

## **Javier Calvo-Amodio, Ph.D.**

[Javier.Calvo@oregonstate.edu](mailto:Javier.Calvo@oregonstate.edu) - <http://mime.oregonstate.edu/people/calvo>

### **A. Education and Employment Information**

#### **A1. Education**

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- 2012                      Ph.D. Systems and Engineering Management  
Texas Tech University  
Advisors: Patrick E. Patterson, and Milton L. Smith
- 2002                      MSc Business Management  
University of Hull, UK  
Advisor: Amanda Gregory
- 2000                      BS Industrial and Systems Engineering  
Tecnológico de Monterrey, Campus Toluca, Mexico

#### **A2. Professional Experience**

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- Sept. 2018–present    Associate Professor  
School of Mechanical, Industrial, and Manufacturing Engineering  
Oregon State University
- Jan 2019 - Sept  
2019                      Engineering Management Interim Program Director  
School of Mechanical, Industrial, and Manufacturing Engineering  
Oregon State University
- Sept 2012 - Sept  
2018                      Assistant Professor  
School of Mechanical, Industrial, and Manufacturing Engineering  
Oregon State University
- Aug 2010 – Jul  
2012                      Part-Time Graduate Instructor  
Department of Industrial Engineering  
Texas Tech University
- Jul 2005 – Jan 2007    Institutional Effectiveness Director  
Tecnológico de Monterrey, Campus Morelia, México
- Jul 2004 – Jul 2005    Industrial and Systems Engineering Program Director  
Tecnológico de Monterrey, Campus Morelia, México
- Jan 2003 – Dec  
2003                      Corporate Quality Assurance Chief  
Bachoco, S.A. de C.V., Mexico
- Jan 2001 – Sept  
2001                      Quality Leader  
CAABSA Constructora, S.A. de C.V

## B. Teaching, Advising, and Other Assignments

### B1. Instructional Summary

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#### B1.1. Credit Courses

Number	Course Title	Term/Year	Credits	Enrollment
IE/ME497	MIME Capstone Design	Fall 2012	4	121
IE/ME498	MIME Capstone Design	Winter 2013	4	121
IE/ME497	MIME Capstone Design	Fall 2013	4	135
IE/ME599	ST/System Dynamics Modeling	Fall 2013	3	11
IE/ME498	MIME Capstone Design	Winter 2014	4	135
IE/ME497	MIME Capstone Design	Fall 2014	4	96
IE599	ST/Systems Thinking Theory and Practice	Fall 2014	4	7
IE/ME498	MIME Capstone Design	Winter 2015	4	96
IE/ME497	MIME Capstone Design	Fall 2015	4	97
IE/ME498	MIME Capstone Design	Winter 2016	4	97
IE575	Systems Thinking Theory and Practice	Winter 2016	4	16
IE599	ST/Systems Engineering	Spring 2016	4	9
IE497	MIME Capstone Design	Fall 2016	4	48
IE498	MIME Capstone Design	Winter 2017	4	45
IE575	Systems Thinking Theory and Practice	Winter 2017	4	13
ENGR390	Engineering Economy	Spring 2017	3	84
IE475	Advanced Manufacturing Costing Techniques	Fall 2017	3	44
IE575	Systems Thinking Theory and Practice	Winter 2018	4	12
IE499	Systems Principles for Industrial Engineering Practice	Winter 2018	4	5
ENGR390	Engineering Economy	Spring 2018	3	88
IE475	Advanced Manufacturing Costing Techniques	Fall 2018	3	40
IE575	Systems Thinking Theory and Practice	Winter 2019	4	7
ENGR390	Engineering Economy	Spring 2019	3	89
IE475	Advanced Manufacturing Costing Techniques	Fall 2019	3	40
IE575	Systems Thinking Theory and Practice	Winter 2020	4	7
ENGR390	Engineering Economy	Spring 2020	3	89
IE475	Advanced Manufacturing Costing Techniques	Fall 2020	3	32
ENGR390	Engineering Economy	Fall 2020	3	192
IE366	Work Systems Engineering	Winter 2021	4	46

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IE470	Management Systems Engineering	Winter 2021	4	29
IE570	Management Systems Engineering	Winter 2021	4	12
IE406	Industrial Engineering Topics	Winter 2021	1	1
IE475	Advanced Manufacturing Costing Techniques	Fall 2021	3	30
IE575	Systems Thinking Theory and Practice	Fall 2021	4	14
IE366	Work Systems Engineering	Winter 2022	4	71
IE470	Management Systems Engineering	Winter 2022	4	21
IE570	Management Systems Engineering	Winter 2022	4	7

### **B1.2. Non-Credit Courses and Workshops**

none

### **B1.3. Course and Curriculum Development**

Use this area to describe your activities in developing or restructuring course content, and in developing curriculum (series of related courses), including implementation of innovative instructional practices. Don't include things that are expected of every teacher in every course, such as updating course objectives or switching to a new textbook. Format each example as a separate paragraph, beginning with a boldfaced phrase serving as a title, as shown.

### **B1.4. Team or Collaborative Efforts**

START Bilingue – Spring 2022

### **B1.5. International Teaching**

none

## **B2. Student (eSET) and Participant/Client Evaluations**

Course No. (credits)	Term	Enrollment	# Re-sponding	Student Evaluation (#1/#2)	Required /Elective
IE 497 (4)	Fall 2012	120	105	3.5/3.8	Required
IE 498 (4)	Winter 2013	120	50	3.9/4.0	Required
IE 497 (4)	Fall 2013	135	110	4.2/4.4	Required
IE599 (IE575) (3)	Fall 2013	11	6	3.8/4.5	Elective
IE 498 (4)	Winter 2014	135	100	4.5/4.6	Required
IE 497 (4)	Fall 2014	97	80	3.9/4.5	Required
IE599 (IE575) (4)	Fall 2014	7	6	5.2/5.5	Elective
IE 498 (4)	Winter 2015	97	71	4.5/5.1	Required
IE497 (4)	Fall 2015	97	77	3.8/4.2	Required

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IE498 (4)	Winter 2016	97	70	4.6/5.2	Required
IE575 (4)	Winter 2016	16	14	4.8/5.3	Elective
IE599 (IE584) (4)	Spring 2016	9	4	5.0/5.2	Elective
IE497 (4)	Fall 2016	48	36	4.6/4.8	Required
IE498 (4)	Winter 2017	45	38	4.5/4.7	Required
IE575 (4)	Winter 2017	13	9	5.0/5.3	Elective
ENGR390 (3)	Spring 2017	84	56	5.4/5.7	Required
IE475	Fall 2018	40	15	5.6/5.7	Elective
IE575	Winter 2019	7	2	6/6	Elective
ENGR390	Spring 2019	86	27	5.4/5.4	Required
IE475	Fall 2019	39	10	5.0/5.7	Elective
IE575	Winter 2020	7	6	5.8/5.8	Elective
ENGR390	Fall 2020	173	41	na	Required
IE475	Fall 2020	32	12	na	Elective
IE366	Winter 2021	46	15	na	Required
IE470/570	Winter 2021	41	7	na	Elective
IE475	Fall 2021	30	8	5.5/5.8	Elective
IE575	Fall 2021	14	1	6/6	Required
IE366	Winter 2022	70	18	5.3/5.6	Required
IE470/570	Winter 2022	28	8	5.9/5.8	Elective

