



CURRICULUM VITAE

John Vlachopoulos

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JOHN VLACHOPOULOS

Professor Emeritus

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EDUCATION

1960-1965	Nat. Tech. Univ. (NTU), Athens, Greece (Dipl-Ing. 1965)
1965-1968	Washington University, St. Louis, MO, U.S.A. (M.S. 1968; D.Sc. 1969) (Doctoral Dissertation defended July 30,1968)

POSITIONS HELD

McMaster University

Assistant Professor July 1, 1968 - June 30, 1974

Associate Professor July 1, 1974 - June 30, 1979

Full Professor July 1, 1979 - December 31, 2007

Chairman, Department of Chemical Engineering July 1, 1985 – June 30, 1988

Professor Emeritus, January 1, 2008- present

Academic Research leave locations:

- i. Institut für Kunststofftechnologie (IKT), Univ. Stuttgart, Germany, January-June 1975
Univ Strassbourg, EAHP, Strassbourg, France, June-July 1975
- ii. Centre de Mise en Forme des Materiaux (CEMEF), ENSMP (ParisTech),
September 1981-July 1982
- iii. Centre de Mise en Forme des Materiaux (CEMEF), ENSMP (ParisTech),
September 1988-March 1989

Polydynamics Inc (www.polydynamics.com)

President, January 10, 1994- Present

LANGUAGES with ability to lecture:

English, Greek (mother tongue), German (fluent), French (fluent), Spanish (fluent), Italian (functional) and Portuguese (functional)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS (*currently active)

- Prof. Eng. Ontario (PEO) – Canada
- * Chem.Inst.Can.(CIC)–Can.Soc.Chem.Eng. (CSCChE)- Canada
- * Can. Soc. Rheology (CSR-SCR) (Past President, 1986-1988) – Canada
- *Amer.Inst.Chem.Eng. (AIChE) – (USA)
- *Soc. Rheol. (SOR) – (USA)
- *Soc. Plast. Eng. (SPE) - USA/International
- *Polym. Proc. Soc. (PPS) –International (Past President, 2005-2007)
- *Hellenic Society of Rheology (HSR) – (Greece)
- Verein Deutscher Ingenieure (VDI) – (Germany)

HONOURS AND AWARDS

- 1 **Fellow (FCIC)**, Chemical Institute of Canada (1985)
- 2 **Fellow (FSPE)**, Society of Plastics Engineers (2001)
- 3 **Fellow (FCAE)**, Canadian Academy of Engineering (2014)
- 4 **Peter Benham Distinguished Lecturer**, Queen’s University, Belfast, N. Ireland (2000)
- 5 Received the **2001 Fred E. Schwab Award for outstanding achievements in education**, from the Society of Plastics Engineers, during the Annual Technical Meeting in Dallas, Texas, USA.
- 6 Received the **2004 Distinguished Achievement Award** of the Extrusion Division of S.P.E. (in “**recognition of his contributions to the plastics industry**”) during the Annual Technical Meeting in Chicago, Illinois, USA.
- 7 **D.B. Robinson Distinguished Speaker**, University of Alberta, Edmonton, Canada (2007)
- 8 Received the **S.G. Mason Award for outstanding contributions to rheology**, from the Canadian Society of Rheology, Hamilton, Ontario, **Canada**, (2007).
- 9 **Honoured with a special symposium** during the 26th International Conference of the Pol. Proc. Soc. (**PPS-26**), in **Banff, Alberta, Canada**.
- 10 **Visiting Professorship**, Warsaw University of Technology, Warsaw, **Poland** (2011)
- 11 Received the **2014 Bruce Maddock Award**, of the Extrusion Division of SPE, for **contributions to single screw extrusion fundamentals** (SPE ANTEC, Las Vegas, 2014).
- 12 **SABIC Lectureship Award**, University of Akron, Akron, OH, **USA** (2014)
- 13 **Conference Honouree**, 7th International Meeting of the **Hellenic, Society of Rheology, Heraklion, Crete** (2014)
- 14 **Honoured with Special Issue** of International Polymer Processing, 37(4), 2022 (the Journal of the Polymer Processing Society)

