Elisa Heymann

University of Wisconsin-Madison elisa@cs.wisc.edu
Computer Sciences Department
Madison WI

Professional Preparation
Ph.D. in Computer Science, 2001. University Autonoma de Barcelona.

Appointments
7/2016-present: Senior Scientist. University of Wisconsin-Madison. Research and teaching in software security, and cybersecurity of maritime freight shipping. In-depth software vulnerability assessments.
9/2002–present: Associate Professor, Computer Architecture and Operating Systems Department, Universitat Autònoma de Barcelona, Spain. Research and teaching in distributed systems, software security, operating systems, parallel programming, project management, and related areas. In-depth software vulnerability assessments.
7/2014-8/2015: Visiting Associate Professor, University of Wisconsin-Madison.
6/2013–8/2013: Visiting Associate Scientist, University of Wisconsin-Madison.
6/2012–8/2012: Visiting Associate Scientist, University of Wisconsin-Madison.
6/2011–8/2011: Visiting Associate Scientist, University of Wisconsin-Madison.
1/2010–8/2010: Visiting Associate Scientist, University of Wisconsin-Madison. Sabbatical.
6/2007–8/2007: Visiting Associate Scientist, University of Wisconsin-Madison.
6/2004–8/2004: Visiting Associate Scientist, University of Wisconsin-Madison.
9/1992–8/2002: Assistant Professor, Computer Architecture and Operating Systems Department, Universitat Autònoma de Barcelona, Spain.

Industrial Positions

01/1992–08/1992: Research Staff, Fundación Instituto de Ingeniería, Caracas, Venezuela.

COURSES TAUGHT

Introduction to Software Security (at the University of Wisconsin-Madison).
Secure Programing Techniques (at the University of Wisconsin-Madison).
Distributed Systems, graduate level.
Distributed Systems, undergrad.
Operating Systems, undergrad.
Project Management, undergrad.
Engineering Principles.
Undergraduate Projects.
Master Projects.

CURRENT AND RECENT RESEARCH GRANTS

Senior Personnel, Welch (Indiana), Basney (NCSA), Marsteller (PSC), Miller (UW-Madison), Trusted CI, The NSF

Cybersecurity Center of Excellence, NSF, January 2020 – December 2024, $12.5 million ($1.5 million UW).

Senior Personnel, Welch (Indiana), Basney (NCSA), Butler (NCSA), Koranda (UW-Milwaukee), Marsteller (PSC), Miller, NSF Cyber Center of Excellence: Center for Trustworthy Scientific Cyberinfrastructure, NSF SDCI, January 2016 - December 2019, $4.3 million ($540,000 UW).

Senior Scientist, Computación Avanzada, Simulación y Seguridad, ante el Reto de las Aplicaciones Sociales (TIN2017-84875-P) Spanish Ministry of Economy and Competitiveness (MINECO), January 2018–December 2020 (Euros 175,450).

Senior Scientist, *Efficient and Secure Computing for Simulation and Optimization of Social Applications* (CANOPUS - TIN2014-53172-P) Spanish Ministry of Economy and Competitiveness (MINECO), 2015–2017 (Euros 123,541).

Senior Personnel (at the University of Wisconsin), Welch (Indiana), Basney (NCSA), Butler (NCSA), Koranda (UW-Milwaukee), McGee (RENCI), Hinrichs (UIUC), Marsteller (PSC), Miller (University of Wisconsin), "*Center for Trustworthy Scientific Cyberinfrastructure*, NSF SDCI, September 2012 - September 2015, $4.3 million ($540,000 UW).

Principal Investigator, Heymann (Universitat Autònoma de Barcelona), Miller, Rubin (Microsoft, Haifa), *Center for Secure Software*. NATO grant, January 2011 - December 2013 (Euros 30,000).

Principal Investigator UAB, *NGI-InSPIRE,* Commission of the European Communities, March 2010 – March 2014, (Euros 82,478 Universitat Autònoma de Barcelona).

Senior Scientist, *High Performance Computing: Research, Technology, and Applications*, Spanish Ministry of Science and Technology, 2012 – 2014. (Euros 254,705).