**B3. Advising**

**B3.1. Graduate Advisees – Completed**

Student	Degree	Thesis	Graduated
1. Nithin Saravan Marthandam (Co- advised with Ean Ng)	MS	<i>A Proposed Model for Forecasting the Project Termination Phase from an Engineering Economic Perspective</i>	Summer 2014
2. Viswanath Parameshwaran Kashi (co- advised with Toni Doolen)	MS	<i>Developing a Should-Cost Model to Predict Display Pricing in Smartphones</i>	Fall 2014
3. Hao Zhang (co- advised with Karl Haapala)	Ph.D.	<i>A Framework for Integrating Systems Thinking into Sustainable Manufacturing</i>	Fall 2014
4. Tanida Chongvilaiwan	MS	<i>A Theoretical Framework to Capture Stakeholders' Perspectives for the Design of Collaborative Communication Structures for Specialized Organizations.</i>	Spring 2015
5. Bradley Moore	MS	<i>Framework and Method for Designing Complementarist Interventions to Systemically Address Management Challenges in Small Organizations.</i>	Fall 2015
6. John McGrath	MS	<i>Tool to Enable Learning and Mentoring Opportunities in the MIME Capstone Design Class at Oregon State University.</i>	Fall 2015

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7. Cody Kopriva	MS	<i>An Application of Visual Management to Reduce In-house Material Handling Wastes in SMEs with High Product Variety and Low Volume</i>	Spring 2016
8. Sage M. Kittelman	MS	<i>The Role of Communication in New Process Implementations: A General Systems Theory Approach</i>	Fall 2016
9. Thomas Solberg (co-advised with Ean Ng)	MS	<i>A Proposed Framework for Increasing the Accessibility of Systems Thinking Intervention Approaches for Non-Systems Thinking Practitioners</i>	Winter 2017
10. Aaron Sprunger	MS	<i>Team Temperature Assessment Framework – A Measure for Team Effectiveness based on the Boeing Portland Production System.</i>	Spring 2017
11. Anh B. Tong	PhD	<i>Integration of Systems Thinking, Viable System Model, and System Dynamics toward Systemic Sustainability Assessment Methodology.</i>	Fall 2017
12. Siddhesh P. Joshi	MS	<i>Complementary Approach to Management-led Continuous Process Improvement Program</i>	2018
13. Siqi Wang	MS	<i>A Systems Definition of Team Emergence</i>	2018
14. Abdullah Khajah	MS	<i>The Effect of Process Improvement Practices on Kuwaiti Manufacturing Companies – Lean Management</i>	Spring 2019
15. Seth G. Taylor	MS	<i>A Method for Measuring Systems Thinking Learning</i>	Summer 2019
16. Sage M. Kittelman	PhD	<i>Communication in Purposeful Human Activity Systems: The Role of Signs in Organizational Change Management</i>	Fall 2020
17. Sami Al-Abdrabbuh	PhD	<i>Protective Action Decision Making in Large-Scale Emergencies: The Role of Information Requirements and Job Aids in Community-Level Decision Making.</i>	Fall 2020
18. Malaia P. Jacobsen	MS	<i>Exploring the Consistency of Terminology used in Performance Measurement &amp; Management.</i>	Spring 2021

**B3.2. Graduate Advisees – Current**

Student	Degree	Expected Graduation	Advanced to Candidacy (Y/N)
1. Neal T. Wilkinson	PhD	Spring 2024	Y
2. Ethan L. Copples	MS/PhD	Spring 2023/2025	N
3. Audrey Concepcion	MS/PhD	Spring 2024/2026	N
4. Prathamesh Mali	MS	Spring 2023	--
5. Hua-Ching Liao	MS	Spring 2023	--

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6. Ryan Hekker	MS	Spring 2024	--
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### **B3.3. Graduate Thesis or Project Committees**

#### **MEng Advisor:**

##### ***Graduated***

1. Jinchuan Wang, MEng IE, 2013
2. Lukas Bintoro, MEng IE, 2014
3. Guochao Zhang, MEng IE, 2015
4. Mudhyan Almudhyan, MEng IE, 2015
5. Chinmay Narwankar, MEng IE, 2017
6. Craig Kensel, MEng IE, 2019
7. Joel Duhn, MEng IE, 2019
8. Jason Chapple, MEng IE, 2020
9. Megan Cibula, MEng IE, 2020
10. Michael Brennan, MEng IE, 2020
11. Mishal Albassam, MEng IE, 2020
12. Sarah Jarrett, MEng IE, 2019
13. Tara Larson, MEng IE, 2019
14. Trystan Bartley, MEng IE, 2021
15. Neal Wilkinson, MEng IE, 2020

##### ***Current***

n.a.

#### **Minor Professor or Committee Member:**

##### ***Graduated***

1. Matthias Wöfl, MS ME, 2012
2. Rachel L. Yim, MS IE, 2013
3. Pantea Mizrae, MS IE, 2014
4. Shooka Darabi, MS IE, 2014
5. Woraruthai Choothian, PhD IE, 2014
6. Andrew Bluett, MS IE, 2014
7. Ian Garretson, MS IE, 2015
8. Matteo Smullin, MS IE, 2016
9. Molly Martin, MS IE, 2017
10. Grant Zimmerman, MS (Economy)
11. Luis Angel Gomez Cunia, PhD (Civil Engineering), 2020

##### ***Current***

1. Paul Oyier, PhD (Forestry)
2. Phillip Carleton, PhD (Industrial Engineering)

#### **Graduate Council Representative:**

1. Liza Bonafasal, PhD (Civil and Construction Engineering)
2. Zhenqiang Su, PhD (Electrical Engineering)

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### **B3.4. Undergraduate Research Assistants**

1. Mishal Albassam (Fall 2012-Fall 2013) UHC Thesis
2. Michael Vanderputten (Fall 2014-Spring 2015) UHC Thesis
3. Anna Royce (Fall 2014-Spring 2015) UHC Thesis
4. Olivia Girod (Fall 2014-Spring 2015) UHC Thesis
5. Matt Zaiger (Spring 2014 – Summer 2014)
6. Aaron Sprunger (Fall 2014 – Summer 2015)
7. Malaia Jacobsen (Winter 2015 - present)
8. Spencer Lazaroff (Winter 2014 – Winter 2015)
9. Laura Chapman (Fall 2015 – Fall 2016)
10. Rachel Reintjes (Spring 2015 – Summer 2016)
11. AnneMarie Minniti (Fall 2016 - present)
12. Andres Cruz-Martinez (Fall 2016 – present)
13. Thomas Murphy (2017-2019)
14. Ryan Hekker (2021-2022)
15. Audrey Concepcion (2021-2022)

### **B3.5. Postdoctoral Trainees**

1. N.a

### **B3.6. Other Advising**

**Faculty Advisor, Toastmasters MIME Speaks club**, Fall 2013-present. During this period I have co-advised the club, training over 40 students in public speaking and leadership skills.