SCHOLARLY AND PROFESSIONAL ACTIVITIES

- **Consultant to process and polymer industry, licensor of software packages and expert witness in legal disputes involving patent litigation and product liability.**
Consulting contracts and software licensing agreements include: Falconbridge Nickel Mines (Canada), Rohm and Haas (USA), Alcan (Canada), American National Can (USA), Egan Machinery (USA), Samuel Strapping Systems (Canada), Brampton Engineering (Canada), Eastman Kodak (USA), Extrusion Dies Inc. (USA), Neste Polyeten (Sweden), Mitsubishi Petrochemical (Japan), Mitsubishi Plastics (Japan), Mitsubishi Kasei (Japan), Royal Institute of Technology (Sweden), Tetra Pak (Sweden), Monsanto (USA), Hercules (USA), Mobil Chemical (USA), Viskase (USA), U. St. Etienne (France), Ube (Japan), Ford Motor Company (USA), Dow Chemical (USA), BICC Cables (USA), Black Clawson Sano (USA), Boston Scientific (USA), Cryovac (USA), E.I. DuPont de Nemours (USA), Nicholas Plastics (USA), Nordson Corporation (USA), Velcro (USA), OM Industries (Canada), Hanwha Chemical Corp. (Korea), Borealis (Norway), Progress Precision (Canada), Xerox (Canada), Ingenia Polymers (Canada, USA), Corma (Canada), Nitta Casings (USA), Total Petrochemicals (Belgium) **and several other corporations totalling over 500, in 31 countries.**
- Member (former) of the Editorial Board of Advances in Polymer Technology.
- Member of the Editorial Board of International Polymer Processing (PPS).
- Member of Advisory Board of Progress in Polymer Processing (PPS, Hanser Publishers)
- Regular journal referee: C.J.Ch.E., A.I.Ch.E.J., Polym. Eng. Sci., J. Rheol., J. Appl. Polym. Sci., Chem. Eng. Comm., Adv. Polym. Tech., Rubb. Chem. Tech., J. Non-Newt. F.M., Intern. Polym. Proc., Num. Meth. Heat Transf., Chem. Eng. Sci.....(over 25 journals)
- Reviewer of research proposals for NSERC (Canada), Canada Council, FCAR-FQRNT (Quebec, Canada), NSF (USA), NATO, Ministry of Research and Technology (Greece), Technology Fund (Ontario, Canada), Petroleum Research Fund (USA), Research funding organizations in Australia, U.K., The Netherlands, Czech Republic, Ukraine, Portugal and Saudi Arabia.
- Member of Selection Committee for the Government of Canada awards to foreign nationals (1975-1978)
- External Ph.D. Thesis examiner for several universities: U. Toronto, U. Waterloo, McGill, École Polytechnique, U. Alberta, U. British Columbia, Indian Institute of Technology (Madras, India), Ecole N.S. Mines Paris (France), U. Sydney (Australia), Tech. U. Brno (Zlin- Czech Republic), RMIT (Melbourne, Australia), U. of Western Ontario, U. of Belfast (Northern Ireland), U. do Minho (Portugal), U. Duisburg-Essen (Germany), U. Lyon (France), Ecole National Supérieure d'Arts et Métiers (Paris, France)
- Session Chairman: in several national and international conferences.
- Chairman, Symposium on Quantitative Characterization of Plastics and Rubber, McMaster University, June 1984 (Attendance 80).
- Course Director and usually sole Lecturer: Intensive Short Courses on Polymer Rheology and Processing (usually extrusion) in Canada, Greece, Venezuela, Sweden, Finland, Czech Republic, U.S.A., Australia, Belgium, Brazil, Japan, Germany, Italy, Mexico, The Netherlands, Luxembourg, Spain, New Zealand and UAE, Abu Dhabi (cumulative attendance over 2000). Offered 2-3 times per year in different parts of the world (85 times since 1987).
- Chairman, Canadian Rheology Group (now Canadian Society of Rheology) (1986-88).

- Chairman, Organizing Committee of the 7th Annual International Meeting of the Polymer Processing Society (PPS), Hamilton, Ontario, April 1991 (Attendance about 400, from 23 countries).
- President, Polydynamics, Inc., a spin-off company engaged in software research, development, and consulting in plastics processing, since 1994.
- Co-organizer, OCMR Workshop on Die Design, Toronto, Ontario, June 1995 (attendance 70).
- Organizer, Workshop on Rotomolding, McMaster University, Hamilton, Ontario, May 1995 (attendance 40).
- Member, Board of Directors, Extrusion Division of the Society of Plastics Engineers (SPE) 1997–2003.
- Chair, Organizing Committee, North American Meeting of the Polymer Processing Society (PPS), Toronto, August 1998 (attendance about 145).
- Chair, PPS Membership Committee, 1999–present.
- Member, Organizing Committee, 3rd Pacific Rim Rheology Conference, Vancouver, B.C. (2001).
- Member, Organizing Committee, US/Canada Plastics Alliance (Niagara-on-the-Lake, ON meeting, April 1999).
- Nanocomposites RCE Selection Panel, NSF, Washington, DC (July 2002).
- President, Polymer Processing Society (2005-2007).
- Member of the Industrial Advisory Board of Medical Plastics Research Institute (MPRI), Queen’s University of Belfast, N. Ireland (2004-2006).
- Soc. Plastics Eng. (SPE) member of SPE Fellows election committee (since 2008), SPE Education award committee (since 2009)
- Polymer Processing Society (PPS), J. L. WHITE Innovation Award selection Committee (2010-2017), Chair of Selection Committee (2022-present)