Principal Investigator UAB, *European Middleware Initiative (EMI),* Commission of the European Communities, March 2010 – March 2012, budget included in the NGI-InSPIRE.

Principal Investigator, Heymann (Universitat Autònoma de Barcelona), Miller, Tel-Zur (University of Ben-Gurión, Israel). *GridVAC: Grid Vulnerability Assessment Center*. NATO grant, November 2007- November 2009 (Euros 32,000).

Senior Scientist, *Int.Eu.Grid: Interactive European Grid.* Commission of the European Communities, 2006–2008, (Euros 157,111 Universitat Autònoma de Barcelona).

Principal Investigator, *Teaching Innovation,* Universidad Autónoma de Barcelona, 2006 – 2007. (Euros 6,000).

Junior Scientist, *CROSSGRID: Development of a Grid Environment for Interactive Applications.* Commission of the European Communities, 2002 – 2005, (Euros 351.000 Universitat Autònoma de Barcelona). Participating entities: CYFRONET (Poland), ICM (Poland), UVA (Holland), FZK (Germany), PSNC (Poland), CSIC, INS (Poland), SAS (Slovakia), TUM (Germany), UCY (Cyprus), Datamat (Italy), Trinity College (Ireland), USDC (Spain), Demokitos (Greece), LIP (Portugal), Algosystems (Greece), UAB (Spain). (Euros 175,388).

PhD Student, *Adaptive and Efficient Parallel Computing on Networks of Distributively Owned Workstations.* Fulbright Commision of Cultural, Educative and Scientific Exchange between Spain and the USA, June 1999 – May 2000. (3.200.000 Pesetas.)

Senior Scientist, *High Performance Computing applied to Computational Science*, Spanish Ministry of Science and Technology, 2007 – 2012.

Senior Scientist, *High Performance Computing: Architecture, Environments, and Applications*, Spanish Ministry of Science and Technology, 2004 – 2007.

Senior Scientist, *Tematic Network for Coordinating Grid Middleware Activities*, Spanish Ministry of Science and Technology, 2004 – 2006.

Senior Scientist, *Complementary Funding to an EU project: CROSSGRID: Development of Grid Environment for Interactive Applications*, Spanish Ministry of Science and Technology, 2003 – 2004.

Senior Scientist, *Parallel and Distributed Processing: from the Specification and Tuning of Applications to the*

Architecture, Spanish Ministry of Science and Technology, 2002 – 2004. (459.000 Euros.)

Senior Scientist, *Parallel and Distributed Processing: from the Specification and Tuning of Applications to the Architecture Parallel Processing: Architecture, Programming and Applications*, Spanish Ministry of Science and Technology, 1998 – 2001. (31,140,000 Pesetas equivalent to Euro187,155)

PUBLICATIONS

1. B. Miller, M. Zhang, E. Heymann, "The Relevance of Classic Fuzz Testing: Have We Solved This One?" in IEEE Transactions on Software Engineering, doi: https://doi.org/10.1109/TSE.2020.3047766
2. A. Wong, E. Heymann, D. Rexachs and E. Luque, "Middleware to Manage Fault Tolerance Using Semi-Coordinated Checkpoints," in IEEE Transactions on Parallel and Distributed Systems, vol. 32, issue 2, pp. 254-268, February 2021, doi: https://doi.org/10.1109/TPDS.2020.3015615.
3. J. O. Eichenhofer, E. Heymann, B. P. Miller and A. Kang, "An In-Depth Security Assessment of Maritime Container Terminal Software Systems," in IEEE Access, vol. 8, pp. 128050-128067, 2020, doi: https://doi.org/10.1109/ACCESS.2020.3008395.
4. Andrew Adams, Kay Avila, Jim Basney, Dana Brunson, Robert Cowles, Jeannette Dopheide, Terry Fleury, Elisa Heymann, Florence Hudson, Craig Jackson, Ryan Kiser, Mark Krenz, Jim Marsteller, Barton P. Miller, Sean Piesert, Scott Russell, Susan Sons, Von Welch and John Zage. "Trusted CI Experiences in Cybersecurity and Service to Open Science". Proceedings of PEARC'19: Practice and Experience in Advanced Research Computing, pp 1-8, 2019. https://doi.org/10.1145/3332186.3340601
5. J.O. Eichenhofer, E.R. Heymann, B.P. Miller and K W. (Arnold) Kang, "Securing Maritime Software Systems: Academia and Industry Working Together", Port Technology International, Edition 80: Winter 2018.
6. Joseph O. Eichenhofer, Elisa Heymann and Barton P. Miller, "In-Depth Software Vulnerability Assessment of Container Terminal Systems", 2nd NATO Conference on Cyber Security in the Maritime Domain, Souda, Crete, Greece, September 2017.
7. E. Heymann, B.P. Miller, D. Incertis, "Addressing the Cyber-Security of Maritime Shipping". European Transport Conference, Barcelona, Spain, 5-7 October 2016.
8. James A. Kupsch, Elisa Heymann, Barton P. Miller, and Vamshi Basupalli, "Bad and Good News about Using Software Assurance Tools", Software-Practice and Experience, Wiley InterScience, 2016. Available at http://onlinelibrary.wiley.com/doi/10.1002/spe.2401/epdf
9. Maxime Frydman, Guifre Ruiz, Elisa Heymann, Eduardo Cesar and Barton P. Miller, "Automating Risk Analysis of Software Design Models", The Scientific World Journal 2014 (2014), Article ID 805856, June 2014. http://dx.doi.org/10.1155/2014/805856. 2014.
10. Jairo D. Serrano, Elisa Heymann, Eduardo Cesar, Barton P. Miller, "Increasing Automated Vulnerability Assessment Accuracy on Cloud and Grid Middleware", 9th International Conference on Information Security Practice and Experience (ISPEC), Lanzhou, China, pp. 278-294, May 2013.
11. J. Serrano, E. Heymann, E. Cesar, and B. Miller, "Vulnerability Assessment Enhancement for Middleware" in Computing and Informatics Journal, ISSN: 1335-9150, Vol. 31, No. 1, pp. 103-118. 2012.
12. L. Cornwall, E. Heymann, "The EGI Software Vulnerability Group and EMI", EMI Second Technical Conference, Proceedings of Science, Munich, Germany, March 2012. Available at http://pos.sissa.it/archive/conferences/162/149/EGICF12-EMITC2_149.pdf
13. V. Ivars, M.A Senar, E. Heymann. "*TDP-Shell: A Generic Framework to Improve Interoperability between Batch Queue Systems and Monitoring Tools*". Proceedings of the IEEE International Conference on Cluster Computing, pp. 522-526, 2011.

14. M. Lopez, E. Heymann, M. A. Senar. "*Scheduling Workflows in Opportunistic Environments*". Proceedings of the IEEE International Conference on Cluster Computing, pp. 517-521, 2011.
15. J. Serrano, E. Heymann, E. Cesar, and B. Miller, "Vulnerability assessment enhancement for middleware" in 5th Iberian Grid Infrastructure Conference (IBERGRID), 2011.
16. J. Kupsch, B. Miller, E. César, and E. Heymann. "*First Principles Vulnerability Assessment*". 2010 ACM Cloud Computing Security Workshop (CCSW), Chicago, IL, 2010.
17. G. Martinez, E. Heymann, M.A. Senar. "*Integrating Scheduling Policies into Workflow Engines*". Procedia Computer Science, Vol. 1, N. 1, pp. 2737-2746, 2010.
18. G. Martinez, E. Heymann, M.A. Senar, B.P. Miller. "*Using SchedFlow for Performance Evaluation of Workflow Application*s". 5th Workshop on Workflows in Support of Large-Scale Science, New Orleans, EEUU, 2010.
19. M. Brugnoli, E. Heymann and M. A. Senar. "*Grid Scheduling based on Collaborative Random Early Detection Strategies*". 8th Euromicro International Conference on Parallel, Distributed and Network-Based Computing, pp. 35-42, 2010.
20. J. Serrano, E. Heymann, and E. Cesar, "Developing New Automatic Vulnerability Strategies for HPC systems" in Latinamerican Conference on High Performance Computing - CLCAR, pp. 166-173, 2010.
21. M. Brugnoli, E. Heymann and M. A. Senar. "*Decentralized Scheduling for Grid Environments using IP Network Techniques*". 3rd Iberian Grid Infrastructure Conference (IBERGRID 2009), 2009.
22. E. Fernández, E. Heymann, M. A. Senar. "*Practical Mechanisms for Managing Parallel and Interactive Jobs on Grid Environments*". InGrid 2008 (3rd International Workshop on Distributed Cooperative Laboratories: Instrumenting the Grid). 2008.
23. M. Brugnoli, E. Heymann, M. A. Senar. "*Random Early Detection aplicado a la planificación en entornos Grid*". Proceedings of the XIX Jornadas de Paralelismo (Spanish Workshop on Parallelism), pp. 499-504, Castellón-Spain, Septiember 2008.
24. G. Martinez, M. Lopez, E. Heymann, M. Senar. "*SchedFlow: Sistema Integrador de Políticas de Planificación y Gestores de Workflows*". Proceedings of the XIX Jornadas de Paralelismo (Spanish Workshop on Parallelism), pp. 481-487, Castellón-Spain, September 2008.
25. M. Brugnoli, S. Wilmott, E. Heymann, M. Senar. "*Applying Internet Random Early Detection Strategies to Scheduling in Grid Environments*". LNCS series vol. 4873, pp. 587-598, 2007.
26. E. Fernández, E. Heymann, M. Senar. "*Resource Management for Interactive Jobs in a Grid Environment*". IEEE International Conference on Cluster Computing, Barcelona, 2006.
27. M. Lopez, E. Heymann, M. A. Senar. "*Analysis of Dynamic Heuristics for Workflow Scheduling on Grid Systems*". Post proceedings of the International Symposium in Parallel and Distributed Computing (ISPDC) 2006.
28. E. Fernandez, E. Heymann, M. A. Senar. "*Supporting Efficient Execution of MPI Applications Across Multiple Sites*". LNCS series vol. 4128, pp. 383-392, 2006.
29. A. Morajko, E. Fernandez, A. Fernandez, E. Heymann, M. A. Senar. "*Workflow Management in the CrossGrid Project*". LNCS series vol. 3470, pp. 424-433, 2005.
30. E. Heymann, M. A. Senar, E. Luque, M. Livny. "*Efficient Resource Management Applied to Master-Worker Applications*". J. Parallel and Distributed Computing, 64, 767-773, 2004.
31. E. Heymann, A. Fernández, M. A. Senar, J. Salt. "*Managing MPI Applications in Grid Environments*". LNCS series,vol. 3165, pp. 42-50, 2004.
32. E. Heymann, A. Fernández, M. A. Senar, J. Salt. "*The EU-CrossGrid Approach for Grid Application Scheduling*". LNCS series vol. 2170, pp 17-24, 2003.
33. E. Heymann, M.A. Senar, E. Luque, M. Livny. "*Self-Adjusting Scheduling of Master-Worker Applications on Distributed Clusters*". LNCS series vol. 2150, pp. 742-751, 2001.

34. E. Heymann, M.A. Senar, E. Luque, M. Livny. "*Evaluation of Strategies to Reduce the Impact of Machine Reclaim in Cycle-Stealing Environments*". Proceedings the International Symposium on Cluster Computing and the Grid, pp. 320-328, 2001.
35. E. Heymann, M. A. Senar, E. Luque. *"Gestión dinámica de aplicaciones master-worker sobre sistemas distribuidos*". Proceedings of the VI Congreso Argentino de Ciencias de la Computación CACIC 2000, pp. 1077-1088, 2000.
36. E. Heymann, M.A. Senar, E. Luque, M. Livny. "*Evaluation of an Adaptive Scheduling Strategy for Master-Worker Applications on Clusters of Workstations*". LNCS series vol. 1970, pp. 310-319, 2000.
37. E. Heymann, M.A. Senar, E. Luque, M. Livny, "*Adaptive Scheduling for Master-Worker Applications on the Computational Grid*". Lecture Notes in Computer Science, vol. 1971, pp. 214-227, 2000.
38. E. Heymann, M.A. Senar, E. Luque, M. Livny. "*Adaptive Scheduling for Master-Worker Applications on the Computational Grid*". LNCS series vol. 1971, pp. 214-227, 2000.
39. E. Luque, E. Heymann, F. Tinetti, "*Preserving Message Integrity in Dynamic Process Migration*". Euromicro Workshop on Parallel and Distributed Processing (PDP-98), 1998, IEEE Press.
40. E. Luque, D. Franco, E. Heymann, J. Moure, "*Process Migration: The Message Integrity Problem*". Parallel and Distributed Computing and Systems (PDCS), pp. 17-21, 1996, IEEE Press.
41. E. Luque, D. Franco, E. Heymann, J. Moure, "*A Modular Parallel Programming Approach*", Parallel and Distributed Computing and Systems (PDCS), pp. 157-160, 1996, Acta Press.
42. E. Luque, D. Franco, E. Heymann, J. Moure, "*TransCom: A Communication Microkernel for Transputers*". Euromicro Workshop on Parallel and Distributed Processing (PDP-96), pp. 147-153, 1996, IEEE CS Press.
43. E. Luque, M. Senar, D. Franco, P. Hernández, E. Heymann, J. Moure, "*A Visual Programming Environment for a Transputer Based System*". Parallel and Distributed Computing and Systems (PDCS), pp. 94-97, 1994, Acta Press.
44. E. Luque, M. Senar, D. Franco, P. Hernández, E. Heymann, J. Moure, *"Programming Environment for a Transputer Based Computer*". Future Generation Computer Systems, vol. 10, pp. 295-299, 1994.
45. Luque, M. Senar, D. Franco, P. Hernández, E. Heymann, J. Moure, "*Transputer Based System Software*". Euromicro Workshop on Parallel and Distributed Processing (PDP-94), pp. 536-543, 1994, IEEE CS Press.
46. E. Luque, M. Senar, D. Franco, P. Hernández, E. Heymann, J. Moure. *"Distributed Kernel for a Transputer-Based Computer*". Transputer Applications and Systems 1993, pp. 861-876, IOS Press.

Other Journals/Conferences/Workshops:

47. Guifre Ruiz, Elisa Heymann, Eduardo Cesar and Barton P. Miller, "*Automating Threat Modeling through the Software Development Life-Cycle*", XXIII Jornadas de Paralelismo (JP2012), Elche, Spain, September 2012.
48. Arindam Choudhury, Elisa Heymann, Miquel Angel Senar, "*Provisioning Hadoop Virtual Clusters in Opportunistic Clusters*". XXIII Jornadas de Paralelismo (JP2012), Elche, Spain, September 2012.
49. Davidlohr Bueso, Elisa Heymann, Miquel Angel Senar, "*Towards Efficient Working Set Estimations in Virtual Machines*". XXIII Jornadas de Paralelismo (JP2012), Elche, Spain, September 2012.
50. M Lopez, E. Heymann, M. A. Senar. "*Planificación de DAGS en entornos oportunísticos*". Proceedings of the XXII Jornadas de Paralelismo (Spanish Workshop on Parallelism), pp. 475-483, Tenerife-Spain, 2011.