**Faculty Advisor, IISE OSU Chapter**, 2016-2018. Co-advised with Hector Vergara. During this period I oversaw external operations, including hosting the Western Regional Conference.

**Faculty Advisor, ALPHA PI MU**, 2018-present. During this time the chapter achieved an Honorable Mention and has been recognized for the students' activities during the pandemic.

**SESEY Summer Experiences Advisor, 2013-present**. I have exposed to industrial engineering research, in collaboration with my graduate students, to 16 high school students as part of the SESEY program.

**AIAA Industrial Engineering Practices in Laboratory, 2014-present**. I advise via capstone projects AIAA students to implement knowledge management techniques and manufacturing scheduling methods.

## **B4. Other Assignments**

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None

## **C. Scholarship and Creative Activity**

### **C1. Publications**

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The candidate's role on joint publications is indicated as part of each entry; if nothing has been included, the candidate's involvement was minor. **The candidate should indicate in bold font students for which the candidate serves as a major advisor.**

### C1.1. Books & Book Chapters

1. Watson, M. D., Mesmer, B., Roedler, G., Rousseau, D., Gold, R., Calvo-Amodio, J., Jones, C., Miller, William D., Long, D., Lucero, S., Russell, R. W., Sedmak, A., Verma, D., (2019). *Systems Engineering Principles and Hypotheses*, INSIGHT, 21:1, (pp. 18-28), Hoboken: Wiley.
2. Sillars, D. N., Ng, E. H., Calvo-Amodio, J., Capalbo, S., **Martin, M., Jahanger, Q. K., ... & Elatlasi, R.** (2017). Advanced technology: Return on investment at the Oregon Department of Transportation. *Oregon Department of Transportation, Salem, OR, An Investigative Report*, 30530-16.
3. Flumerfelt, S., Alves, A., Calvo-Amodio, J., Hoyle, C., & Kahlen, F. J. (2017). "Managing Systems Complexity Through Congruence". In *Transdisciplinary Perspectives on Complex Systems* (pp. 115-144). Springer International Publishing. (contributed text, case study, data, and analysis)

### C1.2. Refereed Journal Publications

1. Watson, M., Mesmer, B., Roedler, G., Rousseau, D., Calvo-Amodio, J., Keating, C., Miller, W.D., Lucero, S., Gold, R., Jones, C., Long, D., Russel, R.W., Sedmack, A. (2022) *Systems Engineering Principles*. INCOSE Technical Product, International Council on Systems Engineering (INCOSE).
2. **Zhang, H.**, Veltri, A., Calvo-Amodio, J., & Haapala, K. R. (2021). Making the business case for sustainable manufacturing in small and medium-sized manufacturing enterprises: A systems decision making approach. *Journal of Cleaner Production*, 287, 125038.
3. **Kittelman, S.**, & Calvo-Amodio, J. (2020). A taxonomy of purposeful human activity system signs as a means to improving systems literacy. *Systems Research and Behavioral Science*, 37(5), 789-803.
4. Watson, M., Mesmer, B., Roedler, G., Rousseau, D., Keating, C., Gold, R., Calvo-Amodio, J., Jones, C., Miller, W.D., Lucero, S., Sedmak, A., Pyster, A. (2020). *Systems Engineering Principles*, Systems Engineering Body of Knowledge, SEBoK v. 2.3, released 30 October 2020 INCOSE. SEBoK Wiki accessed 1/30/2021 ([https://www.sebokwiki.org/wiki/Systems\\_Engineering\\_Principles](https://www.sebokwiki.org/wiki/Systems_Engineering_Principles))
5. **Martin, M. A., Jahanger, Q. K., Zimmerman, G., Hadziomerspahic, A.**, Sillars, D. N., Ng, E. H., & Calvo-Amodio, J. (2020). "Case Study: Economic Analysis of Statewide Roadway 3D Mapping Using Mobile LiDAR". *Journal of Transportation Engineering, Part A: Systems*, 146(7).
6. **Taylor, S.**, Calvo-Amodio, J., & Well, J. (2020). "A Method for Measuring Systems Thinking Learning". *Systems*, 8(2), 11.
7. **Marthandam, N. S.**, Ng, E. H., Calvo-Amodio, J., **Narwankar, C.**, & Barroso, L. A., "Validating a model for forecasting the project termination phase using existing business cases," *The Engineering Economist*, 64(2), 142-166, 2019
8. Rousseau, D., & Calvo-Amodio, J. (2019). *Systems Principles, Systems Science, and the Future of Systems Engineering*. INSIGHT, 22(1), 13-15.
9. Calvo-Amodio J., (2019). *Using principles as activity drivers in human activity systems*. *Systems Research and Behavioral Science*. pp. 1–9. <https://doi.org/10.1002/sres.2625>



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10. Calvo-Amodio, J., & Rousseau, D. (2019, January). *The Human Activity System: Emergence from Purpose, Boundaries, Relationships, and Context*. In Proceedings of the 17th Annual Conference on Systems Engineering Research, Washington DC, 3-4 April.
11. Rousseau D, Billingham J, Calvo-Amodio J., (2019). *Systemic virtues as a foundation for a general theory of design elegance*. Systems Research and Behavioral Science. pp 1–12. <https://doi.org/10.1002/sres.2627>
12. Rousseau, D., Billingham, J., & Calvo-Amodio, J. (2018). Systemic Semantics: A Systems Approach to Building Ontologies and Concept Maps. Systems, 6(3), 32.
13. **Kittelman, S.**, Calvo-Amodio, J., & Martínez León, H. C. (2018). *A systems analysis of communication: defining the nature of and principles for communication within human activity systems*. Systems Research and Behavioral Science, 35(5), 520-537, 2018
14. **Tong, A.**, Calvo, J., & Haapala, K. R. (2018). *Integration of Sustainability Indicators and the Viable System Model Towards a Systemic Sustainability Assessment Methodology*. Systems Research and Behavioral Science, 35(5), 564-587, 2018
15. Rousseau, D., Billingham, J., & Calvo-Amodio, J. (2018). *Systemic Semantics: A Systems Approach to Building Ontologies and Concept Maps*. Systems, 6(3), 32.
16. Flumerfelt, S., Calvo-Amodio, J., Porter Medina, J.D., (2017). *Tapping the Potential of Sensemaking for Performance Management*. Measuring Business Excellence (contributed text, accepted, in press)
17. Martínez-Leon. H. C., & Calvo-Amodio, J. (2016). *Towards lean for sustainability: Understanding the interrelationships between lean and sustainability from a systems thinking perspective*. Journal of Cleaner Production. DOI: <https://doi.org/10.1016/j.jclepro.2016.11.132> (provided systems thinking perspective and initial idea)
18. **Moore, B.**, Calvo-Amodio, J., & Junker, J. F. (2016) *Applying a Framework for Complementarist Intervention Approaches to Service Organizations to Achieve a Sustainable Holistic Management Model*. Systemic Practice and Action Research, 1-27. DOI:10.1007/s11213-016-9403-6 (provided initial idea, student advisor)
19. Calvo-Amodio, J., Patterson, P.E., Smith, M.L., Burns, J.L. (2015) *Application of Transition-Phase Management Model for an Electronic Health Record System Implementation: A Case Study*. Engineering Management Journal, Vol 27, Issue 3, pp. 131-140 DOI:<http://dx.doi.org/10.1080/10429247.2015.1064662> (primary author)
20. Robinson, T. A., Calvo-Amodio, J., & Parmigiani, J. P. (2015) *Capstone Design as an Individual Writing Experience*. International Journal of Engineering Education Vol. 31, No. 6(B), pp. 1902–1923 DOI: n.a. ISSN: 0949-149X (Contributed text)
21. **Zhang, H.**, Calvo-Amodio, J., Haapala, K.R. (2015), *Establishing Foundational Concepts for Sustainable Manufacturing Systems Assessment through Systems Thinking*, International Journal of Strategic Engineering Asset Management, Vol 2, Issue 3, pp. 249-269. DOI: 10.1504/IJSEAM.2015.072124 (provided initial idea, student co-advisor)
22. Calvo-Amodio, J., Tercero, V.G., Ramirez, J., and Martinez, I.A. (2014) *Systemic Analysis of the Effects that Academic Performance has on Six Sigma Certification Rates*; Engineering Management Journal Vol. 26, Issue 4, pp. 13-22. DOI: 10.1080/10429247.2014.11432024 (primary author)
23. Calvo-Amodio, J., Patterson, P.E., Smith, M.L., Burns, J.R. (2014) *A Generalized System Dynamics Model for Managing Transition-Phases in Healthcare Environments*. Journal of Industrial Engineering and Management Innovation Vol. 1, Issue 1, pp. 13-30. DOI: n.a. ISSN (on-line): 2215-1389 (primary author)

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24. **Hyder, I., Arnold, D.,** Calvo-Amodio, J., Parmigiani, J.P. (2013) *Using Graduate Assistants as Project Advisers for Externally-Sponsored Capstone Design Projects*. International Journal of Engineering Education Vol. 30, No. 1, pp. 1-11. DOI: n.a. (contributed text)
25. **Zhang, H.,** Calvo-Amodio, J., Haapala, K.R. (2013), *A Conceptual Model for Assisting Sustainable Manufacturing through System Dynamics*, Journal of Manufacturing Systems. Vol. 32, Issue 4, pp. 543- 549 DOI: 10.1016/j.jmsy.2013.05.007 (Top 10 Downloaded Journal of Manufacturing Systems Articles; student co-advisor)

### C1.3. Peer-Reviewed Archival Conference Publications

The following papers appeared in archival proceedings that were distributed to libraries (the next section covers other types of proceedings). The acceptance rate is indicated as part of the entry whenever the selection process was rigorous.

1. **Liao, H.,** Calvo-Amodio, J., (2022) Purposeful Human Activity System: A Foundation for Managing Alignment Between Organizational Thinking and Doing. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2022, Tampa, FL (50% acceptance rate)*
2. **Wilkinson, N. T,** (2022) Middle Management: A Systemic Consideration of Middle Managers Role in Organizations. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2022, Tampa, FL (50% acceptance rate)*
3. **Jacobsen, M .P.,** (2019) A Methodology for Designing Enduring Human Activity Systems. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2019, Philadelphia, PA (50% acceptance rate)*
4. **Wilkinson, N.,** Calvo-Amodio, J., (2019) A Proposed Conceptual Framework for Predicting Changes in Beliefs and Perceptions of Employees. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2019, Philadelphia, PA (50% acceptance rate)*
5. **Joshi, S. P., & Calvo-Amodio, J. (2018).** Management-led Participative Continuous Process Improvement. *In Proceedings of the 62nd Annual Meeting of the ISSS-2018* Corvallis, OR, USA (Vol. 1, No. 1).
6. **Taylor, S.G.,** Calvo-Amodio, J., Well, J. (2018) A proposed methodology for developing systems thinking lessons by and for non-experts. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2018, Cor D' Alene, Idaho (60% acceptance rate)*
7. **Kittelman, S.M.,** Calvo-Amodio, J., Barca, R.H. (2016) A Conceptual Framework on the Role of Communication Competency in New Process Implementations Efforts. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 491-500 (provided initial idea; 60% acceptance rate)
8. **Sprunger, A.M., Kittelman, S.M., Jacobsen, M. P., Chapman, L.J.,** Calvo-Amodio, J., Barca, R.H. (2016) New Process Implementation: A Matter of Congruency Between Learning, Knowledge, and Practice. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 416-425 (provided initial idea; 60% acceptance rate)
9. **Elatlassi, R.,** Martin, M.A., Calvo-Amodio, J., Ng, E.H. (2016) A Systemic View on Game Theory: Modeling a Game of Battle of the Sexes Using Archetypes as Proof of Concept. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 300-309 (provided initial idea; 60% acceptance rate)

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10. **Solberg, T.R.**, Calvo-Amodio, J., Ng, E.H., Reintjes, R.T. (2016) Proposed Methodology for Process Improvement at Oregon State University Athletic Department Team Travel Operations. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 218-227 (provided initial idea; 60% acceptance rate)
11. **Wang, S., Elatlassi, R.**, Calvo-Amodio, J. (2016) Critical Systems Thinking on Enterprise Architecture. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 501-509 (provided initial idea; 60% acceptance rate)
12. **Narwankar, C.S., Elatlassi, R., Wang, S.**, Calvo-Amodio, J., Flumerfelt, S., Porter-Medina, J.D. (2016) Increasing Competency in Human Activity Systems Using Boundary Critique. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 228-237 (provided initial idea; 60% acceptance rate)
13. **Kopriva, C.A.**, Calvo-Amodio, J. (2016) An Application of Visual Management to Reduce Wastes in In-House Material Handling Systems in Small and Medium-Sized Organizations. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2016, Charlotte, N.C.* pp. 728-731 (provided initial idea; 60% acceptance rate)
14. **Tong, A.**, Calvo-Amodio, J., Haapala, K., R., (2015) A Dynamic Model of Job Satisfaction and Turnover: Framework for Model Development and Simulation. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 327-335 (student advisor; 70% acceptance rate)
15. **Sprunger, A., M.**, Calvo-Amodio, J., (2015) A Proposed Conceptual Model to Analyze Team Congruence at a Large Manufacturing Operation. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 243-248 (provided main idea, student advisor; 70% acceptance rate)
16. **Kittelman, S.M.**, Calvo-Amodio, J., (2015) Project Management and Effective Communication: A Study of Linguistic Philosophy for Communication Competency. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 327-335 (student advisor; 70% acceptance rate)
17. **Alkharashi, A.**, Calvo-Amodio, J., (2015) The Use of Multiple Project Management Strategies, Project Type Tracks, Scaffolding and Websites in a Large and Multi-Disciplinary Capstone Design Course. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 327-335 (provided main idea, student advisor; 70% acceptance rate)
18. Ng, E.H, Veltri, A., **Tong, A.**, Calvo-Amodio, J., Haapala, K.R., (2015) Safety: Let's Start at The Beginning. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 388-394 (contributed text, student advisor; 70% acceptance rate)
19. **McGrath, J.O.**, Calvo-Amodio, J., (2015) A State of the Art Matrix Analysis on Multi-Project Management in Capstone Senior Design Courses. *Proceedings of the International Annual Conference of the American Society for Engineering Management 2015, Indianapolis, IN.* pp. 327-335 (provided main idea, student advisor; 70% acceptance rate)
20. **McGrath, J.O.**, Calvo-Amodio, J. (2014) Cloud Based Mobile Tool to Enable Collaboration and Mentoring Opportunities in the MIME Capstone Design Class at Oregon State University, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp.3629-3635 (provided main idea, student advisor; acceptance rate not available)
21. **Royce, A., Vanderputten, M.**, Calvo-Amodio, J. (2014) Sustaining Annual Student Design Competitions through a Capstone Design Class and a Knowledge Management System,

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- Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp. 2165-2174 (provided main idea, student advisor; acceptance rate not available)
22. **Saravana Marthandam, N.**, Calvo-Amodio, J., Ng, E.H., (2014). Terminating a Failed Project Without Affecting the Market Value of the Firm, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp. 3552-3563 (provided main idea, student advisor; acceptance rate not available)
  23. **Girod, O., Zhang, H.**, Calvo-Amodio, J., Haapala, K.R. (2014) A Proposed Hybrid-Dynamic Manufacturing System for High Mix Low Volume Manufacturers, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp. 2583-2592 (provided main idea, student advisor; acceptance rate not available)
  24. **Chongvilaiwan, T.**, Harger, R., Calvo-Amodio, J., Vergara, H.A., Lopez-Cevallos, D., (2014) A Proposed Approach to Develop a Healthcare Delivery Management System for Long-Term Humanitarian Development, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp. 2999-3005 (provided main idea, student advisor; acceptance rate not available)
  25. **Parameshwaran Kashi, V.**, Calvo-Amodio, J. (2014) A Should Cost Analysis through Significance Testing using Statistical Tools, *Proceedings of the 2014 Industrial and Systems Engineering Research Conference, Montreal, Canada.* pp. 3646-3653 (student advisor; acceptance rate not available)
  26. Flumerfelt, S., Kahlen, F.J., Alves, A., Calvo-Amodio, J., Hoyle, C. (2014) Systems Competency for Engineering Practice. In *ASME 2014 International Mechanical Engineering Congress and Exposition, Montreal, Canada. American Society of Mechanical Engineers*, pp. V011T14A054-V011T14A054 (acceptance rate not available)
  27. **Moore, B.**, Calvo-Amodio, J., Junker, J. F., (2014) Sustainable management structure for dynamic non-profit organizations: integrating lean thinking and knowledge management through systems thinking. *Proceedings of the American Society for Engineering Management 2014 International Annual Conference, Virginia Beach, VA.* pp. 347-360 (provided main idea, student advisor; 75% acceptance rate)
  28. **McGrath, J.O.**, Calvo-Amodio, J. (2014) Mobile tool to enable accelerated information transfer in the MIME Capstone Design class at Oregon State University. *Proceedings of the American Society for Engineering Management 2014 International Annual Conference, Virginia Beach, VA.* pp. 388-393 (provided main idea, student advisor; 75% acceptance rate)
  29. **Chongvilaiwan, T.**, Calvo-Amodio, J., Junker, J.F. (2014) A theoretical framework for the design of an energy analysis collaborative structure using soft systems methodology. *Proceedings of the American Society for Engineering Management 2014 International Annual Conference, Virginia Beach, VA.* pp. 361-370 (provided main idea, student advisor; 75% acceptance rate)
  30. Calvo-Amodio, J., Ng, E.H., Vergara, H.A., Patterson, P.E., Hernandez, S. (2014). A proposed integrated framework for identifying special signal patterns from pseudo-real-time data: Application to geocoded social media data. *Proceedings of the American Society for Engineering Management 2014 International Annual Conference, Virginia Beach, Va.* pp. 193-199 (provided main idea, 75% acceptance rate)
  31. **Zhang, H., Calvo-Amodio, J.**, Haapala, K. R. (2013). A Systems Thinking Approach for Modeling Sustainable Manufacturing Problems in Enterprises, *Proceedings of the American Society for Engineering Management 2013 International Annual Conference, Minneapolis, MN.* pp. 239-249 (student advisor; 75% acceptance rate)
  32. **McGrath, J.**, Calvo-Amodio, J. A State of the Art Matrix Analysis on Technology Based Training in Rapid Turnover Workplaces, *Proceedings of the American Society for*

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*Engineering Management 2013 International Annual Conference, Minneapolis, MN.* pp. 430-439 (provided main idea, student advisor; 75% acceptance rate)

33. **Zhang, H.**, Calvo-Amodio, J., Haapala, K.R. (2013). Assisting Sustainable Manufacturing through System Dynamics: A Conceptual Model, *Proceedings of NAMRI/SME, Vol. 31, Madison, WI.* (student advisor; acceptance rate not available)
34. Calvo-Amodio, J. (2013) Transition-Phase Management Model as an Action Research Tool for Healthcare Managers, *Proceedings of the 2013 Industrial and Systems Engineering Research Conference, San Juan, Puerto Rico.* p. 765 (acceptance rate not available)
35. Calvo-Amodio, J., Patterson, P., & Smith, M. L. (2012). A Proposed Conceptual System Dynamics Model for Managing Transition-Phases in Healthcare Environments. *Proceedings of the American Society for Engineering Management 2012 International Annual Conference, Virginia Beach, Va.* pp. 278-283 (primary author)
36. Ng, E.H, Calvo-Amodio, J, Natarajan, G., Simonton, J. (2012). When to Stop Beating a Dead Horse: Economic of Terminating Failed Project. *Proceedings of the American Society for Engineering Management 2012 International Annual Conference, Virginia Beach, Va.* pp. 171-173 (contributed text)

### **C1.4. Other Peer-Reviewed Publications**

The following papers appeared in proceedings that were distributed primarily to attendees (as CDs, printed volumes, availability through a public website, etc.).

1. **Taylor, S.G.**, Calvo-Amodio, J., Well, J. (2019). Defining and Measuring the Systems Thinking Learning Process for Non-Experts. *In Proceedings of the 63<sup>rd</sup> Annual Meeting of the ISSS - 2019 Corvallis, OR. Vol. 1. No.1* (80% acceptance rate)
2. **Joshi, S.P.**, Calvo-Amodio, J. (2018) Participative management-led kaizen (continuous process improvement). *In Proceedings of the 62<sup>nd</sup> Annual Meeting of the ISSS - 2018 Corvallis, OR. Vol. 1. No.1* (80% acceptance rate)
3. **Tong, A.**, Calvo-Amodio, J., Haapala, K.R., (2017) Integration of Sustainability Performance Indicators and the Viable System Model toward a Sustainable Systems Assessment Methodology. *In Proceedings of the 61st Annual Meeting of the ISSS - 2017 Vienna, Austria. Vol. 1. No.1* (co-advised student; 85% acceptance rate, 12 pages -paper won Anatole Rapaport Best Paper Award)
4. **Wang, S.**, Calvo-Amodio, J., (2017) Understanding Human Activity Systems: A Study Using General Systems Science Principles. *In Proceedings of the 61st Annual Meeting of the ISSS - 2017 Vienna, Austria. Vol. 1. No.1* (provided main idea, advised student; 85% acceptance rate; 10 pages)
5. **Narwankar, C.S., Wang, S., Elatlassi, R.**, Calvo-Amodio, J., (2016) Complementarist Approach to Categorize Different Stakeholders Within Socio-Technical Systems. *In Proceedings of the 60th Annual Meeting of the ISSS - 2016 Boulder, Colorado. Vol. 1. No.1* (provided main idea; 85% acceptance rate, 8 pages)
6. **Elatlassi, R., Narwankar, C.S.**, Calvo-Amodio, J., (2016) A Categorization of Socio-Technical Systems Approaches Based on Context and Purpose. *In Proceedings of the 60th Annual Meeting of the ISSS - 2016 Boulder, Colorado. Vol. 1. No.1* (provided main idea; 85% acceptance rate, 10 pages)
7. **Moore, B.**, Calvo-Amodio, J., Junker, J. F., (2015) Applying a Framework for Complementarist Intervention Approaches to Service Organizations to Achieve a Sustainable Holistic Management Model. *Proceedings of the 59th Annual Meeting of the ISSS - 2015 Berlin, Germany. Vol. 1. No.1* (provided main idea; 85% acceptance rate, 10 pages)

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8. Calvo-Amodio, J., Flumerfelt, S. (2015) Sense-Making Between and Across Stakeholder Perspectives. *Proceedings of the 59th Annual Meeting of the ISSS - 2015 Berlin, Germany. Vol. 1. No.1* (primary author; 85% acceptance rate, 6 pages)
9. **McGrath, J. O., Bintoro, L. S., Chongvilaiwan, T.**, Calvo-Amodio, J., McGinley, P. J., Shepherd, C. R., & Van Ness, E. E. (2014). Truck Cab Scoring Tool: An Ergonomic and Anthropometric Analysis Tool for Assisting Fleet-Purchasing Decisions. In *Transportation Research Board 93rd Annual Meeting (No. 14-3108). Washington DC, 10 pages*
10. Calvo-Amodio, J., Flumerfelt, S., Hoyle, C. (2014) A complementarist approach to lean systems management. *2014 International Society for the Systems Sciences Conference, Washington D.C.* (primary author), 10 pages
11. Robinson, T. A., Calvo-Amodio, J., & Parmigiani, J. P. (2014) Capstone Design as an Individual Writing Experience. *Proceedings of the 2014 Capstone Conference, Columbus, OH.* (contributed text, 10 pages)
12. Parmigiani, J. P., Calvo-Amodio, J., & Robinson, T. A. (2014) Acquiring a Consistent Source of Quality Capstone Projects. *Proceedings of the 2014 Capstone Conference, Columbus, OH.* (contributed text, 10 pages)

### **C1.5. Papers Currently under Peer Review**

1. Qais Jahander, Grant Zimmerman; Amila Hadziomerspahic; Molly A. Martin; David N. Sillars; Ean H. Ng; Javier Calvo-Amodio. Economic and Operational Impacts of Three-Dimensional Engineered Model and Automated Machine Guidance on Statewide Roadway Projects, *Practice Periodical on Structural Design and Construction*

### **C1.6. Other Publications**

1. Calvo-Amodio, J. (2021). Theoretical Foundations and Practical Application of Purposeful Human Activity Systems., *Systems Engineering Newsjournal*, 101,21.
2. Rousseau, D., Calvo-Amodio, J., (2019) Systems Principles, *Systems Science, and the Future of Systems Engineering*, *INSIGHT Magazine, INCOSE*, V 22, Issue 1

## **C2. Professional Meetings, Symposia, and Conferences**

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### **C2.1. Presentations to Professional Groups** (includes presentations of papers cited in C1.3)

- Invited Workshop: “Applying systems thinking principles in educational equity, governance, and community engagement”, Oregon State School Board Association, November, 2022
- Invited Panelist, “New Horizons of Systems Science: Recent Advances in Systems Science”, *Systems Dynamics Society Webinar Series, 2022*
- Invited Talk: “Systems Science and Systems Engineering” *INCOSE Seattle Chapter, 2022*
- Invited Talk, “Design of Purposeful Human Activity Systems: Systems Theory Informs Systems Practice”, *Mesmer Research Group, 2021*
- Invited Talk, “Systems literacy: a reductionist approach”, *ISSS Mini-Symposia, 2020*
- Invited Talk: “Purposeful Human Activity Systems”, *INCOSE Cascade Chapter, 2020*
- Invited Seminar, “Principles of Systems Science”, *Academic Leaders Series, Tecnológico de Monterrey, Mexico.*
- Plenary speaker, 62nd Annual Meeting of the ISSS - 2018 Corvallis, OR, “Systems Principles as Activity Drivers”, July 2018.

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- Plenary speaker, 61st Annual Meeting of the ISSS - 2017 Vienna, Austria, “Creating Systems Sensibility in at-Risk Middle Schools: An Oregon State University Science & Math Investigative Learning Experiences Project”, July 2017.
- Invited Seminar, University of Hull, Centre for Systems Studies, United Kingdom, “Continuous Process Improvement in Manufacturing Environments: A Systemic Perspective on Culture, Climate, and Team Temperature,” May 2017
- Invited presentation, Systems Sciences Working Group, International Workshop of the International Council on Systems Engineering, Los Angeles, CA, “Systems Approaches in Engineering Environments”, January 2017
- Invited Talk, IISE Western Regional Conference, Oregon State University, “Systems Engineering,” February 2017
- Contributed Talk, 59th Annual Meeting of the ISSS - 2015 Berlin, Germany “Sense-Making Between and Across Stakeholder Perspectives”, August 2015
- Invited Seminar, OSU / ESH Corporate Partners Seminar, “A Systemic Perspective on Safety,” March 2015
- Contributed Talk, American Society for Engineering Management 2012 International Annual Conference, Virginia Beach, Va. “A proposed integrated framework for identifying special signal patterns from pseudo-real-time data: Application to geocoded social media data”, October 2014
- Invited Talk, EMTSP National Conference (AASHTO), “Truck Cab Scoring Tool: An Ergonomic and Anthropometric Analysis Tool for Assisting Fleet Purchasing Decisions”, June 2014
- Contributed Talk, Washington D.C. “A complementarist approach to lean systems management”, July 2014
- Contributed Talk, 013 Industrial and Systems Engineering Research Conference, San Juan, Puerto Rico, “Transition-Phase Management Model as an Action Research Tool for Healthcare Managers”, May 2013
- Contributed Talk, American Society for Engineering Management 2012 International Annual Conference, Virginia Beach, Va. “A Proposed Conceptual System Dynamics Model for Managing Transition-Phases in Healthcare Environments”, October 2012
- Contributed Talk, American Society for Engineering Management 2012 International Annual Conference, Virginia Beach, Va. “When to Stop Beating a Dead Horse: Economic of Terminating Failed Project”, October 2012

### **C2.2. Participation at Invitational Workshops**

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### **C3. Grant and Contract Support**

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List covers grants/contracts on which candidate served as PI or coPI only, including those funded through other institutions. “My share” indicates the amount of funding, if any, over which the candidate had control.

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<i>Agency &amp; Dates</i>	<i>PI (and coPIs)</i>	<i>Title</i>	<i>Total Budget</i>	<i>My Share</i>
OSU's Division of Finance and Administration 9/22 – 09/23	Javier Calvo- Amodio	DFA Framework for Success	\$256,588	\$256,588
OSU's Division of Finance and Administration 9/21 – 09/22	Javier Calvo- Amodio	DFA Framework for Success	\$148,485	\$148,485
HP and COE 1/20 – 09/20	Javier Calvo- Amodio	HP SEED	\$20,000	\$20,000
OSU's Division of Finance and Administration 9/20 – 09/21	Javier Calvo- Amodio	DFA Framework for Success	\$129,550	\$129,550
OSU's Division of Finance and Administration 9/19 – 09/20	Javier Calvo- Amodio	DFA Framework for Success	\$120,837	\$120,837
Boeing Company and OMI 9/18 – 9/19	Javier Calvo- Amodio	Creation of a Daily Cadence Production System – Phase V	\$164,532	\$148,079
OSU's Division of Finance and Administration 10/18 – 06/19	Javier Calvo- Amodio	DFA Framework for Success	\$117,959	\$117,959
Boeing Company and OMI 9/17 – 9/18	Javier Calvo- Amodio, Ean H. Ng	Creation of a Daily Cadence Production System – Phase IV	\$180,00	\$162,000
NSF 8/17 – 7/20	Adam Schultz, Javier Calvo- Amodio, Eduardo Cotilla- Sanchez	PFI: BIC - A Smart GIC- Resilient Power Grid: Cognitive Control Enabled by Data Mining at the Nexus of Space Weather, Geophysics and Power Systems Engineering	\$996,929	\$122,467
Oregon Department of Transportation 4/16 – 6/17	David Sillars, Susan Capalbo, Ean	ODOT Return on Investment for Engineering Automation Study	\$355,064	\$131,373



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<i>Agency &amp; Dates</i>	<i>PI (and coPIs)</i>	<i>Title</i>	<i>Total Budget</i>	<i>My Share</i>
	Ng, Javier Calvo-Amodio			
Boeing Company and OMI 9/16 – 9/17	Javier Calvo-Amodio	Creation of a Daily Cadence Production System – Phase III	\$173,954	\$173,954
The OSU Athletic Department 3/15 – 7/15	Javier Calvo-Amodio, Ean Ng	OSU Athletic Department Teams Travel Operations Process Improvement	\$37,596	\$18,798
Boeing Company and OMI 9/15 – 9/16	Javier Calvo-Amodio	Creation of a Daily Cadence Production System – Phase II	\$104,000	\$104,000
L&M Steel Fabrication and OMI 4/15 – 3/16	Javier Calvo-Amodio	Improving In-Plant Raw Materials and Work in Process Flow through Value-Added Processes	\$71,202	\$71,202
Boeing Company and OMI 9/14 – 9/15	Javier Calvo-Amodio	Creation of a Daily Cadence Production System – Phase I	\$102,000	\$102,000
Advanced Nutrients 4/15 – 11/15	Javier Calvo-Amodio, Ean Ng	Defining Optimal Materials Handling and Labor Cost Allocation Methods	\$40,471	\$20,236
Waste Management 9/14 – 3/15	John Parmigiani, Javier Calvo-Amodio, Geoff Hollinger	Design of a Bird Detection System	\$10,000	\$3,000
Sheldon Manufacturing and OMI 11/14 – 4/15	Javier Calvo-Amodio, Karl Haapala	Development and Implementation of a Level Pull System	\$14,926	\$7,463
Energy Efficiency Center 09/14 – 09/15	Javier Calvo-Amodio (through MOU)	Design of an Energy Analysis Collaborative Structure	\$29,207	\$29,207
Energy Efficiency Center 09/13 – 09/15	PI: Javier Calvo-Amodio (through MOU)	Sustainable Management Structure for Dynamic Non-Profit Organizations	\$62,165	\$62,165