RESEARCH AREAS OF INTEREST

- **POLYMER PROCESSING AND RHEOLOGY**
- **CAD/CAM METHODS IN PLASTICS PROCESSING**
- **FLUID FLOW and HEAT TRANSFER in PROCESS INDUSTRIES**
- **ADDITIVE MANUFACTURING**

CENTRE FOR ADVANCED POLYMER PROCESSING AND DESIGN (CAPPA-D)

John Vlachopoulos was the founder and Director of CAPPA-D (1987-2017). Membership included faculty members, postdoctoral fellows, research engineers and graduate students working in the areas of processing of polymers (extrusion, injection molding, rotomolding, thermoforming, and plastics recycling). After 2007, research in polymer processing continues to be carried out under the leadership of Professor M.R.Thompson, within the **McMaster Manufacturing Research Institute (MMRI)**

UNIVERSITY COURSES TAUGHT

Fluid Mechanics (both at undergraduate and graduate level)
Heat Transfer (undergraduate)
Mass Transfer (undergraduate)
Polymer Rheology (graduate)
Polymer Processing (undergraduate/graduate)
Extrusion Systems Design (undergraduate)

PUBLICATIONS

Books and Lecture Notes

7. **J. Vlachopoulos** and N.D. Polychronopoulos “**Understanding Rheology and Technology of Polymer Extrusion**” 339 pages, First Edition, Polydynamics Inc, Dundas, ON, Canada (2019) ISBN 978-0-9952407-2-8 (book) ISBN 978-0-9952407-3-5 (electronic book)
6. **J. Vlachopoulos** "**Lecture Notes on Polymer Rheology and Extrusion**", over 400 pages, **updated annually** for the **International Intensive Short Course** presentation (1987-present, 85 times in 19 countries, organized by Polydynamics, Inc, since 2022 online).
5. **J. Vlachopoulos** "**Fundamentals of Fluid Mechanics**", 815 pages, McMaster University, Hamilton, ON, Canada (1984,1985,1994,2002,2007). Revised internet edition 2016, Polydynamics Inc., ISBN 978-0-9952407-1-1 (Book) ISBN 978-0-9952407-0-4 (Electronic book). A searchable PDF is downloadable from www.researchgate.com.
4. **J. Vlachopoulos** and J.R. Wagner (Editors), "**The SPE Guide on Extrusion Technology and Troubleshooting**", 413 pages, Society of Plastics Engineers (SPE), Brookfield, CT, USA (2001).
3. J.A. Covas, J.F. Agassant, A.C. Diogo, **J. Vlachopoulos** and K. Walters (Editors) "**Rheological Fundamentals of Polymer Processing**", 463 pages, NATO ASI Series, Kluwer, Dordrecht, The Netherlands (1995). ISBN ISBN-13: 9789048146376 ISBN-10: 9048146372
2. **J. Vlachopoulos**, "**Introduction to Plastics Processing**", over 150 pages, Lecture Notes, Department of Chemical Engineering, McMaster University (1993-2007).
1. **J. Vlachopoulos** (Editor) "**Quantitative Characterization of Plastics and Rubber**", 156 pages, Symposium Proceedings, McMaster University (1984)

Book Chapters

20. N. D. Polychronopoulos and J. Vlachopoulos "Polymer Processing and Rheology" Chapter 4, p. 133-180, in Functional Polymers. Polymers and Polymeric Composites: A Reference Series A.A.J. Mazumder, H. Sheardown A. Al-Ahmed (Editors), Springer Nature Switzerland (2019)
19. J. Vlachopoulos and V. Sidiropoulos "Die Flow Analysis and Mathematical Modeling of Film Blowing" in T. Kanai and G.A. Campbell (Editors) "Film Processing Advances" Hanser Verlag, Chapter 4, 111-132, Munich (2014)
18. J. Vlachopoulos, R. Castillo, N. Polychronopoulos, S. Tanifuji, "Blown Film Dies", Chapter 5 in O.S. Carneiro and M. Nobrega (Eds.) "Design of Extrusion Forming Tools", Smithers – Rapra, London, 141-167 (2012).
17. J. Vlachopoulos, N. Polychronopoulos S. Tanifuji, J.P. Müller "Flat Film and Sheet Dies", Chapter 4 in O.S. Carneiro and M. Nobrega (Eds.), "Design of Extrusion Forming Tools", Smithers – Rapra, London, 113-140 (2012).
16. J. Vlachopoulos and N. Polychronopoulos, "Basic Concepts in Polymer Melt Rheology and their Importance in Processing", Chapter 1, pages 1-27 in M. Kontopoulou (Ed.), "Applied Polymer Rheology", Wiley (2012).
15. J. Vlachopoulos and D. Strutt, "Rheology of Molten Polymers", Chapter 6, pages 77-96, in J.R.Wagner (Ed.), "Multilayer Flexible Packaging" 2nd Edition, Elsevier, Amsterdam (2016, first edition published in 2010).
14. J. Vlachopoulos, "An Assessment of Energy Savings Derived from Mechanical Recycling of Polyethylene versus New Feedstock" McMaster University, Hamilton, ON, Canada, prepared for and published by The World Bank, 22 pages (2009), downloadable also from www.polydynamics.com.
13. J. Vlachopoulos and D. Strutt, "Heat Transfer", in SPE Plastics Technicians Toolbox, 2, 21-33 (2002).
12. J. Vlachopoulos and V. Sidiropoulos, "Polymer Film Blowing: Technology and Modelling", Encycl. of Mat. Sci. & Tech., 7296-7101 Elsevier (2001).
11. J. Vlachopoulos, "Computer-Aided Polymer Processing Analysis and Design", Can. Chem. News, 29-30, September 2000.
10. M. Kontopoulou and J. Vlachopoulos, "Sintering of Polymeric Powders: Analogies Between Polymer Processing and Materials Science", Metalleiologika Metal. Chronika, Vol. 9(1-2), 203-222 (1999), Athens, Greece.
9. J. Perdikoulis, J. Vlachopoulos and J. Vlcek, "Spiral Die Analysis", Chapter 2.2, pp. 39-57 in "Film Processing", T. Kanai and C.A. Campbell (Eds.), Hanser, Munich, Germany (1999).

8. A.T.P. Zahavich and J. Vlachopoulos, "Reprocessing of Polyolefins", 271-297 in "Frontiers in the Science and Technology of Polymer Recycling", G. Akovali, C.A. Bernardo, J. Leidner, L. A. Utracki and M. Xanthos (Eds.), NATO ASI Series, Kluwer, Netherlands (1998).
7. B.L. Koziy, M.O. Ghafur, J. Vlachopoulos and F.A. Mirza, Computer Simulation of Thermoforming, 75-89, in D. Bhattacharyya (Ed.), Elsevier, Amsterdam (1997).
6. A. Karagiannis, A.N. Hrymak, J. Vlachopoulos and J. Vlcek, "Coextrusion of Polymer Melts", Chapter in J.A. Covas et al (Eds.), "Rheological Fundamentals in Polymer Processing", Kluwer, NATO ASI Series, Dordrecht, The Netherlands (1995).
5. M.O. Ghafur, B. Koziy and J. Vlachopoulos, "Simulation of Thermoforming and Blowmolding: Theory and Experiments", 321-383 in "Rheological Fundamentals in Polymer Processing", J.A. Covas et al (Eds.), NATO ASI Series, Kluwer, Netherlands (1995).
4. J. Vlachopoulos, N. Silvi and J. Vlcek, "POLYCAD A Finite Element Package for Molten Polymer Flow", Chapter 4, in K.T. O'Brien (Ed.), "Application of CAE in Extrusion and Other Continuous Processes", 85-102, Hanser, Munich, Germany (1992)
3. J. Vlcek, J. Perdikoulis and J. Vlachopoulos, "Extrusion Die Flow Simulation and Design with FLATCAD, COEXCAD and SPIRALCAD", Chapter 10, in K.T. O'Brien (Ed.), "Application of CAE in Extrusion and Other Continuous Processes", 487-504, Hanser, Munich, Germany (1992).
2. J. Vlachopoulos and E. Mitsoulis, "Fluid Flow and Heat Transfer in Calendering", Chapter in Transport Phenomena in Polymeric Systems (R.A. Mashelkar, Editor), 79-104, Ellis Horwood/Halsted/Wiley (1989).
1. J. Vlachopoulos, "Calendering", Encyclopedia of Materials Science and Engineering, M.B. Bever (Ed.), 485-487, Pergamon Press (1986).

Peer Reviewed Journal Papers

149. N.D. Polychronopoulos, I.E. Sarris, L. Benos, J. Vlachopoulos “Pressure drop in converging flows in three-dimensional printing of concrete” *Phys. Fluids* 35, 093104 (2023)
148. N.D. Polychronopoulos, L. Benos, J. