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EXPERTISE

Dr. Philippidis is an expert in sustainable biofuel and bioproduct technology development, scale-up, and commercialization and has a successful track record in externally-funded R&D management and public-private partnerships. He has 30 years of experience in leading strategic business units in the private and public sectors, directing applied R&D, developing and teaching renewable energy graduate courses, mentoring professionals and students, partnering with communities, and advising companies on sustainable growth. He possesses technical and business degrees and holds 11 patents in clean technologies and biotechnology.

EDUCATION

- Ph.D.** Chemical Engineering, University of Minnesota, Minneapolis, 1989
- M.B.A.** University of Denver, Colorado, 1995
- B.S.** Chemical Engineering, Aristotle University of Thessaloniki, Greece, 1984

PROFESSIONAL EXPERIENCE

- 2011-present **Associate Dean for Research and Associate Professor**, Patel College of Global Sustainability, University of South Florida, Tampa, FL
He directs the College's research and academic programs, develops and teaches interdisciplinary graduate courses in sustainability, and mentors students. His externally-funded applied research focuses on biofuels, bioproducts, and bioenergy from renewable resources (biomass, algae, and oil-seed crops). He manages a multi-disciplinary research team of postdocs and students, directs the renewable energy curriculum, and pursues industry, academic, and community partnerships on the energy-water-food nexus.
- 2002–2011 **Associate Director**, Applied Research Center, Florida International University (FIU), Miami, Florida
Research Associate Professor, Dept. of Civil and Environmental Engineering
Co-Director, Global Energy Security Forum, School of International and Public Affairs
He developed and directed energy programs worth over \$6M and technology evaluation and deployment projects in biofuels, renewable energy, and environmental remediation funded by the US Department of Energy, the US Department of Defense, the State of Florida, and the private sector. He collaborated with venture capital firms and advised US government agencies, the Organization of American States, and the Florida Governor's Energy Office on energy technologies, policy, security, and resilience.
- 1996–2001 **Director**, Biochemical Development, Thermo Fibergen, Inc., Bedford, Massachusetts
He was a member of the executive team of a subsidiary of Thermo Electron Corp. (now

Thermo Fisher Scientific), a Fortune 500 company. He was In charge of energy and environmental R&D and product commercialization and directed product manufacturing and marketing. He interfaced with Wall Street analysts and pursued business ventures in North America and Europe. He managed intellectual property and negotiated technology acquisitions and licensing agreements.

1989–1996 **Leader**, Biofuels Research and Development, National Renewable Energy Laboratory (NREL), Golden, Colorado

He directed a \$29M joint venture between the U.S. Department of Energy and industry for R&D of advanced biofuel technologies. He managed in-house and subcontracted work, developed patents and published, and supervised a multi-disciplinary team of over 30 engineers and scientists. He established and managed relationships with agribusiness and bioenergy companies. He oversaw the design, installation, and operation of a \$16M state-of-the-art biomass demonstration facility.

PROFESSIONAL HONORS and AFFILIATIONS

1. Fulbright Specialist Scholar (2016, 2018)
2. Outstanding USF Faculty Award 2019
3. NATO and European Union travel fellowships
4. Guest Editor for the journals *“Energy Policy”*, *“Sustainability”*, and *“Energies”*
5. Journal reviewer for numerous peer-review publications
6. NSF and DOE invited expert reviewer
7. Kauffman Foundation entrepreneurship award
8. Advisor to US State Department, US Department of Agriculture, Organization of American States, Florida Governor’s Energy Office, and several companies and organizations
9. Member of the Advisory Board of Culture BioSystems Inc. and ClimeCo International
10. Member of the Steering Committee of the Florida Energy Systems Consortium (FESC)
11. Member of the Steering Committee of the Tampa Bay Clean Cities Coalition
12. Senior member of the National Academy of Inventors (NAI)
13. Senior member of the American Institute of Chemical Engineers (AIChE)
14. Member of the American Association for the Advancement of Science (AAAS)

PATENTS (co-authored)

1. **US Patent 6,758,996** “Cellulose-Reinforced Thermoplastic Composite and Methods of Making Same” (2004).
2. **US Patent 6,156,226** “Liquid and Solid De-Icing and Anti-Icing Compositions and Methods for Making Same” (2000).
3. **US Patent 5,961,941** “Production of Precipitated Calcium Carbonate from Papermaking Sludge and Sludge-Derived Ash” (1999).
4. **US Patent 5,919,424** “Method of Recovering Minerals from Papermaking Sludge and Sludge-Derived Ash” (1999).
5. **US Patent 5,876,505** “Method of Producing Glucose from Papermaking Sludge Using Concentrated or Dilute Acid Hydrolysis” (1999).
6. **US Patent 5,777,086** “Method of Recovering Lignin from Pulp and Paper Sludge” (1998).
7. **US Patent 5,705,369** "Prehydrolysis of Lignocellulose" (1998).

8. **US Patent 5,503,996** "Prehydrolysis of Lignocellulose" (1996).
9. **US Patent 5,424,417** "Prehydrolysis of Lignocellulose" (1995).
10. **World Patent 008648** "Prehydrolysis of Lignocellulose" (1995).
11. **World Patent 029475** "Cell Mass from Fermenters as Nutrient Source in Biomass-to-Ethanol Conversion" (1994).

PUBLICATIONS

Refereed Articles

1. Dogaris, I., Ammar, E., Philippidis, G.P. "Prospects of integrating algae technologies into landfill leachate treatment", *World J. Microbiol. Biotechnol.* 36:39, doi.org/10.1007/s11274-020-2810-y (2020).
2. Lo, E., Brabo-Catala, L., Dogaris, I., Ammar, E.M., Philippidis, G.P. "Biochemical conversion of sweet sorghum bagasse to succinic acid", *J. Biosci. Bioeng.* 129:1, 104-109 (2020).
3. Kusmayadi, A., Philippidis, G.P., Yen, H.-W. "Application of computational fluid dynamics to raceways combining paddlewheel and CO₂ spargers to enhance microalgae growth", *J. Biosci. Bioeng.* 129:1, 93-98 (2020).
4. Manisali, A.Y., Sunol, A.K., Philippidis, G.P. "Effect of Macronutrients on Phospholipid Production by the Microalga *Nannochloropsis oculata* in a Photobioreactor", *Algal Res.* 41, 101514 (2019).
5. Dogaris, I., Loya, B., Cox, J., Philippidis, G. "Study of landfill leachate as a sustainable source of water and nutrients for algal biofuels and bioproducts using a novel scalable bioreactor", *Bioresour. Technol.* 282, 18-27 (2019).
6. Goyal, G., Kuhn, J.N., Philippidis, G. "Light olefin production by cracking *Picochlorum oculatum* microalgae using aluminosilicate catalysts", *Biomass Bioener.* 108, 252-257 (2018).
7. Pirasaci, T., Manisali, A.Y., Dogaris, I., Philippidis, G., Sunol, A.K. "Hydrodynamic design of an enclosed Horizontal Bioreactor (HBR) for algae cultivation", *Algal Res.* 28, 57-65 (2017).
8. Deshpande, S., Sunol, A., Philippidis, G. "Status and Prospects of Supercritical Transesterification for Sustainable Biodiesel Production", *WIREs Ener. Environ.* e252, doi.org/10.1002/wene.252 (2017).
9. Dogaris I., Brown T.R., Loya B., Philippidis G. "Cultivation of microalgae in a scalable photobioreactor for production of algal biomass", *Biomass Bioenerg.* 89, 11-23 (2016).
10. Spiegel-Feld, D., Rudyk, B., Philippidis, G. "Allocating the economic benefits of renewable energy between stakeholders on Small Island Developing States (SIDS): Arguments for a balanced approach", *Ener. Policy* 98, 744-748 (2016).
11. Dogaris, I., Welch, M., Meiser, A., Walmsley, L., Philippidis, G. "A Novel Horizontal Photobioreactor for High Density Cultivation of Microalgae", *Bioresour. Technol.* 198, 316-324 (2015).
12. Shah, K.U., Philippidis, G., Dulal, H.B., Brodnig, G. "Developing Biofuels Industry in Small Economies: Policy Experiences and Lessons from the Caribbean Basin Initiative", *Mitig. Adapt. Strat. Glob. Change* 19, 229-253 (2014).
13. Philippidis, G. "Powering America with Sustainable Energy in the 21st Century", *J. Renewable Sustainable Energy* 4, 062801 (2012).
14. Philippidis, G.P., Hatzis, C. "Biochemical Engineering Analysis of Critical Success Factors in the Biomass-to-Ethanol Technology", *Biotechnol. Progress* 13, 222-231 (1997).
15. Toon, S.T., Philippidis, G.P., Ho, N.W.Y., Chen, Z.D., Brainard, A., Lumpkin, R.E., Riley, C.J. "Enhanced Cofermentation of Glucose and Xylose by Recombinant *Saccharomyces* Yeast Strains in Batch and Continuous Operating Modes", *Appl. Biochem. Biotechnol.* 63-65, 243-255 (1997).
16. Rivard, C.J., Engel, R.E., Hayward, T.K., Nagle, N.J., Hatzis, C., Philippidis, G.P. "Measurement of the Inhibitory Potential and Detoxification of Biomass Pretreatment Hydrolyzate for Ethanol Production", *Appl. Biochem. Biotechnol.* 57/58 (1996).

17. Torget, R., Hatzis, C., Hayward, T.K., Hsu, T., Philippidis, G.P. (1996) "Optimization of Reverse-Flow, Two-Temperature, Dilute-Acid Pretreatment to Enhance Biomass Conversion to Ethanol", *Appl. Biochem. Biotechnol.* 57/58, 85-101 (1996).
18. Hatzis, C., Riley, C., Philippidis, G.P. "Detailed Material Balance and Ethanol Yield Calculations for the Biomass-to-Ethanol Conversion Process", *Appl. Biochem. Biotechnol.* 57/58, 443-459 (1996).
19. Kadam, K.L., Hayward, T.K., Philippidis, G.P. "Material Balance Studies with Continuous SSF for Ethanol Production Using Dilute-Acid Pretreated Hybrid Poplar", *Solar Engineering*, The American Society of Mechanical Engineers, 1, 339-347 (1995).
20. Philippidis, G.P., Smith, T.K. "Limiting Factors in the Simultaneous Saccharification and Fermentation Process for Conversion of Cellulosic Biomass to Fuel Ethanol", *Appl. Biochem. Biotechnol.* 51/52, 117-124 (1995).
21. Philippidis, G.P. (1993) "Conversion of Cellulosic Biomass to Fuel Ethanol: Modeling Aspects", *Energy from Biomass and Wastes* 16, 545-557 (1993).
22. Philippidis, G.P., Smith, T.K., Wyman, C.E. "Study of the Enzymatic Hydrolysis of Cellulose for Production of Fuel Ethanol by the Simultaneous Saccharification and Fermentation Process", *Biotechnol. Bioeng.* 41, 846-853 (1993).
23. Philippidis, G.P., Spindler, D.D., Wyman, C.E. "Mathematical Modeling of Cellulose Conversion to Ethanol by the Simultaneous Saccharification and Fermentation Process", *Appl. Biochem. Biotechnol.* 34/35, 543-556 (1992).
24. Spindler, D.D., Wyman, C.E., Grohmann, K., Philippidis, G.P. "Evaluation of the Cellobiose-Fermenting Yeast *Brettanomyces custersii* in the Simultaneous Saccharification and Fermentation of Cellulose", *Biotech. Lett.* 14, 403-408 (1992).
25. Schell, D.J., McMillan, J.D., Philippidis, G.P., Hinman, N.D., Riley, C. "Ethanol From Lignocellulosic Biomass", *Advances in Solar Energy* 7, 373-448 (1992).
26. Philippidis, G.P., Malmberg, L.H., Schottel, J.L., Hu, W.-S. "Effect of Gene Amplification on the Rate of Mercuric Reduction", *Appl. Environ. Microb.* 57, 3558-3564 (1991).
27. Philippidis, G.P., Schottel, J.L., Hu, W.-S. "A Model for Mercuric Ion reduction in Recombinant *Escherichia coli*", *Biotechnol. Bioeng.* 37, 47-54 (1991).
28. Philippidis, G.P., Schottel, J.L., Hu, W.-S. "Kinetics of Mercuric Reduction in Intact and Permeabilized *Escherichia coli* Cells", *Enzyme Microb. Technol.* 12, 854-859 (1990).

Book Chapters

1. Arora, N., Philippidis, G.P. "Fucoxanthin Production from Diatoms: Current Advances and Challenges" in *Algae: Multifarious Applications for a Sustainable World*, Springer (submitted).
2. Philippidis, G. "Advancing Energy Security and Economic Growth with Biofuels" in *Energy Security and Environmental Sustainability in the Western Hemisphere*, Lexington Books, Lanham MD, 381-391 (2017).
3. Philippidis, G. "Energy Diversity Based on U.S. and Latin American Biofuels" in *From Energy Crisis to Energy Security*, Foundation for Defense of Democracies, Washington DC, 69-79 (2008).
4. Philippidis, G.P. "Cellulose Bioconversion Technology", in *Handbook on Bioethanol: Production and Utilization*, Taylor & Francis, Washington DC, 253-285 (1996).
5. Nagle, N.J., Rivard, C.J., Mohagheghi, A., and Philippidis, G.P. "Bioconversion of Cyanide and Acetonitrile by a Municipal-Sewage-Derived Anaerobic Consortium", in *Bioremediation of Inorganics*, Battelle Press, Columbus, OH, 71-79 (1995).
6. Philippidis, G.P. "Evaluation of the Current Status in Cellulase Production Technology", in *Enzymatic Conversion of Biomass for Fuels Production*, American Chemical Society, 566, 188-217 (1994).
7. Philippidis, G.P., Wyman, C.E. "Production of Alternative Fuels: Modeling of Cellulosic Biomass Conversion to Ethanol" in *Recent Advances in Biotechnology*, Kluwer Academic Publishers,

Netherlands, 405-411 (1992).

8. Philippidis, G.P., Schottel, J.L., Hu, W.-S. "Mathematical Modeling and Optimization of Complex Biocatalysis: A Case Study of Mercuric Reduction by *Escherichia coli*", in *Expression Systems and Processes for rDNA Products*, American Chemical Society, 477, 35-49 (1991).

Non-Referred Articles

1. Brown T.R., Dogaris I., Meiser A., Walmsley L., Welch M., Philippidis G. "Development of a Scalable Cultivation System for Sustainable Production of Algal Biofuels" in *Proceedings of the 23rd European Biomass Conference and Exhibition*, Vienna, Austria, 104-107 (2015).
2. Vairavamorthy, K., Eckart, J., Philippidis, G. and Tsegaye, S. "Water and Energy in the Urban Setting" in *Energy and Water: The Vital Link for a Sustainable Future*, Stockholm International Water Institute, Stockholm, 45-48 (2014).
3. Philippidis, G. "Reducing the United States' Carbon Footprint" in *Reducing the Carbon Footprint in the Americas*, University of Miami Center for Hemispheric Policy Center, US Department of State Bureau of Educational and Cultural Affairs (2011).
4. Philippidis, G. "Panamerican Energy Cooperation: Opportunities and Challenges" in *Energy in the Americas*, University of Miami Center for Hemispheric Policy Center, US Department of State Bureau of Educational and Cultural Affairs (2010).
5. Munroe, N., Philippidis, G., Gill, P. K. S., Haider, W., and Amruthaluri, S. "Submerged Jet Mixing of Non-Newtonian Fluids in Waste Tanks", in *Proceedings of ASME 2009 International Mechanical Engineering Congress and Exposition* (2009).
6. Philippidis, G. "The Potential of Biofuels in the Americas" in *Energy in the Americas*, University of Miami Center for Hemispheric Policy Center, US Department of State Bureau of Educational and Cultural Affairs (2008).
7. Maidique M. and Philippidis, G. "Diversifying Our Energy is Imminent Security Concern", in *The Miami Herald*, October 26, 1L-2L (2008).
8. McFarlane R. and Philippidis, G. "How Free Trade Can Help Solve the Energy Crisis", in *The Wall Street Journal*, July 26-27, A9 (2008).
9. Philippidis, G. "Energy Security Achievable with Biofuels Made in the Americas", in *Ethanol Producer Magazine*, Vol. 14, 8, 232-235 (2008).
10. Philippidis, G.P., Smith, T.K. "Engineering Aspects of Lignocellulosic Biomass Conversion to Ethanol" in *Proceedings of the First Biomass Conference of the Americas*, 2, 1104-1109 (1993).

Authoritative Technical Reports (select)

1. Tek, V. and Philippidis, G. "Photobiological Hydrogen Research", Technical Report, Department of Energy (2010).
2. Contreras, M., Cortes, M., Gallo, E., and Philippidis, G. "Study of the Ethanol Production Potential from Sugarcane in Central America and the Dominican Republic", Technical Report, Inter-American Development Bank (2008).
3. Angulo, G., Miranda, S., and Philippidis, G. "Energy Integration in Latin America and Mexico", Technical Report, Department of Energy (2008)
4. Lin, C.X., Skudarnov, P.V., Mo, H.L., and Philippidis, G.P. "Experimental Study and Numerical Modeling of Gas Flow in Microchannels and Micronozzles", Technical Report, Office of Naval Research (2005).
5. Zhou, X., Srivastava, R., and Philippidis, G. "Molecular Modeling and Experimental Study of Electrocatalytic and Transport Processes in High Temperature Polymer Electrolyte Fuel Cells", Technical Report, Air Force Office of Scientific Research (2005).

6. Ghenai, C., Philippidis, G.P., and Lin, C.X. "Active Control Strategies to Optimize Supersonic Fuel-Air Mixing for Combustion Associated with Fully Modulated Transverse Jet in Cross Flow", Technical Report, Air Force Office of Scientific Research (2005).
7. Philippidis, G. "High-Level Waste Saltcake Dissolution Studies", Technical Report, Department of Energy (2004).
8. Mazumdar, A., Conklin, W., Chen, Z., Philippidis, G., and Srivastava, R. "Development and Demonstration of a Pilot-Scale Biomass Gasification Unit for Hydrogen Production", Technical Report, NASA (2004).
9. Ebadian, M.A., Skudarnov, P.V., Lin, C.X., and Philippidis, G. P. "Analytical Assessments Related to Microbubble Drag Reduction", Technical Report, NASA (2003).
10. Ebadian, M., Tachiev, G., Srivastava, R., and Philippidis, G. "Assessment of Florida's Biomass Resources for Hydrogen Production using GIS", Technical Report, NASA (2003).

PRESENTATIONS

1. Quasem, I., Philippidis, G., Sunol, A.K. "Optimization and Scale-up of Biodiesel Production using Lipase Immobilized on Magnetic Nanoparticles", American Institute of Chemical Engineers Annual Meeting, Orlando, FL (2019).
2. Tsarpali, M., Philippidis, G., Kuhn, J. "Hydrothermal Carbonization of Microalgae for Hydrochar Production", American Institute of Chemical Engineers Annual Meeting, Orlando, FL (2019).
3. Manisali, A., Philippidis, G., Sunol, A.K. "Isolation of Natural Phospholipids from *Nannochloropsis oculata* Biomass using Semi-Preparative Scale HPLC", American Institute of Chemical Engineers Annual Meeting, Orlando, FL (2019).
4. Lo, E., Philippidis, G., Chen, K.-C. "Toward a Digestible Biochemical Computer", 6th ACM International Conference on Nanoscale Computing and Communication, Dublin, Ireland (2019).
5. Zhao, A., Colson, G., Karali, B., Philippidis, G. "A Real Options Analysis of the Relationship between Jet Fuel Price Volatility and Price Thresholds for Investing in a Carinata Biofuel Production Plant", Agricultural & Applied Economics Association Annual Meeting, Atlanta, GA (2019).
6. Gordon, R., Merz, C.R., Philippidis, G., Gurke, S., Schoefs, B. "Bubble farming: Scalable microcosms for diatom biofuel and the next generation Green Revolution", North American Diatom Symposium, Eatonton, GA (2019).
7. Goyal, G., Kuhn, J., Philippidis, G. "Production of Alkenes by Catalytic Cracking of Algal Biomass", 27th European Biomass Conference and Exhibition, Lisbon, Portugal (2019).
8. Geller, D.P., Philippidis, G., Coppola, E., Wright, D., Hubbard, W. "Commercialization Factors for Oil Based Biofuels and Coproducts from *Brassica carinata*", 27th European Biomass Conference and Exhibition, Lisbon, Portugal (2019).
9. Wright, D., Small, I., Seepaul, R., George, S., Philippidis, G., Christ, B., Geller, D. "Southeast Partnership for Advanced Renewables from Carinata – a new AFRI CAP", National Sustainability Summit & National Extension Energy Summit, Tampa, FL (2019).
10. Brabo-Catala, L., Lo, E., Dogaris, I., Ammar, E., Philippidis, G. "Biochemical Processing to Enhance the Value of Agricultural Biomass", National Sustainability Summit & National Extension Energy Summit, Tampa, FL (2019).
11. Manisali, A., Philippidis, G., Sunol, A.K. "Continuous Cultivation of Microalga *Nannochloropsis oculata* to Extract and Characterize Phospholipids for Cosmetic Applications", AIChE Spring Meeting, Orlando, FL (2018).
12. Nagpurkar, S., Sunol, A.K., Philippidis, G. "Thermodynamic Data Requirements for Biodiesel Process Development", AIChE Spring Meeting, Orlando, FL (2018).

13. Quasem, I., Sunol, A., Philippidis, G. "Enzymatic Reaction Kinetics for Biodiesel Process Development and Scale-up", AIChE Spring Meeting, Orlando, FL (2018).
14. Lo, E., Brabo-Catala, L., Dogaris, I., Philippidis, G. "Organic Acid Production from Sweet Sorghum Bagasse using Green Chemistry Principles", 26th European Biomass Conference and Exhibition, Copenhagen, Denmark (2018).
15. Lo E., Dogaris I., Philippidis G. "Conversion of sweet sorghum bagasse to sugar for succinic acid production", ICRERES 2017: 19th International Conference on Renewable Energy Resource and Energy Storage, New York, NY (2017).
16. Manisali, A., Dogaris, I., Philippidis, G., Sunol, A. "Continuous Photobioreactor Cultivation of *Nannochloropsis oculata* to Isolate Cosmetic Grade Phospholipids", American Institute of Chemical Engineers Annual Meeting, Minneapolis, MN (2017).
17. Philippidis, G. "Opportunities and Challenges in the Commercialization of Bioproducts from Biomass and Algae", American Institute of Chemical Engineers Annual Meeting, Minneapolis, MN (2017).
18. Manisali, A., Dogaris, I., Philippidis, G., Sunol, A. "Cultivation of Microalgae *Nannochloropsis oculata* to Isolate Phospholipids for Cosmetic Applications", Algae Biomass Summit, Salt Lake City, UT (2017).
19. Deshpande, S., Townsend, D., Driscoll, A., Cogswell, K., Sunol, A., Philippidis, G., and Pandey, M. "Design of a Supercritical Transesterification Pilot Plant to Power the USF Bus System", National Biodiesel Conference & Expo, Tampa, FL (2016).
20. Dogaris I., Welch M., Walmsley L., Meiser A., Philippidis G. "Scale-up and Demonstration of a Horizontal Bioreactor for Commercial Algae Cultivation". 24th European Biomass Conference and Exhibition (EUBCE), Amsterdam, Netherlands (2016).
21. Dogaris I., Loya B., Cox J., Philippidis G. "Use of wastewater in a horizontal bioreactor for commercial algae cultivation". Algae Biomass Summit, Phoenix, Arizona (2016).
22. Deshpande, S., Sunol, A., Philippidis, G. "Development of Supercritical Transesterification for Sustainable Conversion of Oils to Biodiesel", World Biodiesel Congress & Expo, San Antonio, Texas (2016).
23. Goyal, G., Kuhn, J., Philippidis, G. "Light olefin production by cracking *Nannochloris oculata* microalgae using aluminosilicate catalyst", 2nd International Conference on Green Energy & Expo, Atlanta, GA (2016).
24. Cerniga, Z., Deshpande, S., Townsend, D., Driscoll, A., Cogswell, K., McGranahan, E., Sunol, A., Philippidis, G., and Pandey, M. "Biodiesel Production from Waste Oil by Supercritical Transesterification", National Biodiesel Conference & Expo, Ft. Worth, TX (2015).
25. Brown T.R., Dogaris I., Meiser A., Walmsley L., Welch M., Philippidis G. "Development of a Scalable Cultivation System for Sustainable Production of Algal Biofuels", 23rd European Biomass Conference and Exhibition, Vienna, Austria (2015).
26. Dogaris I., Meiser A., Walmsley L., Welch M., Philippidis G. "Development of a low-cost horizontal photobioreactor for high density cultivation of microalgae", 12th Annual World Congress on Industrial Biotechnology, Montreal, Canada (2015).
27. Dogaris I., Welch M., Walmsley L., Meiser A., Philippidis G. "Scale-up of a Horizontal Bioreactor Designed for Commercial Cultivation of Microalgae", Algae Biomass Summit, Washington DC (2015).
28. Philippidis, G., Welch, M., Walmsley, L., and Meiser, A. "Overcoming the Challenges in the Commercial Cultivation of Algae", 10th Annual World Congress on Industrial Biotechnology, Montreal, Canada (2013).
29. Walmsley, L., Meiser, A., Welch, M., and Philippidis, G. "Highly-Productive, Low-Cost Floating Cultivation Platform", Algae Biomass Summit, Orlando, FL (2013).
30. Philippidis, G. and La Trecchia, P. "Reframing Urban Food Waste as a Renewable Resource", 5th AESOP Conference on Sustainable Food Planning, Montpellier, France (2013).

31. Philippidis, G. "Agroenergy Business Opportunities in the Americas", 2nd International Congress of Biofuels, Guayaquil, Ecuador (2011).
32. Philippidis, G. "Biofuels: The Promise of the Next Generations", international webinar presentation, Greentech Media (2010).
33. Philippidis, G. "Global Risks and Challenges from Climate Change", 3rd US-Brazil Forum, Sao Paulo, Brazil (2010).
34. Philippidis, G. "Renewable Energy Opportunities in Florida and the Americas", 2nd Renewable Energy Fair, Valladolid, Spain (2010).
35. Philippidis, G. "Biodiesel and Ethanol Production from Sustainable Sources", Power and Energy Workshop, Federico Santa Maria University of Technology, Valparaiso, Chile (2009).
36. Philippidis, G. "Energy Security in the Americas", 4th Annual Latin America Conference, Miami, FL (2009).
37. Philippidis, G. "Biofuels in the Americas for Sustainable Energy Security", Santo Domingo, Dominican Republic (2008).
38. Philippidis, G. "The Potential of Biofuels in Uruguay" at the invitation of the Government of Uruguay and the US State Department (2008).
39. Philippidis, G. "Bioenergy Prospects of Central America" at the invitation of the Institute of the Americas and the Organization of American States, San Salvador, El Salvador (2008).
40. Philippidis, G. "Cellulosic Ethanol Prospects in the Americas", 3rd Americas Sugar & Ethanol Trade, Miami, FL (2008).
41. Philippidis, G. "The Potential of Biofuels in the Americas: Market and Technology", Biofuels Americas Conference, Cartagena, Colombia (2007).
42. Philippidis, G. "New Technologies in Biofuels Production", OLADE Latin America and the Caribbean 2nd Biofuels Seminar, San Salvador. El Salvador (2007).
43. Tek, V. and Philippidis, G., "Cloning and Preliminary Expression Studies of [NiFe]-Hydrogenase from *R. gelatinosus* CBS in *E-coli*", 8th International Hydrogenase Conference, Breckenridge, Colorado (2007).
44. Philippidis, G. "Biomass: A Domestic Sustainable Asset for St. Kitts & Nevis", 2nd Bioenergy Stakeholders Consultation at the invitation of the Government of St. Kitts and Nevis and the Organization of American States, St. Kitts and Nevis (2007).
45. Philippidis, G. "The Pursuit of Energy Diversity", Americas Energy Conference, Miami, FL (2006).
46. Philippidis, G., Moderator of Biofuels Panel at the "Energy and the Competitiveness of the Caribbean Conference" (organized by DOE and the CCAA), Port-of-Spain, Trinidad (2006).
47. Toon, S.T., Philippidis, G.P., Ho, N.W.Y., Chen, Z.D., Brainard, A., Lumpkin, R.E., and Riley, C.J. "Cofermmentation of Glucose and Xylose by Recombinant *Saccharomyces* Yeast Strains in Batch and Continuous Fermentations", 18th Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, Tennessee (1996).
48. Nagle, N.J., Rivard, C.J., Mohagheghi, A., and Philippidis, G. "Bioconversion of Cyanide and Acetonitrile by a Municipal Sewage-Derived Anaerobic Consortium", 3rd *In Situ and On-Site Bioreclamation* International Symposium, San Diego, California (1995).
49. Rivard, C.J., Engel, R.E., Smith, T.K., Nagle, N.J., Hatzis, C., and Philippidis, G.P. "Measurement of the Inhibitory Potential and Detoxification of Biomass Pretreatment Hydrolyzate for Ethanol Production", 17th Symposium on Biotechnology for Fuels and Chemicals, Vail, Colorado (1995).
50. Torget, R.W., Hayward, T.K., Hatzis, C., and Philippidis, G.P. "Reverse-Flow, Two-Temperature Dilute-Acid Pretreatment to Enhance Biomass Conversion to Ethanol", 17th Symposium on Biotechnology for Fuels and Chemicals, Vail, Colorado (1995).

51. Hatzis, C., Riley, C., and Philippidis, G.P. "Detailed Material Balance and Ethanol Yield Calculations for the Biomass-to-Ethanol Conversion Process", 17th Symposium on Biotechnology for Fuels and Chemicals, Vail, Colorado (1995).
52. Smith, T.K., Kadam, K.L., and Philippidis, G.P. "Studies of Biomass Pretreatment Conditions for Ethanol Production by Continuous SSF", 16th Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, Tennessee (1994).
53. Nguyen, Q., Duff, B., Schell, D., Dickow, J., and Philippidis, G. "Design, Installation, and Operation of a Lignocellulosic Biomass-to-Ethanol Pilot Plant", 6th National Bioenergy Conference, Reno, Nevada (1994).
54. Philippidis, G.P., Smith, T.K., and Wyman, C.E. "Biochemical Conversion of Cellulosic Biomass to Fuel Ethanol in the Continuous Operational Mode", 15th Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, Colorado (1993).
55. Smith, T.K. and Philippidis, G.P. "Ethanol Production from Lignocellulosic Biomass: Evaluation of SSF Conditions and Parameters", 15th Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, Colorado (1993).
56. Philippidis, G.P. and Smith, T.K. "Engineering Aspects of Lignocellulosic Biomass Conversion to Ethanol", First Biomass Conference of the Americas, Burlington, Vermont (1993).
57. Philippidis, G.P. "Conversion of Cellulosic Biomass to Ethanol", Institute of Gas Technology Symposium on Energy from Biomass and Wastes, Orlando, Florida (1992).
58. Philippidis, G.P., Smith, T.K., and Wyman, C.E. "Study of the Enzymatic Hydrolysis of Cellulose during the Simultaneous Saccharification and Fermentation Process for Production of Fuel Ethanol", 14th Symposium on Biotechnology for Fuels and Chemicals, Gatlinburg, Tennessee (1992).
59. Philippidis, G.P. and Wyman, C.E. "Technology for Fuel Ethanol Production from Cellulosic Biomass", Biofor/Bioqual Annual Meeting on Implementation of Biological Processes for the Forest Industry and Environmental Quality, Vancouver, BC, Canada (1992).
60. Philippidis, G.P. and Mohagheghi, A. "Kinetics of Biological Removal of Mercuric and Uranyl Ions from Aqueous Phase", 1st *In Situ and On-Site Bioreclamation* International Symposium, San Diego, California (1991).
61. Philippidis, G.P., Spindler, D.D., and Wyman, C.E. "Mathematical Modeling of Cellulose Conversion to Ethanol by the Simultaneous Saccharification and Fermentation Process", 13th Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, Colorado (1991).
62. Spindler, D.D., Philippidis, G.P., and Wyman, C.E. "Experimental Investigation of Key Parameters in the Simultaneous Saccharification and Fermentation of Biomass to Ethanol", 13th Symposium on Biotechnology for Fuels and Chemicals, Colorado Springs, Colorado (1991).
63. Philippidis, G.P. and Wyman, C.E. "Production of Alternative Fuels from Cellulosic Biomass", NATO Advanced Study Institute, Kusadasi, Turkey (1991).
64. Philippidis, G., Schottel, J.L. and Hu, W.-S. "Modeling of the Mercuric Reduction Process", 197th American Chemical Society National Meeting, Miami, Florida (1989).
65. Philippidis, G., Schottel, J.L. and Hu, W.-S. "Kinetic Analysis of Complex Biocatalysis", 196th American Chemical Society National Meeting, Los Angeles, California (1988).
66. Philippidis, G., Schottel, J.L. and Hu, W.-S. "Kinetic Study of Complex Biocatalytic Processes: Mercuric Reduction as a Model System", 87th Annual Meeting of the American Society for Microbiology, Atlanta, Georgia (1987).
67. Philippidis, G., Schottel, J.L. and Hu, W.-S. "Complex Biocatalytic Reaction using a Recombinant Microorganism", American Institute of Chemical Engineers Annual Meeting, Miami, Florida (1986).

EXTERNAL FUNDING (recent)

1. Co-PI: "Automated Modular Algae Cultivation System for Aquaculture" funded by USDA SBIR, USF share: \$31,000 (2019-2020).
2. Co-PI: "Sustainability Superheroes: Developing Global Citizens for a Sustainable Economic Future" funded by the Coca-Cola Foundation: \$200,000 (2019-2021).
3. PI: "Large-scale Development of an Innovative Algae Technology as a Sustainable Source of Renewable Energy and Products to Enhance and Diversify Florida's Economy" funded by the Florida Department of Agriculture and Consumer Services: \$476,000 (2019-2021).
4. Co-PI: "Southeast Partnership for Advanced Renewables from Carinata" funded by the US Department of Agriculture, USF share: \$1,247,000 (2017-2022).
5. PI: "Scale-up Testing of a Horizontal Bioreactor for Algae Cultivation" funded by Culture Fuels Inc. and the Florida High Tech Corridor, \$163,000 (2016-2018).
6. PI: "Cost-Effective Scalable Cultivation of Algae for Renewable Fuel and Animal Feed Production in Florida" funded by the Florida Department of Agriculture and Consumer Services, \$672,000 (2014-2016).
7. PI: "Renewable Energy Education Program" funded by the Florida Energy Systems Consortium, \$85,000 (2013-2016).
8. PI: "Production of High-Value Algae Biomass in a Novel Cultivation System" funded by Culture Fuels Inc. and the Florida High Tech Corridor, \$54,000 (2013-2014).
9. PI: "Development of a Microalgae Production Platform" funded by Culture Fuels Inc. and the Florida High Tech Corridor, \$90,000 (2011-2013).
10. Co-PI: "Biofuel Science Education for Under-Represented Students at FIU" funded by the US Department of Agriculture, \$300,000 (2010-2013).
11. PI: "Seeding Biofuel Entrepreneurship in South Florida" funded by the Kauffman Foundation, \$15,000 (2009-2010).
12. Co-PI: "Internationalization of Environmental Studies Curriculum in Biofuel Production" funded by the US Department of Agriculture, \$100,000 (2008-2011).
13. PI: "Assessment and Development of Pretreatment for Sugarcane Bagasse to Commercialize Cellulosic Ethanol Technology" funded by the Florida Office of Energy and Florida Crystals Corporation, \$1,918,000 (2007-2011).

STUDENT ADVISING and MENTORSHIP

He has been serving as co-major advisor of doctoral, master, and honors students from Integrative Biology, Chemical Engineering, Chemistry, and Environmental Science and Policy. He has advised numerous graduate and undergraduate students in Global Entrepreneurship, Chemical, Mechanical, and Biomedical Engineering, Environmental Studies, Latin American and Caribbean Studies, and Research Experience for Undergraduates programs.

CURRICULUM DEVELOPMENT and TEACHING

He developed and taught graduate courses for USF's Master's program in Global Sustainability (both in-class and on-line):

- *"Renewable Transportation Fuels" (IDS 6207)*
- *"Renewable Power Portfolio" (IDS 6208)*
- *"Economics and Finance for Sustainability" (IDS 6235)*
- *"Bioresources for a Sustainable Future" (IDS 6210)*

He developed and taught the undergraduate courses "*Engineering Thermodynamics*" (on-line) and "*Chemical Engineering Thermodynamics*" (in-class).

COMMUNITY ENGAGEMENT

He has developed and led interdisciplinary sustainability and renewable energy projects with local governments and communities, including Manatee County, the City of Dunedin, the City of Miami, and the Hillsborough County School District. He is a member of the steering committee of the USF Green Energy Fund.

MEDIA APPEARANCES

Wall Street Journal, Voice of America, "Nightly Business Report" on Public Broadcasting System (PBS), NBC News Channel 8 (Tampa Bay), NBC News Channel 6 (Miami), "Issues" on WBPT South Florida (Channel 2), The Rich Roffman Show (880 AM), Colombian National Radio, Tampa Bay Times, Palm Beach Post, Sun-Sentinel, Miami Herald, and South Florida Business Journal.