (MA481)

Graph Theory and Combinatorics (MA489)

Advanced Individual Study in Graph Theory (MA489)

## Student Research Projects Directed

- Cadet Senior Honors Thesis (co-advised with Bill Pulleyblank) – Optimal Linear Arrangements in Graphs (2015-2016) - Marshall Scholar winner

- Cadet Senior Honors Thesis (co-advised with Chris Arney) – Cyber Operations through Mission Command: Using Network Analysis to develop Contingent Command and Control Strategies for Tactical Communication during the Information Age (2013-2014)
- Cadet Senior Honors Thesis – Mathematics and Music (2011-2012)
- Cadet Senior Honors Thesis – Alliances in Graphs (2006-2007)
- Master’s Thesis at NPS (second reader) - Modeling Toolkit and Workbook for Defense Analysis Students (2006 - Riden and Drake)
- Cadet Senior Thesis - The USMA Branching Problem (2005) - Hollis Award Winner
- Cadet Senior Thesis - Alliances in Graphs (2004)
- Cadet Senior Thesis - Value of Information (2003)
- Cadet Senior Thesis - Land Warrior Power Management (2002)
- Cadet Senior Thesis - Fair Assessment in Physical Testing (2002)
- Cadet Senior Thesis - Mathematics and Music (2002)
- Cadet Senior Thesis - Statistical Analysis of Ice Dam Effectiveness (2000)
- Project Director for French Exchange Students’ (St. Cyr) Senior Thesis - Problems and Solutions on Series-Parallel Graphs (1999)
- Cadet Senior Thesis - Algorithms for Recursively Constructed Graph Classes (1998)
- Cadet Capstone Project - PT Test Data Analysis (1998)
- Independent Research in Graph Theory - Recursively Constructed Graphs (1994)
- Independent Research in Graph Theory - Counting Maximum Matchings (1994)

## Grants Awarded

- **Network Structure—2009-2011**
  - Network Science grant funded through the Army Research Office to investigate the mathematical nature of social networks – \$ 160,000
- **Dynamic Domination in Graphs—2007**
  - Funded by the estate of General of the Army Omar N. Bradley for mathematical research performed by an active duty soldier – \$ 2000
- **Efficient Algorithms for Problems Modeled by Graphs—2005**
  - Funded by the Dean’s Faculty Development and Research Fund to collaborate with Professor Steve Hedetniemi at Clemson University; joint work with Professor Jean Blair from USMA’s Electrical Engineering and Computer Science Department – \$ 3800
- **Efficient Algorithms for Problems Modeled by Graphs—2004**
  - Funded by the Dean’s Faculty Development and Research Fund to collaborate with Professor Steve Hedetniemi at Clemson University; joint work with Professor Jean Blair from USMA’s Electrical Engineering and Computer Science Department – \$ 3300
- **Efficient Algorithms for Problems Modeled by Graphs—2003**
  - Funded by the Dean’s Faculty Development and Research Fund to collaborate with Professor Steve Hedetniemi at Clemson University; joint work with Professor Jean Blair from USMA’s Electrical Engineering and Computer Science Department – \$ 2800

- **Automated Detection and Control of Soldier Power Management**—2001-2003
  - Funded by the US Army PM Soldier; joint work with USMA Professors Darrall Massie and Margaret Bailey from Civil and Mechanical Engineering, Larry Shattuck from Behavioral Sciences and Leadership, and Todd Crowder from the Department of Physical Education – \$ 30,000 over 3 years.
- **The Optimal Linear Arrangement Problem**—2002
  - Funded by the Dean’s Faculty Development and Research Fund to collaborate with Professor R. Gary Parker, Georgia Institute of Technology – \$ 750.
- **On the Complexity of Certain Completion Problems**—2000
  - Funded by the Dean’s Faculty Development and Research Fund to collaborate with Professor R. Gary Parker, Georgia Institute of Technology – \$ 1000.

## Journal Refereeing

- Journal of Defense Modeling and Simulation
- Science
- Australasian Journal of Combinatorics
- ARS Combinatorica
- Discrete Applied Mathematics
- Discrete Mathematics
- Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS)
- INFORMS Transactions on Education
- Conference Proceedings for ITNG 2007 (4th International Conference on Information Technology)

## Refereed Publications

1. STEVEN B. HORTON, *Results of the 2021 Mathematical Contest in Modeling*, UMAP Journal Vol. 42, No. 4 (2021), pp. 369-392.
2. J. BELL, D. CUMMINS, S. HORTON, W. PULLEYBLANK, *Oriented Graceful Labelings of Trees*, Congressus Numerantium 228 (2017), pp. 223-243.
3. B. D. WILKINS, J. GREENBERG, B. REDMOND, A. BAILY, N. FLOWERDAY, A. KRATCH, T. V. HROMADKA II, R. BOUCHER, H. D. MCINVALE, S. HORTON, *An Unsteady Two-Dimensional Complex Variable Boundary Element Method*, Appl. Math. Vol. 8 No. 6 (2017), doi: 10.4236/am.2017.86069
4. P. RAO, T. V. HROMADKA II, C. HUXLEY, D. SOUDERS, N. JORDAN, C. C. YEN, E. BRISTOW, C. BIERING, S. HORTON, B. ESPINOSA, *Assessment of Computer Modeling Accuracy in Floodplain Hydraulics*, International Journal of Modelling and Simulation (TJMS), Vol. 37, No. 2, (2017), pp. 88-95, doi: 10.1080/02286203.2016.1261218.
5. A. N. JOHNSON, T. V. HROMADKA, M. T. HUGHES, AND S. B. HORTON, *Modeling Mixed Boundary Problems with the Complex Variable Boundary Element Method (CVBEM) using Matlab and Mathematica*, International Journal of Computational Methods and Experimental Measurements, Vol. 3, No. 3, (2015), pp. 269-278.

6. A. JOHNSON, T. V. HROMADKA, M. CARROLL, M. HUGHES, L. JONES, N. PAPPAS, C. THOMASY, S. HORTON, R. J. WHITLEY, M. JOHNSON, *A Computational Approach to Determining CVBEM Approximate Boundries*, *Engineering Analysis with Boundary Elements* 41 (2014), pp. 83-89.
7. S. SMITH, R. BAXTER, J. MENGES, T. V. HROMADKA, S. HORTON, *Real Time Boundary Element Node Location Optimization*, *Engineering Analysis with Boundary Elements* (2012), 36, pp. 1049-1052, doi:10.1016/j.enganabound.2011.11.020.
8. J. R. S. BLAIR, R. GERA, S. HORTON, *Movable Dominating Sensor Sets in Networks*, *Journal of Combinatorial Mathematics and Combinatorial Computing*, 77 (2011), pp. 103-123.
9. T. V. HROMADKA, R. J. WHITLEY, S. B. HORTON, *Approximate Solutions to the Dirichlet Problem in  $R^n$  Using One Analytic Function*, *Numerical Methods for Partial Differential Equations*, vol. 26, issue 6 (2010), pp. 1636-1641.
10. T. V. HROMADKA, R. J. WHITLEY, S. B. HORTON, M. J. SMITH, J. M. LINDQUIST, *Generous Statistical Tests*, *Stochastic Environmental Research and Risk Assessment*, 23 (2009), pp. 9-12.
11. J. R. S. BLAIR, W. GODDARD, S. HEDETNIEMI, S. B. HORTON, P. JONES, G. KUBICKI, *On Domination and Reinforcement Numbers in Trees*, *Discrete Math*, 308 (2007), pp. 1165-1175.
12. G. MCCORMICK, S. HORTON, AND L. HARRISON, *Things fall apart: the "end game" dynamics of internal wars*, *Third World Quarterly*, 28 (2007), pp. 321-367.
13. M. HUBER AND S. HORTON, *How Ken Griffey is like Kevin Bacon or, degrees of separation in baseball*, *J. Recreational Mathematics*, 33 (2006), pp. 194-203.
14. R. GERA, C. RASMUSSEN, AND S. HORTON, *Dominator colorings and safe clique partitions*, *Congressus Numerantium*, 181 (2006), pp. 19-32.
15. R. GERA, C. RASMUSSEN, P. STÄNICĂ, AND S. HORTON, *Results on the min-sum vertex cover problem*, *Congressus Numerantium*, 178 (2006), pp. 161-172.
16. J. R. S. BLAIR, W. GODDARD, S. HEDETNIEMI, S. HEDETNIEMI, AND S. B. HORTON, *Domination equivalence in graphs*, *AKCE J. Graphs. Combin.*, 2 (2005), pp. 123-136.
17. J. R. S. BLAIR AND S. HORTON, *Broadcast covers in graphs*, *Congressus Numerantium*, 173 (2005), pp. 109-115.
18. S. HORTON, *On some problems related to dominating set*, *Graph Theory Notes of New York*, 48 (2005), pp. 29-32.
19. J. R. S. BLAIR, P. HEGGERNES, S. B. HORTON, AND F. MANNE, *Broadcast domination algorithms for interval graphs, series-parallel graphs, and trees*, *Congressus Numerantium*, 169 (2004), pp. 55-77.
20. S. HORTON, T. EASTON, AND R. PARKER, *The linear arrangement problem on recursively constructed graphs*, *Journal of Networks*, 42 (2003), pp. 165-168.
21. S. HORTON, W. JERZAK, A. NAPOLI, AND N. PRINS, *A math, science, and technology interdisciplinary lively application of mathematics at the United States Military Academy*, *Primus*, 10 (2000), pp. 42-52.

22. S. B. HORTON, R. G. PARKER, AND R. B. BORIE, *On minimum cuts and the linear arrangement problem*, *Disc. Appl. Math.*, 103 (2000), pp. 127–139.
23. S. HORTON, T. EASTON, AND R. PARKER, *On the complexity of certain completion problems*, *Congressus Numerantium*, 145 (2000), pp. 9–31.
24. T. EASTON, S. HORTON, AND R. PARKER, *A solvable case of the optimal linear arrangement problem on Halin graphs*, *Congressus Numerantium*, 119 (1996), pp. 3–17.
25. S. HORTON AND R. PARKER, *On Halin subgraphs and supergraphs*, *Discrete Applied Mathematics*, 56 (1995), pp. 19–35.
26. W. P. FOX AND S. HORTON, *A “7 into 4” carry-through problem*, *Primus*, 5 (1995), pp. 163–177.
27. R. BORIE, S. HORTON, AND R. PARKER, *On some results pertaining to Halin graphs*, *Congressus Numerantium*, 89 (1993), pp. 65–87.

## Books and Book Chapters

1. FRANK R. GIORDANO, WILLIAM P. FOX, STEVEN B. HORTON, *A First Course in Mathematical Modeling*, Brooks-Cole, 5th Edition, 2014.
2. D. C. ARNEY, S. B. HORTON, *Network Science for Graph Theorists*, chapter in *Handbook of Graph Theory*, CRC Press, 2nd Edition, 2013.
3. FRANK R. GIORDANO, WILLIAM P. FOX, STEVEN B. HORTON, MAURICE D. WEIR, *A First Course in Mathematical Modeling*, Brooks-Cole, 4th Edition, 2009.

## Other Publications

1. S. B. HORTON, C. N. MENESES, A. MUKHERJEE, AND M. E. ULUÇAKLI, *A computational study of the broadcast domination problem*, Tech. Report DIMACS 2004-45, DIMACS, 2004.
2. J. R. S. BLAIR, P. HEGGERNES, S. B. HORTON, AND F. MANNE, *Broadcast domination algorithms for interval graphs, series-parallel graphs, and trees*, tech. report, University of Bergen, 2003.
3. S. B. HORTON, D. DAY, A. NAPOLI, B. BARRACLOUGH, G. HANSLER, AND J. SAMEK, *Analyzing the safety of a dam*, in *Changing Core Mathematics*, D. C. Arney and D. Small, eds., Mathematical Association of America, 2002, pp. 179 – 181.
4. S. B. HORTON, *An interdisciplinary project at USMA*, *Mathematica Militaris*, 9 (1999), pp. 5–6.
5. J. APPEGET AND S. HORTON, *Military applications of network flows*, in *Military Mathematical Modeling*, D. Arney, ed., Defense Automated Printing Services, West Point, NY, 1998, pp. 141–150.
6. W. FOX AND S. HORTON, *Military applications of reliability*, in *Military Mathematical Modeling*, D. Arney, ed., Defense Automated Printing Services, West Point, NY, 1998, pp. 153–168.
7. S. B. HORTON, *Student growth assessment at USMA*, *Mathematica Militaris*, 8 (1998), pp. 6–7.
8. ———, *The Optimal Linear Arrangement Problem: Algorithms and Approximation*, PhD thesis, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, 1997.



9. ———, *Graph Approximation: Issues and Complexity*, MS thesis, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, 1991.

## Invited Talks

1. W. PULLEYBLANK AND S. HORTON, *Optimal Linear Arrangements and graceful labelings of graphs*. My Favorite Conjectures session at the Joint Math Meetings, Baltimore, MD, January 2014.
2. M. BARDZELL, R. CAMPBELL, S. HORTON, G. LILLY, D. STOLEE, *What Experiences Matter on your Resume?* Panel session at the Joint Math Meetings, Baltimore, MD, January 2014.
3. E. THORNBURG, W. PULLEYBLANK, AND S. HORTON, *Packing Steiner Trees in Channels*. Gehman Lecture given at MAA Seaway Section meeting, Hamilton College, Clinton, NY, April 2012.
4. S. HORTON, *Math, Science, and Engineering for Counterterrorism and Counterinsurgency at West Point*. American Association for the Advancement of Science annual meeting, San Diego, CA, 2010.
5. S. HORTON, *Network Science at USMA*. Fifth annual Mathematical Methods in Counterterrorism Conference, Washington, D.C., 2009.
6. S. HORTON, *Generating Small World Graphs using Mathematica*. USMA Network Science Workshop, West Point, NY, 2007.
7. S. B. HORTON, J. R. S. BLAIR, AND R. GERA, *Dynamic domination in graphs*. Mathfest, San Jose, CA, 2007.
8. S. B. HORTON, J. R. S. BLAIR, AND R. GERA, *Dynamic domination in graphs*. AMS Eastern Section Meeting at Stevens Institute of Technology, Hoboken, NJ, 2007.
9. S. HORTON AND R. STURDIVANT, *Discrete dynamical systems and problem solving*. Minicourse given at the Joint Mathematics Meetings, San Antonio, TX, 2006.
10. S. HORTON, *Some problems related to dominating set*. Graduate seminar in IEOR, University of California at Berkeley, 2005.
11. ———, *A graph theory primer*. Three day graph theory seminar conducted for officials at the Army Research Office in Research Triangle Park, North Carolina, 2005.
12. S. B. HORTON, *Some problems related to domination in graphs*. Invited talk at Graph Theory Day Forty Eight, Mount Saint Mary College, Newburgh, NY, 2004.
13. A. DURFEE, S. HORTON, R. PECK, AND A. ROSSMAN, *Integrating statistics/data analysis through the core curriculum*. Panel Discussion at the Joint Mathematics Meetings, San Diego, CA, 2002.
14. S. HORTON, R. PARKER, AND R. BORIE, *On cuts of bounded order and the linear arrangement problem*. Invited talk at INFORMS meeting, Philadelphia, PA, 1999.

## Contributed Talks

1. J. BELL, D. CUMMINS, S. HORTON, W. PULLEYBLANK, *Oriented Graceful Labelings of Trees*. 48th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, FL, 2017.
2. H. D. MCINVALE, T. V. HROMADKA II, S. B. HORTON, *Cumulative Departure Model of the Cryosphere During the Pleistocene – an Application in Computational Engineering Mathematics*, Association Of Environmental and Engineering Geologists, Annual Meeting, Kona, Hawaii, 2016.
3. A. N. JOHNSON, T. V. HROMADKA, AND S. B. HORTON, *The Complex Variable Boundary Element Methods (CVBEM) for Mixed Boundaries*. Joint Mathematics Meetings, San Antonio, TX, 2015.
4. J. R. S. BLAIR AND S. B. HORTON, *Edge Discovery in a Large Social Network*. International Network for Social Network Analysis Annual Conference (Sunbelt), Fort Lauderdale, FL, 2011.
5. J. R. S. BLAIR AND S. B. HORTON, *Edge Discovery in a Large Social Network*. Joint Mathematics Meetings, New Orleans, LA, 2011.
6. J. R. S. BLAIR AND S. B. HORTON, *Edge Discovery in a Large Social Network*. 5th Annual Network Science Workshop, United States Military Academy, West Point, NY, 2010.
7. J. R. S. BLAIR AND S. B. HORTON, *Broadcast covers in graphs*. 36th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, FL, 2005.
8. J. R. S. BLAIR, P. HEGGERNES, S. B. HORTON, AND F. MANNE, *Broadcast domination algorithms for interval graphs, series-parallel graphs, and trees*. 35th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, FL, 2004.
9. G. KRAHN, M. HUBER, S. HORTON, M. PHILLIPS, J. MYERS, A. GLEN, AND B. MELENDEZ, *The continuous evolution of core mathematics*. Presentation at the New York Project Kaleidoscope Assembly for Shaping General Education Programs Focused on Scientific and Quantitative Literacy, New York, NY, 2003.
10. J. A. PICCIUTO AND S. B. HORTON, *Projects in a probability and statistics course at West Point*. Joint Mathematics Meetings, Baltimore, MD, 2003.
11. J. BLAIR AND S. HORTON, *Problems related to dominating sets in graphs*. Center for Faculty Development, Department of Mathematical Sciences, West Point, NY, 2003.
12. D. HUGHES-HALLETT, S. HORTON, A. ROSSMAN, K. SOMERS, AND R. STARBUCK, *The role of undergraduate mathematics for statistics and vice-versa*. Panel Discussion at the Joint Statistics Meeting, New York City, 2002.
13. D. ARNEY AND S. HORTON, *On the value of information*. 69th Military Operations Research Society Symposium, United States Naval Academy, Annapolis, MD, 2001.
14. S. HORTON, *Computational complexity for dummies*. Center for Faculty Development, Department of Mathematical Sciences, West Point, NY, 2001.

15. S. HORTON AND D. DAY, *Teaching statistical reasoning at West Point*. Joint Mathematics Meetings, Washington, D.C., 2000.
16. D. ARNEY, J. MYERS, R. MARCHAND, S. HORTON, E. BERKOVE, M. VANESKO, AND J. SCHARF, *A guided tour of project intermath application projects*. Joint Mathematics Meetings, Washington, D.C., 2000.
17. P. BEAVER AND S. HORTON, *A linear model to support the United States Army Southern Command's strategic planning process*. 68th Military Operations Research Society Symposium, United States Air Force Academy, Colorado Springs, CO, 2000.
18. ———, *On the complexity of certain completion problems*. 31st Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Florida Atlantic University, Boca Raton, FL, 2000.
19. G. KRAHN AND S. HORTON, *Knowledge and reasoning – what is the relation?* Joint Mathematics Meetings, Washington, D.C., 2000.
20. S. HORTON, A. NAPOLI, AND D. DAY, *Math, science, and technology interdisciplinary lively applications of mathematics*. Educating Army Leaders, West Point, NY, 1999.
21. S. HORTON, A. NAPOLI, W. JERZAK, AND E. BERKOVE, *A math, science, and technology interdisciplinary lively application of mathematics at the United States Military Academy*. Joint Mathematics Meetings, San Antonio, TX, 1999.
22. S. HORTON, W. FOX, G. KRAHN, AND W. WILHELM, *Digitization for the Army After Next*. 66th Military Operations Research Society Symposium, Naval Postgraduate School, Monterey, CA, 1998.
23. G. KRAHN, K. SNOOK, D. DAUGHTRY, S. HORTON, AND W. FOX, *Math, methods, and models*. Teaching That Leads to Learning: A Celebration of Teaching Strategies That Work, West Point, NY, 1997.
24. S. HORTON, T. EASTON, AND R. PARKER, *A solvable case of the optimal linear arrangement problem on Halin graphs*. 27th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Baton Rouge, LA, 1996.
25. S. HORTON AND R. PARKER, *On some results pertaining to Halin graphs*. 23rd Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL, 1992.

## Other Contributions

- **Committee Work—**

- USMA Faculty Credentials and Promotions Committee (2006-2016, Chair 2010-2016)
- NCAA Faculty Athletic Representative for West Point (2016-2018)
- Patriot League (athletic) Policy Committee Representative for West Point (2016-2018)
- Dean's Transition Team Co-Chair (2016)
- USMA Strategic Plan Faculty and Staff Excellence Goal Team Chair (2014)

- Curriculum Revision Working Group member and Course-of-Action Evaluation Team Chair (2014)
- Academic Board member (2013-2015 and 2016-2018)
- General Committee member (2013-2015 and 2016-2018)
- Math, Science, and Engineering (MSE) Committee member (2013-2015 and 2016-2018)
- Dean’s Transition Team member (2010)
- USMA Faculty Manual Committee (2009-2010)
- Middle States Self-Study, Faculty Working Group (2008-2009)
- USMA Admissions Committee: alternate member (2006-2013), primary Executive Committee member (2014-2018)
- Supervise all department civilian faculty searches since 2006
- Oversee all department junior and second tour military faculty searches since 2006
- Senior military faculty section committees
  - \* Department of Mathematical Sciences (2016)
  - \* Department of Systems Engineering (2016) (Committee Chair)
  - \* Department of Mathematical Sciences (for Deputy Head – 2015)
  - \* Department of Mathematical Sciences (2013)
  - \* Department of Systems Engineering (for Deputy Head – 2013) (Committee Chair)
  - \* Department of Mathematical Sciences (2012)
  - \* Department of Physics (for Deputy Head – 2007)
  - \* Department of Chemistry (2004)
  - \* Department of Electrical Engineering and Computer Science (2001)
- Member of Dean’s Faculty Development and Research Fund funding allocation committee (2004-2005)
- Member of the USMA Curriculum Committee (2001-2003)
- Served on the Hollis Award Committee to select the best cadet operations research project at USMA (1998-2000 and 2002 as committee chairman)
- Member of the Dean’s Math, Science, and Technology goal team (1999-2000)

• **Volunteer Activities—**

- Officer-in-Charge for the Cadet Spirit Band (2014 - 2016)
- Head Officer Representative to the Army Men’s Intercollegiate Basketball Team (2003 - 2004 and 2006 - 2010)
- Assistant Officer Representative to the Men’s Basketball Team (1992 - 1994 and 1997 - 2003)
- Community Volunteer (craps dealer and pit boss), West Point Women’s Club Casino Night (1998 - 2018)
- Volunteer math teacher at Bishop Ireton High School in Alexandria, VA (2000-2001)
- Volunteer math teacher and tutor at Marshall Elementary School in Seaside, CA (2006)
- Volunteer math teacher at West Point Elementary School (2006-2007)

• **Service to the National Mathematics and Operations Research Communities—**

- Director of the Mathematical Contest in Modeling (MCM) for COMAP (2020 - present)
- Member of the Curriculum Review Team for the Naval Postgraduate School's Math Department (2014)
- External Review Committee Member for the Naval Postgraduate School's Math Department (2010)
- Contributor to the USMA Network Science Center (2010-2018)
- Lead organizer for Graph Theory Day 52 (2006)
- Contest judge for COMAP's Mathematical Competition in Modeling (MCM) (most years 2002 - present)
- Contest judge for COMAP's High School Mathematical Competition in Modeling (HiMCM) (2007 - 2012 and 2018 - present)
- Member of the COMAP Subcommittee of the INFORMS Education Committee (2001 - 2003)
- Deputy Site Coordinator for the 67th Military Operations Research Society Symposium (1999)

• **Other Professional Development—**

- Attended the DIMACS Reconnect workshop on experimental algorithmics conducted at Lafayette College (2004)
- Attended the 2003 Project Kaleidoscope Assembly: Shaping General Education Programs Focused on Scientific and Quantitative Literacy at NYU
- Invited participant at the Mathematical Association of America's Committee on the Undergraduate Program in Mathematics (CUPM) Calculus Reform and the First Two Years (CRAFTY) subcommittee's workshop on Statistics conducted at Grinnell College (2000)
- Deputy Site Coordinator for the 67th Military Operations Research Society Symposium held at West Point (1999)
- Attended the MAA PREP workshop on teaching discrete mathematics conducted at Valparaiso University (2003)
- Participant at the CUPM Curriculum Foundations Conference (2001)

## Hobbies – what I do for fun

• **Musician—**

- Lead Guitar and Saxophone – Blues, Classic Rock, Big Band Jazz/Swing
- Founding member of the "Math Band" which performs (for free) at community events
- several guest appearances at Trophy Point and other venues as a guitarist with the USMA Band's country music group (2014 - 2018)
- Member (as a saxophone player) of the Vegas Valley Legacy Big Band (2019 - 2020)

• **Duplicate Bridge—**

- American Contract Bridge League Bronze Life Master
- Winner – with my wife Julie as partner – of the 199er pairs at the 1995 North American Bridge Championships
- Active player at Las Vegas Bridge World and at local tournaments