

**BIBLIOGRAPHY**  
**CARLOS FERNANDEZ-PELLO**

**I. PEER REVIEWED PUBLICATIONS**

**A. Archival Journals**

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167. K. Miyamoto, X. Huang, N. Hashimoto, C. Fernandez-Pello and O. Fujita "Flammability Limit of Polyethylene Insulated Wires Under Varying Oxygen Concentration and External Radiation" 2016 Spring Technical Meeting, Western States Section/Combustion Institute, Seattle, WA, March 20-21, 2016
168. J.L. Urban, C.D. Zak, J. Song and C. Fernandez-Pello "Smolder Spot Ignition of Natural Fuels by a Hot Metal Particle" 2016 Spring Technical Meeting, Western States Section/Combustion Institute, Seattle, WA, March 20-21, 2016
169. D.C. Murphy, M. Sanchez-Sanz and C. Fernandez-Pello "The Role of Non-Thermal Electrons in Flame Acceleration" 2016 Spring Technical Meeting, Western States Section/Combustion Institute, Seattle, WA, March 20-21, 2016
170. J.L. Urban, D.C. Murphy and C. Fernandez-Pello "Oxidative Heating of Iron Sparks and Hot Particles" 2016 Spring Technical Meeting, Western States Section/Combustion Institute, Seattle, WA, March 20-21, 2016
171. S. L. Olson, P. V. Ferkul, S. Bhattacharjee, F. J. Miller, A. C. Fernandez-Pello, J. S. T'ien, "Utilizing ISS on-board resources to maximize science output from the Burning and Suppression of Solids – II (BASS-II) Experiment" ISS Conference, San Diego, CA., July 12-14, 2016.
172. Y. Kobayashi, X. Huang, C. Fernandez-Pello, Melting and Dripping of Polyethylene Insulation in Flame Spread over Wires, 54th Symposium (Japanese) on Combustion, Sendai, Japan, 23-25 Nov 2016.
173. Y. Kobayashi, Y. Konno, X. Huang, M. Tsue, O. Fujita, C. Fernandez-Pello, "Flame Spread and Dripping Behaviors in Horizontal and Vertical Wires", 10th US National Combustion Meeting, College Park, MA, USA, 23-26 Apr 2017.
174. M. Thomsen, X. Huang, A. Alonso, C. Fernandez-Pello, D.L. Urban and G.A. Ruff, "Flame Spread Over a Fire Resistant Fabric Under External Heating". 10th US National Combustion Meeting, College Park, MA, USA April 2017
175. J. L Urban, D. C. Murphy, and C. Fernandez-Pello. "Enhanced Spot Ignition Potential if Iron Sparks". T10th United States National Meeting on Combustion, College Park, MD, April 23-26, 2017.

176. J. L Urban, J, Song, N, Liu, and A.C. Fernandez-Pello. "On the effect of Fuel Moisture Content on the Smoldering Ignition of Natural Fuels by Firebrands". The 10th United States National Meeting on Combustion, College Park, MD, April 23-26, 2017.
- 177 J. Song, J. L Urban, N. Liu, and C. Fernandez-Pello. "On the Effect of Fuel Moisture Content on the Smoldering Ignition of Natural Fuels by Firebrands". The Mediterranean Combustion Symposium, Naples, Italy, September 17-21, 2017
178. J.L. Urban, D. Shirazi, M. Vicariotto, D. Dunn-Rankin, D.C. Murphy and C Fernandez-Pello. "Temperature Measurement of Glowing Firebrands with Multi-Color Pyrometry", 2017 Fall Technical Meeting, Western States Section of the Combustion Institute, Laramie WY, October 2017
179. M. Thomsen, X. Huang, C. Fernandez-Pello, A. Alonso, D.L. Urban, G.A. Ruff, "The effect of pressure and external heating on the nomex flame spread limits (LOC)", 2017 Fall Tech. Meet. West. States Sect. Combust. Institute, WSSCI 2017, Laramie. WY, October 2017.
180. M. Thomsen, X. Huang, C. Fernandez-Pello, D.L. Urban, G.A. Ruff, Concurrent Flame Spread over Nomex under External Heating, in: 33rd Meeting American Society for Gravitational and Space Research, October 2017.
181. JL Urban and C Fernandez-Pello. "Thermal Imaging & Smoldering Ignition Potential of Glowing Firebrands", Fire Continuum Conference, Missoula MT, May 2018
182. M. Thomsen, C. Fernandez-Pello, X. Huang, S. Olson and P. Ferkul, "The Effect of Buoyancy on Downward Flame Spread over PMMA cylinders" 34th Annual Meeting of The American Society For Gravitational and Space Research. Oct. 31-Nov. 3, 2018
- 183 M. Thomsen, X. Huang, C. Fernandez-Pello, D.L. Urban, G.A. Ruff, "Upward Concurrent Flame Spread: Effect of Gravity" 12<sup>th</sup> Asian Microgravity Symposium, AMS2018, Zhuhai., China, November 12-16, 2018 (Keynote Lecture)
184. S.L. Link, X. Huang, C. Fernandez-Pello, S. Olson and P. Ferkul "Limiting Oxygen Concentration of Microgravity Opposed Flame Spread" 12<sup>th</sup> Asian Microgravity Symposium, AMS2018, Zhuhai., China, November 12-16, 2018
- 185.Y. Konno, O. Fujita, I. Noishiki, N. Hashimoto, Y. Kobayashi, S. Nakaya, M. Tsue, C. Fernandez-Pello. "Opposed-flow Flame Spread and Extinction Limits of Electric Wires under Various External Radiant Flux in Microgravity" " 12<sup>th</sup> Asian Microgravity Symposium, AMS2018, Zhuhai., China, November 12-16, 2018
186. L. Gagnon, J. L Urban, Y. Lu, C. Fernandez-Pello, V.P. Carey, Y. Konno and O. Fujita "Effect of Flow Velocity on Flame Spread along Insulated Electrical Wires" 11th U. S. National Combustion Meeting, Pasadena, CA, March 24-27, 2019

187. M. Thomsen, C. Fernandez-Pello, X. Huang, S. Olson and P. Ferkul, "Downward Burning of PMMA Cylinders in Spacecraft Environments" 11th U. S. National Combustion Meeting, Pasadena, CA, March 24–27, 2019
188. Y. Liu, J. Urban, C. Fernandez-Pello and C. Xu "Temperature and Motion Tracking of Metal Spark Sprays" 11th U. S. National Combustion Meeting, Pasadena, CA, March 24–27, 2019
189. M. Thomsen, C. Fernandez-Pello, X. Huang, S. Olson and P. Ferkul, "Opposed Flow Burning of PMMA Cylinders in Normoxic Conditions" 11th Mediterranean Combustion Symposium, Tenerife, Spain, June 16-20, 2019
190. M. Thomsen, S. Fereres, C. Fernandez-Pello, D.L. Urban and G.A. Ruff "Modeling the Effect of Buoyancy on the Flame Spread over Cotton" 11th Mediterranean Combustion Symposium, Tenerife, Spain, June 16-20, 2019
191. L. Gagnon, J. L Urban, Y. Lu, C. Fernandez-Pello, V.P. Carey, Y. Konno and O. Fujita "Effect of Ambient Pressure on the Piloted Ignition and Subsequent Flame Spread Across Simulated Electrical Wires" 2019 Fall Technical Meeting of the Western States Section of the Combustion Institute, October 14-15, 2019, Albuquerque, NM.
192. M. Thomsen, S. Fereres, C. Fernandez-Pello, D.L. Urban, G.A. Ruff, "Understanding the Role of Low Pressure on Upward Flame Spread over Thin Cotton", 2019 Fall Technical Meeting of the Western States Section of the Combustion Institute, October 14-15,2019, Albuquerque, NM
193. L. Gagnon, C. Fernandez-Pello, J. Urban, V. Carey, Y. Konno and O. Fujita "Analyzing and Predicting Concurrent Flame Spread over Electrical Wires in Reduced Ambient Pressures" 12th US National Combustion Meeting, May 24-26, 2021 (on line).
194. L. Carmignani, P. Garg, M. Thomsen, C. Fernandez-Pello, D. Urban and G. Ruff "Flame Spread and Burning Rates of Spreading Flames in Sub-atmospheric Pressures" American Society for Gravitational and Space Research (ASGSR) 2021, Baltimore, MD, November 3-6, 2021
195. C. Liveretou, L. Carmignani, C. Scudiere, M. Thomsen, M. Gollner, C. Fernandez-Pello, D. S. Olson and P. Ferkul "Downward Flame Spread Rate Over PMMA Cylinders Under External Radiant Heating and Sub-atmospheric Pressure" American Society for Gravitational and Space Research (ASGSR) 2021, Baltimore, MD, November 3-6, 2021
196. P. Garg. I Shan, M. Hajilou, C. Fernandez-Pello and M. Gollner "Flammability Limits of Cellulose Powder under Varying Oxygen, Heating and Wind Conditions" 2022 Spring Technical Meeting of the Western States Section of the Combustion Institute, March 21–22, 2022, Stanford, CA

197. C. Liveretou, L. Carmignani, C. Scudiere, M. Thomsen, M. Gollner, C. Fernandez-Pello, D. S. Olson and P. Ferkul, "Comparing the Combined Effects of Ambient Pressure and External Heat Flux on Flame Spread Rate Behavior in Vertical PMMA Cylinders" 2022 Spring Technical Meeting of the Western States Section of the Combustion Institute, March 21–22, 2022, Stanford, CA
198. L. Carmignani, P. Garg, J. Cobian-Iñiguez, S. Stephens, N. Finney, M. Gollner, and C. Fernandez-Pello "Wind and Geometry Effects on Smoldering of Woody Fuels" IAWF Fire and Climate Conference, May 23-27, 2022, Pasadena, California

#### **IV. PRESENTATIONS AT MEETINGS AND SEMINARS**

1. "Torres de Refrigeracion," II Convencion de Ingenieros Industriales, Barcelona (Spain), October 1971.
2. "Laminar Flame Spread Over Flat Solid Surfaces," Princeton University, Princeton, NJ, July, 1976.
3. "Experimental and Theoretical Studies of Flame Spread Over Solid Fuels," AVCO Everett Research Laboratories, Everett, MA, August, 1976.
4. "Downward Flame Spread Over the Surface of Solid Fuels," University of California, Berkeley, CA, October, 1976.
5. "A Theoretical Model of Downward Flame Spread Over Flat Solid Combustibles," Harvard University, Cambridge, MA, October, 1976.
6. "Upward Flame Spread Under the Influence of Externally Applied Thermal Radiation," Brown University, Providence, RI, March, 1977.
7. "Downward Flame Spread in an Opposed Forced Flow," Princeton University, Princeton, NJ, April 1978.
8. "Downward Flame Spread in an Opposed Forced Flow," National Bureau of Standards, Washington, D.C., July 1978.
9. "Flame Spread Mechanisms," University of California, Berkeley, CA, October, 1978.
10. "Flame Spread in a Forward Forced Flow," Northwestern University, Evanston, IL, November, 1978.
11. "Flame Spread in a Forward Forced Flow," Princeton University, Princeton, NJ, February, 1979.

12. "Energy Transfer Mechanisms in Flame Propagation," University of Kentucky, Lexington, KY, March, 1979.
13. "Flame Propagation in Opposed Forced Flows," Princeton University, Princeton, NJ, November 1979.
14. "Combustion of Solid and Liquid Fuels," A week-long series of seminars given at the National Autonomous University of Mexico (U.N.A.M.), Mexico City, Mexico, March 1980.
15. "Flame Spread in an Opposed Flow: Effect of Oxygen Concentration and Gas Velocity," University of California, Berkeley, CA, May, 1980.
16. "Free-Convective Burning of a Fuel Droplet," National Bureau of Standards, Washington, D.C., September, 1980.
17. "A Theory for the Free-Convective Burning of a Condensed Fuel Particle," University of California, Berkeley, CA, November, 1980.
18. "Combustion and Extinction of a Condensed Fuel Particle in a Highly Buoyant Environment," Sandia National Laboratories, Livermore, CA, December, 1980.
19. "Panel Discussion on Flame Spread," invited lecture at the 1981 Fall Technical Meeting, Eastern States Section/The Combustion Institute, October 1981.
20. "Combustion of Condensed Fuels," a series of eight weekly seminars given at the Department of Mechanical Engineering, Osaka University, Osaka, Japan, January-March, 1982.
21. "Combustion Processes," a series of four seminars given at the Faculty of Engineering, Autonomous University of Mexico (U.N.A.M.), Mexico City, Mexico, June 1982.
22. "Flame Spread Over Condensed Fuels," Ishikawajima-Harima Heavy Industries, Co., Tokyo, Japan, January 1983.
23. "Micro-Explosive Combustion of Droplets of Emulsified and Multicomponent Fuels," Matsushita Electrical Industrial Co., Nara, Japan, January 1983.
24. "Droplet Combustion of Multi-Component Fuels," Department of Energy Engineering, Toyohashi University of Technology, Toyohashi, Japan, January 1983.
25. "Gas Phase Ignition by Catalytic Surfaces," Osaka Gas Co., Osaka, Japan, March 1983.
26. "Controlling Mechanisms in the Combustion of Condensed Fuels," Instituto Politecnico Nacional, ESIME, Seccion de Graduados, Mexico, D.F., April 1983.

27. "Flame Spread Mechanisms," Department of Reaction Chemistry, University of Tokyo, Japan, June 1983.
28. "Convective Combustion of Fuel Droplets," Engineering Research Institute, University of Tokyo, Tokyo, Japan, June 1983.
29. "Mixed Convective Combustion of Condensed Fuels," Institute of Interdisciplinary Studies, University of Tokyo, Tokyo, Japan, July 1983.
30. "Micro-Explosive Combustion of Droplets of Fuel Emulsions and Mixtures," Research Institute, Ishikawajima-Harima Heavy Industries, Tokyo, Japan, August 1983.
31. "Convective Droplet Evaporation and Combustion with Internal Circulation," Stanford University, Stanford, CA, June 1984.
32. "Ignition and Extinction of Condensed Fuels," University of California, Berkeley, CA, September, 1984.
33. "Flame Spread over Liquid Fuels with Emphasis in Cryogenic Fuels," Combustion Research Workshop, Cairo University, Egypt, February 1985.
34. "Ignition of Premixed Gases by Cylindrical Surfaces," Madrid University, Spain, March 1985.
35. "Extinction of Diffusion Flames," University of California, Davis, CA, May 1985.
36. "Extinction and Ignition of Condensed Fuels," ITSEMAP, Madrid, Spain, July 1985.
37. "Extinction of a Diffusion Flame on a Vertical Combustible Surface," NBS, Washington, D.C., April 1986.
38. "Stabilization of Diffusion Flames on Flat Combustible Surfaces," Pennsylvania State University, College Park, PA, April 1986.
39. "Flame Spread Mechanisms," University of California, San Diego, CA, April 1987.
40. "Smoldering in Micro-Gravity," CEDETI, Madrid, Spain, June 1987.
41. "Convective Droplet Combustion," University of Naples, Naples, Italy, July 1987.
42. "Flame Spread Mechanisms," University of Naples, Naples, Italy, July 1987.
43. "Flame Spread over Liquid Fuels," CNRS, Poitiers, France, September 1987.
44. "Droplet Combustion," CNRS, Orleans, France, November 1987.

45. "Fire Dynamics of Electrical Cables," LOSC, Londonderry, Australia, May 1988.
46. "Flame Spread Controlling Mechanisms," University of Sydney, Sydney, Australia, June 1988.
47. "Instabilities in Burner Anchored Premixed Flames," Osaka Gas Co., Osaka, Japan, June 1988.
48. "Turbulent Flame Spread," NIST Annual Fire Conference, Maryland, October 1988.
49. "Cellular Flame Instabilities," University of Naples, Naples, Italy, June 1989.
50. "Concurrent Turbulent Flame Spread," 11th Panel Meeting of the UJNR Panel on Fire Research and Safety, October 1989.
51. "Cellular Premixed Flames in Micro-Gravity," Tsukuba International Workshop on Combustion, Tsukuba, Japan, March 21-24, 1990.
52. "Cellular Premixed Flames in Micro-Gravity," Tsukuba International Workshop on Combustion, Tsukuba, Japan, March 21-24, 1990.
53. "Window Glass Breaking Under Radiant Heat Flux from a Fire," ASTM Research Review, ASTM Spring Meeting, San Francisco, CA, May 1990.
54. "Pool and Wall Fire: Some Fundamental Aspects," lead-off paper ASME/JSME Thermal Engineering Joint Conference, Reno, NV 1991.
55. "Turbulent Solid Fuel Combustion," Hitachi, Tsukuba City, Japan, January 1991 and Tokyo University January 1991.
56. "Instabilities in Premixed Flames," MEL, MITI, Tsukuba City, Japan, January 1991 and Osaka Gas, Osaka, January 1991.
57. "Experience de Combustion Dans L'Espace et dans les Conditions de Microgravite" Espace Pierre Mendes-France, Salle Confluence, Poitiers, France, March 27, 1992.
58. "Analysis of a Run Away High Rack Storage Fire," NFPA Fall Meeting, Dallas, TX, November 1992 (with N.J. Alvares, H. Hasegawa, K. Hout and J. White).
59. "Effect of Flow Parameters on CO and Soot Production in Flame Spread," Second Workshop on Developing a Predictive Capability for CO Formation in Fires, New Orleans, LA, March 1993.

60. "Combustion in Microgravity," series of seminars given at the University of Barcelona and Girona, Spain, April 1993.
61. "Smoldering Combustion in Microgravity," University of California, San Diego, April 1993.
62. "Smoldering Combustion Experiments in the Space Shuttle," University of California, Davis, May 1993.
63. "USML-1 Glovebox Experiment #6 - Smoldering Combustion," NASA, USML-1 progress Report Meeting, Huntsville, AL, September 1993.
64. "Smoldering Combustion in Zero Gravity: From Ground to Space Based Experiments," Hitachi Mechanical Engineering Lab, Tsuchiura, Japan, November 1993.
65. "Premixed and Diffusion Flames in Microgravity," Osaka Gas, Osaka, Japan, November 1993.
66. "On Ignition and Flame Spread," University of California, San Diego, May 1994.
67. "Smoldering Combustion," Northwestern University, Evanston, IL, May 1994.
68. "Smoldering Combustion in Microgravity," University of California, Irvine, May 1994.
69. "Smoldering in the Presence of a Gas/Solid Interface and its Transition to Flaming," Work-in-Progress Poster, Twenty-Fifth International Symposium on Combustion, Irvine, CA, Aug. 1994 (with S.O. Tse, C.G. Sanchez and O. Fujita).
70. "Concurrent Flame Spread: The Combined Effect of Flow Velocity, Turbulence and Oxygen Concentration, Work-in-Progress Poster, Twenty-Fifth International Symposium on Combustion, Irvine, CA, Aug. 1994 (with Y.H. Chao and O. Fujita).
71. "Influence of Gravity and Pressure on Pool Fire Type Diffusion Flames," Work-in-Progress Poster, Twenty-Fifth International Symposium on Combustion, Irvine, CA, Aug. 1994 (with J. Chen, J.M. Most, P. Joulain and D. Durox)
72. "On Solid Fuel Ignition and Flame Spread" Zel'dovich Memorial International Conference on Combustion, Moscow, Russia, Sep. 1994.
73. "On Solid Fuel Ignition and Flame Spread" 20th International Conference on Fire Research, San Francisco, CA, Jan, 1995
74. "Combustion of Solid Fuels" Sandia National Laboratory, Albuquerque, NM, May 1995.
75. "Smoldering Combustion in Microgravity" Royal Academy of Sciences of Spain, Madrid, Spain, Jun. 1995



76. "Two-dimensional Smoldering and its Transition to Flaming" 8th International Symposium on Transport Phenomena in Combustion, San Francisco, CA. Aug. 1995 (with S.D. Tse)
77. "On Solid Fuel Ignition and Flame Spread" Department of Mechanical & Aerospace Engineering, Princeton University, Princeton, N.J., October 6, 1995
78. "Ignition and Flame Spread Over a Solid Combustible" E. T. S. Aeronautical Engineering, Madrid University, Madrid, Spain, January 1996
79. "Spray Combustion of Emulsified Fuels" ILP Conference, College of Engineering, University of California Berkeley, CA., March 14, 1996
80. "Controlling Mechanisms in the Transition from Smoldering to Flaming" Department of Mechanical and Aerospace Engineering, University of California Irvine, CA., May 31, 1996
81. "Smoldering Combustion Experiments in Microgravity" Poster Presentation, *Twenty-Sixth Symposium (International) on Combustion*, The Combustion Institute, Naples, Italy, August 3 1996 (with D. Walther and D. Urban)
82. "Combustion in Reduced Gravity" Meeting of the Berkeley Chapter of Pi Tau Sigma, Berkeley, CA, October 1, 1996
83. "Combustion in Reduced Gravity" Meeting of the Berkeley Chapter of the ASME, Berkeley, CA, October 30, 1996
84. "Fired up in Space" Invited Presentation at the Fall Membership Meeting, Berkeley Engineering Alumni Society, Commerce, CA, November 13, 1996
85. "Piloted Ignition of a Solid Combustible Material under a Thermal Radiant Flux: The Effect of the Oxidizer Flow Velocity" ASTM Winter Technical Meeting, San Diego, CA, Dec.8, 1998
86. "Forward Smolder Ignition of Polyurethane Foam" 25th International Conference on Fire Safety, Millbrae, CA, January 14, 1998 (with Anthenien, R.)
87. "Test Method for Ranking the Fire Properties of Materials in Space Based Facilities" Advanced Research Workshop, NATO Science Committee, Novosibirsk, Russia, May 12, 1998
88. "Combustion in Reduced Gravity" MEL, Hitachi, Tsichiura, Japan, July 13, 1998
89. "MEMS Opportunities in Thermal Management" Thermal Management Workshop, 1998 Defense Science Research Council Summer Conference, La Jolla, CA, July 20, 1998

90. “MEMS Wankel Internal Combustion Engine” Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, November 16, 1998
91. “Numerical Model of the Pyrolysis of a Solid Fuel under an External Radiant Flux” Mathematical Modeling in Combustion Workshop, Zacatecas, Mexico, November 20, 1998 (with J.L. Cordova)
92. “A Forced Flow Ignition and Flame Spread Test Method for the Fire Properties of Materials” Twenty-Seventh International Conference on Fire Safety, San Francisco, CA, January 11-12, 1999 (with J.L. Cordova)
93. “Issues and Opportunities in MEMS Thermosciences Systems” Department of Mechanical Engineering, University of California, Berkeley, March 29, 1999.
94. “Fired up in Space” Cal Day, Berkeley, CA, April 17, 1999
95. “Issues and Opportunities in MEMS Thermosciences Systems” School of Engineering, University of California, Irvine, April 22, 1999
96. “Issues and Opportunities in MEMS Thermosciences Systems” Department of Applied Mechanics and Engineering Sciences, University of California, San Diego, June 3, 1999
97. “Numerical Analysis of the Endothermic Pyrolysis and Ignition Delay of Composite Materials Exposed to an External Radiant Flux” Institute of Mathematics and its Applications, IMA Workshop on Fire, Minneapolis, MN, October 11, 1999 (with Zhou, Y.)
98. “MEMS Rotary Internal Combustion Engine” DARPA, MEMS, PI Meeting, Atlanta, GA, January 14, 2000
99. “Microgravity Ignition Delay of Solid Fuels in Low Velocity Flows” Department of Applied Mechanics and Engineering Sciences, University of California, San Diego, CA April 17, 2000
100. “MEMS Rotary Internal Combustion Engine” Chevron Research, Richmond, CA, April 26, 2000
- 101 “Small Scale Combustion Research for Applications to MEMS Rotary IC Engines” Poster Presentation, *Twenty-Eighth Symposium (International) on Combustion*, The Combustion Institute, Edinburgh, Scotland, August 2000 (with K. Fu, A. Knblock and D. Walther)
102. “A Numerical Model for Smoldering Combustion of Polyurethane Foam in Normal and Micro-gravity Conditions” Poster Presentation, *Twenty-Eighth Symposium (International) on Combustion*, The Combustion Institute, Edinburgh, Scotland, August 2000 (with E. Kallman)

103. "Effects of material Composition and Oxidizer Velocity on the Ignition Delay of combustible Solids" Poster Presentation, *Twenty-Eighth Symposium (International) on Combustion*, The Combustion Institute, Edinburgh, Scotland, August 2000 (with J. T. Trevor and D. Walther).
104. "An Application of the Enthalpy-Temperature Hybrid Method to Predict Polymer Pyrolysis and Ignition" II International Workshop on Combustion Modeling, Veracruz, Mexico, February 24, 2001 (with Y.Y. Zhou)
105. "MEMS Power Generation Using Combustion" DHL Seminar, Xerox Parc Research Center, Palo Alto, CA, May 3, 2001
106. "MEMS Power Generation Using Combustion" Solid-State Seminar series, U. C. Davis, Department of Electrical and Computer Engineering, Davis, CA May 11, 2001
107. "MEMS Power Generation Using a Micro Rotary Combustion Engine" HORIBA/STEC, Kyoto, Japan, July 16, 2001
108. "MEMS Power Generation Using a Micro Rotary Combustion Engine" HRL, Malibu, CA, July 26, 2001
109. "MEMS Micro Power Generation Using Combustion" ASME monthly meeting, Berkeley, CA, Dec 11, 2001
110. "MEMS Rotary Engine" USC Aerospace and Mechanical Engineering Seminar Series, Fall 2001, Los Angeles, CA, Dec. 12 2001
111. "Micro-Scale Power Generation Using Combustion" School of Aeronautical Engineering, Madrid Polytechnic University, Spain, January 17, 2002.
112. "Microscale Combustion: Issues and Opportunities" Princeton University, Department of Mechanical & Aerospace Engineering, 2002 Spring Seminar Series, Princeton, NJ, Feb. 15, 2002
113. "MEMS Rotary Engine" Pi Tau Sigma Second general meeting, Department of Mechanical Engineering, U.C. Berkeley, March 20, 2002
114. "Micro-Scale Power Generation Using Combustion" Stanford University, Department of Mechanical Engineering, Stanford, CA, April 30, 2002.
115. "Micro-Scale Power Generation Using Combustion" Sandia National Laboratory, Livermore, CA June 5, 2002.
116. "Micro-Scale Power Generation Using Combustion: Issues and Opportunities". Osaka University, Faculty of Engineering, Osaka, Japan, July 17, 2002.

117. "MEMS Rotary Engine" Hitachi, Mechanical Engineering Laboratories, Tsuchiura, Japan, August 6, 2002
118. "Opposed Smolder Combustion in Micro-gravity" Poster presentation, Twenty-Ninth Symposium (International) on Combustion, The Combustion Institute, July 21, 2002, Sapporo, Japan, (with Bar-Ilan, A., Rein, G. and Urban, D.)
119. "A Methodology to Determine Pre-Crash Fuel Loading Through Thermal Destruction Analysis" 2002 GAASI Advanced Technical Workshop, Wichita, KA, October 2002 (with Alvares, N)
120. "MEMS Rotary Engine Power System" Invited Presentation, Power MEMS 2002, Tsukuba, Japan, November 12,13, 2002
121. "MEMS Rotary Engine Power System" IHI Basic Research Laboratories, Yokohama, Japan, November 15, 2002
122. "Micro-scale Combustion for Power Generataion" COE Symposium on Innovation in Mechanical Engineering, Tokyo University, Tokyo, March 7-9, 2004
123. "Micro-scale Combustion for Power Generation" COE Symposium on Innovation in Mechanical Engineering, Tokyo University, Tokyo, March 7-9, 2004.
124. "Thermal Management in Micro-engines" Thermal Management for Micro and Meso Power Systems Conference", Chicago, Il. May 17-19, 2004.
125. "Micro-Power Generation Using Combustion: Issues and Progress" Royal Academy of Engineering, Madrid, Spain, October 2004.
126. "Combustion in Reduced Gravity" ASME Berkeley Student Chapter Annual meeting, U.C. Berkeley, CA, Nov 17 2004
127. "Development of a Test Method to Evaluate the Susceptibility of Materials to Smoldering Combustion" NASA White Sands Test Facility, New Mexico, December 1, 2004.
128. "Combining FDS with Solid Phase Model to Predict Ignition and Flame Spread" Panel on Grand Challenges for Fire and Combustion Research, 2004 ASME International Mechanical Engineering Congress and Exposition, Anaheim, CA, Nov. 13-16, 2004, (with Lautenberger, C.)
129. "Flame Speed and Shape in Small Combustion Chambers" Poster presentation 30<sup>th</sup> Symposium International on Combustion, Chicago, Ill. July 2004. (with Y. Tsuji, B. Sprague, D. Walther, A. Pisano,)

130. "On the Derivation of Polyurethane Foam Kinetic Parameters using Genetic Algorithms" Poster presentation 30<sup>th</sup> Symposium International on Combustion, Chicago, Ill. July 2004. (with G. Rein and J.B. Herren)
131. "Modeling Ignition of Solid Combustibles in Normal and Micro Gravity" Poster presentation 30<sup>th</sup> Symposium International on Combustion, Chicago, Ill. July 2004. (with C. Lautenberger, D. Rich, and Z.G. Yuan,
132. "The Application of Genetic Algorithms to Determine the Kinetic Constants in Heterogeneous Reactions", Fluid Mechanics: A Workshop in Honor of Amable Linan, Granada, Spain, September, 2004 (with G. Rein and C. Lautenberger).
133. "Effect of Initial Pressure, Temperature, and Chamber Size on Pressure Rise in Reduced Scale IC Engine Combustion Chamber" Power MEMS 2004, Tsukuba, Japan, November, 2004 (with Y. Tsuji, B. Sprague, D. Walther, and A. Pisano)
134. "Development of a Test Method to Evaluate the Susceptibility of Materials to Smoldering Combustion" NASA White Sands Test Facility, New Mexico, December 1, 2004.
135. "Flame Propagation in 2-D Channels" Asian Conference on Propulsion and Power 2005, Kita-Kyusyu, Japan, January 2005 (with Tsuji, Y., Sprague, B. Walther, D., and Pisano, A.)
136. "Critical Burning Rate: A Criterion for Pilot Ignition," Fire Research: Current Trends and Future Perspectives Conference, BRE, Watford, UK , April 19, 2005 (with Lautenberger, C. , Rich, D. and Hernandez, J.)
137. "The Use of Genetic Algorithms to Determine the Parameters Controlling Composites Ignition" Second International Fire Bridge Conference, Belfast, Northern Ireland, UK, May 9-11, 2005 (with Lautenberger, C.)
138. "Solid Fuel Ignition in Convective Oxidizer Flows" Laboratoire de Combustion et de Detonique, ENSMA-CNRS, Poitiers, France, April 2005
139. "Development of Small-Scale Rotary Engines" Poster presentation 31st Symposium International on Combustion, Heidelberg, Germany, August 6-11, 2006 (with Sprague, S.B., Park, S.W., Walther, D.C., and Pisano, A. P.)
140. "Modeling Microgravity Flame Spread Rates over Samples of Polymer and Polymer/Glass Composites" Poster presentation 31st Symposium International on Combustion, Heidelberg, Germany, August 6-11, 2006 (with McAllister, S., Rich, D., Lautenberger, C, and Yuan, Z.G
141. "Solid Propellant Micro-Thruster" International Mechanical Engineering Congress & Exposition (IMECE), Chicago, Il, November 5-10, 2006. (with E. Parra and K. Pister)

142. "On the Trajectory of Sparks and Embers in High Winds – A Potential Source for Spotting Fires" Department of Mechanical Engineering Colloquium, U.C. Riverside, Feb 9, 2007
143. "The Use of Genetic Algorithms to Determine the Parameters Controlling Composites Ignition" Second International Fire Bridge Conference, Belfast, Northern Ireland, UK, May 9-11, 2005 (with Lautenberger, C.)
144. "Microgravity Flame Spread Rates Over Samples of Polymer/Glass Composites," 2006 Spring Technical Meeting, Western States Section/ Combustion Institute, Boise, Idaho, March 27-28, 2006 (with Rich, D., Lautenberger, C., and McAllister, S.)
145. "Trajectory and Combustion of Embers as Origin of Wild-land Spot Fires" Colloque Scientifique International "Stopfeux", IUSTI-Polytech'Marseille, France, May 12, 2006 (with Anthenien, R)
146. "Development of Small-Scale Rotary Engines" Poster presentation 31<sup>st</sup> Symposium International on Combustion, Heidelberg, Germany, August 6-11, 2006. (with S.B. Sprague, S.W. Park, D.C. Walther, and A.P. Pisano)
147. "Modeling Microgravity Flame Spread Rates over Polymer/Glass Composites" Poster presentation 31<sup>st</sup> Symposium International on Combustion, Heidelberg, Germany, August 6-11, 2006.(with . S. McAllister, D. Rich, C. Lautenberger, A.C.and Z.G. Yuan)
148. "Development of Small-Scale Internal Combustion Rotary Engines" Department of Mechanical Engineering, University of Illinois at Urban-Champaign, Feb 27, 2007
149. "Generalized Pyrolysis Model for Combustible Solids" 2007 Annual Fire Research Conference, NIST, Gaithersburgh, MD, April 4,5, 2007 (with C. Lautenberger)
150. "MEMS to Generate Small Scale Power Using Combustion" XIV Seminario Enzo Levi, Autonomous University of Mexico (UNAM), Cuernavaca, Mexico, May 17, 18, 2007
151. "Development of Small-Scale Internal Combustion Rotary Engines" Recent Developments in Energy and Combustion Science, Richmond, VA, October 19-21, 2007
152. "Preliminary Study of the Ignition of Vegetation Bed by a Firebrand" Workshop on Mathematical Modeling and Numerical Simulation of Forest Fire Propagation, Vigo, Spain November 29-30, 2007 (with S. Fereres and C. Lautenberger)
153. "Characterization of Small-Scale Internal Combustion Rotary Engines" 4th International Symposium on Innovative Aerial/Space Flyer Systems, Tokyo, Japan, January 14-15, 2008 (with S.B. Sprague)

154. "Multidimensional Numerical Modeling of Smoldering Combustion". 2008 SIAM International Conference on Numerical Combustion, Monterey, CA, March 31 2008. (with E. Kallman)
155. "Modeling Wildland Fire Development" Seminar Series, Department of Mechanical Engineering, University of California, Berkeley, CA, October 22, 2008
155. "A Microwave-Assisted Fast Pyrolysis Reactor for Conversion of Biomass to Bio-Crude". Poster presentation KAUST Meeting, University of California, Berkeley, January 2009 (with D. Rich and R. Dibble)
156. "Smart Combustion Sensor Technology". Poster presentation KAUST Meeting, University of California, Berkeley, January 2009 (with A. Pisano)
156. "Modeling Wildland Fire Propagation and Spotting" The University of Edinburgh, Scotland, UK March 27, 2009
157. "Modeling Wildland Fire Propagation and Spotting" Seminar on Forecasting and Modeling Wildfire Risk for UK Moorlands and Heaths, The University of Manchester, Manchester, UK March 31-April 1, 2009 (with C. Lautenberger)
158. "Material Flammability in Spacecraft" SURVIAC Bulletin, U.S. Department of Defense Information Analysis Center, Vol. XXV, Issue 1, 2009 (with S. McAllister)
159. "Modeling the Transition from Smoldering to Flaming" 11<sup>th</sup> Journées du GDR Incendie" CSTB-Champs sur Mare, France, June 17,18 2010 (with A. Dodd and C. Lautenberger)
160. "Communication Infrastructure Provider Assets in the Wildland Setting: CIP Fire Threat Map". Presented to the California Utilities Commissions on June 13, 2010., San Francisco, CA (with Lautenberger, C., Rich, D., Kramer, M, Stephens, S.)
161. "Modeling Wildland Fire Propagation and Spotting" ETSIA, Polytechnic University of Madrid, Spain, June 8, 2011
- 162 "Mechanisms of Solid Fuel Combustion" Hitachi Lab, Hitachi City, Japan, December 7, 2011
163. "Modeling Wildland Fire Propagation and Spotting" Fire Asia 2012 Conference. Hong Kong, February, 8-9, 2012
164. "Wildland Fire Spotting Ignition and Propagation" 6<sup>th</sup> Annual Wildland Fire Litigation Conference, Sacramento, CA, April 20-22, 2012
165. "Wildland Fire Spotting Ignition and Propagation" Jacob's School of Engineering, University of California San Diego, May 14, 2012

166. "On the Mechanisms of Ignition" Institute di Motori, Naples University, Italy, June 5, 2012
167. "Effect of Spacecraft Environment on the Ignition of Solid Fuels" Hokaido University, Sapporo, Japan, June 26, 2012
168. "Mechanisms of Fuel Ignition" Tohoku University, Sendai, Japan, June 28, 2012
169. "Solid Fuel Combustion" IHI, Yokohama, Japan, July 4, 2012
170. "Flammability of Materials in Spacecraft" USM, Valparaiso, Chile, February 28, 2013
171. "Hot Metal Particle Ignition" 7<sup>th</sup> Annual Wildland Fire Litigation Conference, Monterrey, CA, April 19-21, 2013
172. "Micro-Power Generation" Short Course, Dipartimento de Ingegneria Industriale, Universita degli Studi di Napoli Federico II. Naples, Italy, April 29-May 4, 2013
173. "Flammability of Materials in Spacecraft" Universidad Carlos III, Madrid, Spain, May 15, 2013
174. "Spot Fire Ignition of Cellulose Fuel Beds by Hot Metal Particles" NIST, Gaithersburg, MD, December 11, 2013
175. "Identifying the Role of Spacecraft Atmospheres on the Ignition of Solid Fuels" Pierre and Marie Curie University, Paris, France, May 21, 2014
176. "Piloted Ignition of Clear and Black PMMA Cylinders" Poster Presentation 35<sup>th</sup> International Symposium on Combustion, San Francisco, CA August 3-8, 2014 (with S. Link)
177. "Transport and Concentrations from Emissions in a Residence from a Cookstove" Poster Presentation 35<sup>th</sup> International Symposium on Combustion, San Francisco, CA August 3-8, 2014 (with J. Jones and D. Murphy)
178. "Modeling of Spot Fire Ignition of Natural Fuels by Hot Particles" Poster Presentation 35<sup>th</sup> International Symposium on Combustion, San Francisco, CA August 3-8, 2014 (with C. Zak, J. Urban, and M. Sanchez-Sanz)
179. "Large Scale Spacecraft Fire Safety Test" Poster Presentation 35<sup>th</sup> International Symposium on Combustion, San Francisco, CA August 3-8, 2014 (with D. Urban at al.)
180. "Spot Fire Ignition of Wildland Fuel Beds by Hot Metal Particles" State Key Laboratory of Fire Science, University of Science and Technology of China, Hefei, Anhui, China, May 6, 2015 (with J. Urban, C. Zak, C. Lautenberger and S. McAllister)



181. "Flame Spread over Insulated Wires: the Role of Insulation Melting and Core Conductivity" 2017 International FLARE Workshop, Nordwiick, Netherland, January 2017 (with Y. Kobayashi, Y. Konno, X. Huang, S. Nakaya, M. Tsue, and O. Fujita)
182. "Piloted Ignition of Cylindrical Fuel: Effect of Transparency and Size," Poster presentation 12th International Symposium on Fire Safety Science, Lund, Sweden, 12-16 June 2017 (with A. Rodriguez, X. Huang\*, S. Link, S. Olson, P. Ferkul)
183. "Spot Fire Ignition in Wildland-Urban Interface" FCE Distinguished Lecture, Hong Kong Polytechnic University, Kowloon, Hong Kong, November 16, 2018
184. "Flammability of Materials in Spacecraft Environments" Invited Seminar, Department of Fire Protection Engineering, University of Maryland, MD, March 1, 2019
185. "Fundamentals of Solid Fuel Combustion" APCISS-1 Vina del Mar, Chile, November 2019
186. "Emissions from Internal Combustion Engines", Lecture at the Escuela de Ingenieria y Ciencias, ITESM, Puebla, Mexico, October 10, 2020
187. "Wildland Fire Spot Ignition by Metal Particles and Firebrands" 2021/22 Fluid Mechanics Seminar Series, Department of Aero Eng. and Eng. Mechanics, University of Texas at Austin. September 30, 2021
188. "Combustion in Reduced Gravity", Seminario de Investigacion, Escuela de Ingenieria y Ciencias, ITESM, Puebla, Mexico, November 17, 2021
189. "Material Flammability (Ignition, Spread, Suppression) in Space Exploration Atmospheres" Joint CAE/ESA/JAXA/NASA ISS Increment 66 Science Symposium, (on line) 14-16 December 2021