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<i>Agency &amp; Dates</i>	<i>PI (and coPIs)</i>	<i>Title</i>	<i>Total Budget</i>	<i>My Share</i>
Portland General Electric 09/14 – 04/15	PI: Karl Haapala Co-PI: Javier Calvo-Amodio	Workshop: Sustainable Engineering in the Energy Sector	\$12,789	\$6,395
Sheldon Manufacturing and OMI 11/14 – 4/15	Karl Haapala, Javier Calvo-Amodio	Using Process and System Modeling to Understand Manufacturing Costs	\$12,000	\$6,000
		<b>Totals</b>	<b>\$2,980,254</b>	<b>\$1,961,758</b>

### **C3.1. Funding for Graduate Student Fellowships**

<i>Year</i>	<i>Fellowship</i>	<i>Student Name</i>	<i>Approx. Value</i>
2022	NSF GRF	Ethan L Copple	\$147,000

### **C3.2. Donations**

<i>Year</i>	<i>Source</i>	<i>Donation</i>	<i>Approx Value</i>
2013	Oregon Freeze Dry	Cash for Capstone Senior Design	\$5,000
2013	Oregon Department of Transportation	Cash for Capstone Senior Design	\$5,000
2013	Devers Eye Clinic	Cash for Capstone Senior Design	\$5,000
2014	Devers Eye Clinic	Cash for Capstone Senior Design	\$5,000
2014	Oregon Freeze Dry	Cash for Capstone Senior Design	\$10,000
2015	Oregon Freeze Dry	Cash for Capstone Senior Design	\$5,000
2015	Coach Glass	Cash for Capstone Senior Design	\$5,000
2016	Oregon Freeze Dry	Cash for Capstone Senior Design	\$5,000
		<i>Totals</i>	\$45,000

### **C3.3. Proposals Currently under Review**

<i>Agency</i>	<i>PI (and coPIs)</i>	<i>Title</i>	<i>Budget</i>	<i>Duration</i>
n.a.				

### **C4. Patents Filed and In Process**

None

### **C5. Other Scholarship and Creative Activities**

Cab Analysis and Scoring Tool (CAST) licensed as freeware; made available to Federal and State Agencies through <http://www.emtsp.org/> or ODOT. ODOT has used CAST as part of their RFP process to replace their 10 Ton truck fleet (highlighted in MIME main webpage).

## **D. Service**

### **D1. University Service**

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- Area Lead (IE)
- COE Interdisciplinary Program Committee chair
- P&T Subcommittee
- IE GPC
- Interim Meng EM director
- IE UPC co-chair
- Student Organization Advising: Alpha Pi Mu
- Student Organization Advising: IISE
- Student Organization Advising: Toastmasters Club
- University Commencement
- IE UPC chair
- Student Organization Advising: IISE
- Student Organization Advising: Toastmasters Club
- P&T Peer Teaching committee Industrial Engineering and Manufacturing Engineering ABET Coordinator (2012 – present)
- OSU Institutional Review Board Member - Board 1 (2013 – 2015)
- Electronic Research Administration (ERA) System Evaluation Committee Member (2014-2015)
- Broader Impacts Invitational (2012 and 2013)
- 2013 Robotics Faculty Search Committee (2014)
- Explore Engineering Careers IME speaker (2012 – present)
- SME Mock Interviews (2012)
- School of MIME Faculty Search Committee, AY13/14
- School of MIME Faculty Search Committee, AY16/17
- School of MIME, IME Graduate Program Committee (2016-present)
- IME ABET Coordinator (2012-present)
- IISE Chapter co-advisor (2016-present)
- MIME Distinguished Speaker Committee (2016-present)
- Toastmasters MIME Speaks Club Advisor (2015-present)
- SESEY Advisor (2013-present)
- OSU Commencement Faculty Marshall (2013-present)

### **D2. Service to the Profession**

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#### **D2.1. Journal Editorships**

- Deputy Editor for Systems Research and Behavioral Science, 2021-present
- Guest Editor, Advances in Systems Sciences, Systems, 2018-2021
- Associate editor for Engineering Management Journal, 2017-present

#### **D2.2. Conference and Workshop Organization**

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- 63<sup>rd</sup> Annual Meeting of the International Society for the Systems Sciences, 2019, Corvallis, OR
- 62<sup>nd</sup> Annual Meeting of the International Society for the Systems Sciences, 2018, Corvallis, OR

### **D2.3. Conference Program Committees**

- International Council on Systems Engineering - International Workshop, Systems Science Working Group 2021
- International Council on Systems Engineering - International Workshop, Systems Science Working Group 2022
- Systems Engineering Track Co-Chair, American Society for Engineering Management International Annual Conference, 2012-present
- Systems Engineering Track Co-Chair, Institute of Industrial and Systems Engineers Annual Conference & Expo, 2017-present
- Systems Modelling and Systems Engineering Special Integration Group Chair, International Society for the Systems Sciences Annual Meeting and World Conference

### **D2.4. Reviewing**

- Systems Engineering Handbook 5.0
- Systems Engineering Body of Knowledge
- INCOSE Vision 2035
- NSF Grant Review Panels. Served in two in-person panels for SYS Program in the CMMI division.

### **D2.5. Other**

## **D3. Service to the Public**

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### **D3.1. Professionally Related**

Development of Industrial Engineering and Systems Sciences lessons for middle school students in collaboration with OSU's SMILE program. The lessons have been popular among teachers and students and are constantly being used. The lessons in systems sciences have been lauded by the International Society for the Systems Sciences and will be highlighted in their website after I present them on a plenary session.

### **D3.2. Non-Professionally Related (optional)**

## **E. Awards**

### **E1. National and International Awards**

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**Fellow of the American Society for Engineering Management**

## **E2. State and Regional Awards**

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None

## **E3. University or Community Awards**

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**The Student Learning and Success Award, 2016.** Oregon State University recognizes outstanding achievement by an Oregon State University team.

## **F. Contributions to University's DEI Goals**

I have brought to the attention of leadership that DEI must also include the perspectives of non-white and non-USA-born individuals. Typically, all efforts are filtered through the biases of white USA-born individuals, which by default results in non-inclusive expectations. In addition, I constantly highlight, in my classes, with my peers, and leaders, opportunities to learn to be more aware of diversity, to make sure we are more equitable and inclusive. I believe that until we, as a community, begin treating DEI as part of our jobs and not as an ancillary item that requires a box to be ticked, efforts will be mostly lip-service (as represented in this section – there are no measurable outcomes or objectives).

Operationally, my classes are designed to embrace different socio-economical, religious, gender, disability, backgrounds and create an open environment for students to bring up issues that might need attention.

I constantly meet with students, at their request, to help them navigate DEI-related issues and events. It is important to note that students tend to confide in me and seek my advice with school and life-related concerns.