51. Jairo Serrano, Elisa Heymann and Eduardo Cesar, "*Manual vs. Automated Vulnerability Assessment for Grid Middleware*". Congreso Español de Informática, CEDI 2010-XXI Jornadas de Paralelismo, Valencia-Spain, 2010.
52. Vicente José Ivars, Miquel Angel Senar y Elisa Heymann, "*TDP-Shell: Achieving interoperability between Resource Management Systems and Monitoring Tools for MPI Environments*". Congreso Español de Informática, CEDI 2010-XXI Jornadas de Paralelismo, Valencia-Spain, 2010.
53. Jairo Serrano, Elisa Heymann and Eduardo Cesar, "*Developing New Automatic Vulnerability Assessment Strategies for HPC Systems*". Congreso: III Conferencia Latino Americana de Computación de Alto Rendimiento, CLCAR 2010, Brazil, 2010. G. Martinez, M. Lopez, E. Heymann, M. Senar. "*Servicios de Asignación y Planificación de Recursos Grid*". Jornadas de Paralelismo, Castellón-Spain, 2008.
54. M. Brugnoli, E. Heymann, M. A. Senar. *"Random Early Detection aplicado a la planificación en entornos Grid*". Jornadas de Paralelismo, Castellón-Spain, 2008.
55. E. Heymann, A. Fernández, M. Senar, "*CrossBroker: Gestión de Aplicaciones Paralelas e Interactivas en Entornos Grid*". Jornadas Técnicas RedIRIS, Logroño-Spain, 2005.
56. E. Heymann, A. Fernández, M. Senar. "*Gestión de Aplicaciones en el Proyecto CrossGrid*". Jornadas Técnicas RedIRIS, Toledo-Spain, 2004.
57. E. Fernandez, Heymann, M.A. Senar, E. Luque and A. Fernández, "*Reliable Scheduling of MPI Applications on a Grid Environment*". Jornadas de Paralelismo, Almería-Spain, 2004.
58. A. Fernández, E. Heymann, J. Salt, M. Senar. "*Servicios de Asignación y Planificación de Recursos Grid*". Jornadas Técnicas RedIRIS, 2003.
59. C. López, E. Heymann, M. Senar, E. Luque, "*Estudio de Estrategias para Aliviar los Efectos de la Pérdida de Máquinas en Entornos Oportunísticos*". Jornadas de Paralelismo, Valencia, Spain, 2001.
60. E. Heymann, M. Senar, E. Luque, "*Adaptive Scheduling for Master-Worker Applications on Clusters of Workstations*", Jornadas de Paralelismo, Granada-Spain, 2000.
61. E. Luque, E. Heymann, F. Tinetti, "*Migración Dinámica de Procesos: El Problema de la Integridad de Mensajes*", III Congreso Argentino de Ciencias de la Computación, Parallel and Distributed Processing track, pp. 213-225, 1997.
62. E. Luque, D. Franco, E. Heymann, J. Moure, "*Un microkernel de comunicaciones para Transputers*". VI Jornadas de Paralelismo, Barcelona-Spain, 1995.
63. E. Luque, M. Senar, D. Franco, P. Hernández, E. Heymann, J. Moure, "*Programming Environment for a Transputer-Based Computer*". IV Jornadas de Paralelismo, Santander-Spain, 1993.

Technical Reports:

J.A. Kupsch, B.P. Miller, E. Cesar and E. Heymann, "*First Principles Vulnerability Assessment*", *MIST Project Technical Report*, September 2009.

Tutorials:

1. "Secure Coding Practices & Automated Assessment Tools". Half day. Web Hands-on. Tools standalone. SuperComputing'20. Atlanta-virtual, November 2020.
2. "Secure Coding Practices and Automated Assessment Tools". Half day. Web Hands-on. Tools standalone. Gateways'20, Virtual. October 2020.
3. "Web Security and Automated Assessment Tools--Theory & Practice". Half day. Web Hands-on. Tools standalone. Trusted CI NFS Cybersecurity Summit, Virtual. September 2020.

4. "Secure Coding Practices and Automated Assessment Tools". Full day. Web Hands-on. Internet2 Technology Exchange. New Orleans, December 2019.
5. "Secure Coding Practices and Automated Assessment Tools". Full day. Web Hands-on. SuperComputing'19. Denver, CO, November 2019.
6. "Web security and Automated Assessment Tools". Half day. Hands-on on Web. NSF Cybersecurity Summit, San Diego, CA. October 2019.
7. "Secure Coding Practices and Automated Assessment Tools". Half day. Hands-on. Cal Poli Pomona SFSCon, Pomona, CA. September 2019.
8. "Secure Coding Practices and Automated Assessment Tools". Half day. Hands-on. Gateways'19, San Diego, CA. September 2019.
9. "Secure Coding Practices and Automated Assessment Tools". Half day. Hands-on. University of Iowa, Iowa City, September 2019.
10. "Secure Coding Practices and Automated Assessment Tools". Full day (8 hours). Hands-on. University of Queensland, Brisbane, Australia. May 2019.
11. "Secure Coding Practices and Automated Assessment Tools". Half-day. Hands-on. SuperComputing'18. Dallas, TX, November 2018.
12. "Secure Coding Practices, Automated Assessment Tools and the SWAMP". Half-day. Hands-on. SecDev'18 (IEEE Cybersecurity Development Conference). Cambridge, MA. September 2018.
13. "Automated Assessment Tools – Theory & Practice". Half day. Hands-on. 2018 NSF Cybersecurity Summit, Alexandria, VA. August 2018.
14. "Secure Coding Practices and Automated Assessment Tools". Half day. Technical University of Munich, Germany. March 19, 2018.
15. "Secure Coding Practices and Automated Assessment Tools". 3-day tutorial. Hands-on for Windows. TotalSoftBank (TSB), Busan, South Korea. 21-23 November 2017.
16. "Secure Coding Practices". URISC@SC17. Denver, CO, November 2017.
17. "Secure Coding Practices and Automated Assessment Tools". O'Reilly Security Conference, New York. October 2017.
18. "Automated Assessment Tools: Theory and Practice". NFS Cybersecurity summit. Arlington, VA, August 2017. Hands-on.
19. "Secure Coding Practices & Automated Assessment Tools". FAA. New Jersey, June 2017. 3 full days.
20. "Secure Coding Practices & Automated Assessment Tools". OSCON: O'Reilly Open Source Convention, Austin, TX, May 2017.
21. "Secure Coding Practices and Automated Assessment Tools". 1 full day. CA Engineering, Utah, April 2017.
22. "Secure Coding Practices and Automated Assessment Tools". Universidad de la República. Montevideo, Uruguay, March 2017
23. "Secure Coding Practices and Automated Assessment Tools". SuperComputing 2016, Salt Lake City, UT, November 2016.
24. "Secure Coding Practices and Automated Assessment Tools". 2016 NSF Cybersecurity Summit for Large Facilities and Cyberinfrastructure, Arlington, VA, August 2016.
25. "Automated Assessment Tools", XSEDE 2016, Miami, Floria, July 2016.
26. "Secure Programing and Automated Assessment Tools", (15 hour long) ERTIC 2016, Regional ICT school, Asunción, Paraguay, July 2016.
27. "Automated Assessment Tools", International Conference on Software Engineering and Data Engineering (SEDE'15), San Diego, CA, October 2015.
28. "Secure Coding Practices (and Other Good Things)", NSF CyberSecurity Summit, Arlington, VA, August 2015.
29. "Secure Coding Practices (and Other Good Things)", XSEDE 2015, Saint Louis, Missouri, July 2015.
30. "Hacks and Counter-Hacks: How the Bad Guys Think about Your Code and Some Defensive Techniques", UW Lockdown, Madison, WI, July 2015.

31. "Secure Programming". Tutorial for the IT group. University of Wisconsin Madison. April 2015.
32. NFS Cybersecurity Summit for Cyberinfrastructure and Large Facilities, Arlington, Virginia, September 2014.
33. XSEDE14, Atlanta, July 2014.
34. E. Heymann, B.P. Miller, J. Kupsch, "*Secure Coding Practices (and Other Good Things)*". NFS Cybersecurity Summit for Cyberinfrastructure and Large Facilities, Arlington, Virginia, September 2013.
35. E. Heymann, B.P. Miller, J. Kupsch, "*Secure Coding Practices for Grid and Cloud Middleware and Services*". XSEDE13, San Diego, California, July 2013.
36. E. Heymann, B.P. Miller, J. Kupsch, "*Secure Coding Practices for Grid and Cloud Middleware and Services*". Tutorial for the SWAMP (Software Assurance Market Place) staff, Madison, Wisconsin, July 2013.
37. E. Heymann, B.P. Miller, "*Techniques for Secure Programming*". ESSoS 2013, Inria, Paris, France, February 2013.
38. E. Heymann, B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". Infosys, Mysore, India. This tutorial was part of a 64 hour class taught during 2 weeks. January 2013.
39. E. Heymann, B.P. Miller, "*Secure Coding Practices for Grid and Cloud Middleware and Services*". Supercomputing 2012, Salt Lake City, Utah, 2012.
40. E. Heymann, B.P. Miller, "*Secure Coding Practices for Middleware*". Secureware 2012, Roma, Italy, August 2012.
41. E. Heymann, B.P. Miller, "*Secure Coding Practices for Middleware*". European Grid Infrastructure (EGI) Technical Forum, Lyon, France, September 2011.
42. E. Heymann, B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". Epic Systems, Verona, Wisconsin (The leading electronic patient record system in the US, with more than 120 million patients online.) July 2011.
43. E. Heymann, B.P. Miller, "*First Principles Vulnerability Assessment for Middleware*". Rutherford Labs, United Kingdom, January 2011.
44. E. Heymann, B.P. Miller, "*Security Risks in the Grid*". OSG Summer School, Madison, Wisconsin, July 2010.
45. E. Heymann, B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". Epic Systems, Verona, Wisconsin, March 2010.
46. E. Heymann. B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". CERN, Geneva, Switzerland, December, 2009.
47. E. Heymann. B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". Open Grid Forum 27 (OGF27), Banff, Canada, October, 2009.
48. E. Heymann. "*Vulnerability Assessment for Middleware*". EGEE'09 meeting, Barcelona, Spain, September, 2009.
49. E. Heymann. B.P. Miller, "*Vulnerability Assessment and Secure Coding Practices for Middleware*". OGF 25, Catania, Italy, March 2009.
50. E. Heymann, "*Tutorial Tecnologías Grid. Experiencias prácticas dentro de un proyecto interdisciplinar para el desarrollo de herramientas de soporte a la computación Grid*". Conferencia Latinoamericana de Informática (CLEI 06), Santiago de Chile, 2006.

PH.D. STUDENTS COMPLETED:

1. Jairo Serrano Latorre, "*Vulnerability Assessment for Complex Middleware Interrelationships in Distributed Systems*". November 2013.
2. María del Mar López Hernández, "*Planificación de DAGs en entornos oportunísticos*". ("Scheduling of DAGs in an Opportunistic Environment".) September 2012.

3. Vicente José Ivars Camañez, "*TDP-Shell: Entorno para acoplar gestores de colas y herramientas de monitorización*". ("TDP-Shell: An Environment for Unifying Resource Management Systems and Monitoring Tools".) September 2012.
4. Gustavo Martínez, "*Framework for Integrating Scheduling Policies into Workflow Engines*". September 2011.
5. Manuel Brugnoli, "*Decentralized Scheduling on Grid Environments*". October 2010.
6. Enol Fernández del Castillo, "*Scheduling for Interactive and Parallel Applications on Grids*". October 2008.

Other Activities:

Reviewer of European project development for the European Commission. 2014, 2015, 2016, 2017, 2018, 2019, 2020. (Work performed in Brussels.)

Reviewer of papers for different conferences, including SuperComputing, EuroPar, ICS, and IPDPS.

Co-Chair, 2nd Shonan Meeting on Grid and Cloud Security: A Confluence, Japan, March 2014.

Co-Chair, Shonan Meeting on Grid and Cloud Security: A Confluence, Japan, October 2012.

Co-organizer. European Condor Week. Barcelona, Spain, October 2008.

Reviewer of project proposals for the European Commission (Framework Program 6, 7, and H2020): 2006-present.
Reviewer of project proposals for the Catalan Funding Agency (AGAUR), Barcelona, Spain: 2009-present.
Reviewer of project proposals for the Valencian Funding Agency (AVAP), Valencia, Spain: 2010-present.

Invited by Infosys, Mysore, India, to co-teach a 2 week-long course on Security (64 hours). January 2013.
Invited by the Universidad Nacional de la Plata, Argentina, to teach a week-long course on Grid Architectures (40 hours), September 2007.

Languages: Spanish (native), English (fluent), Catalan (fluent), French (intermediate).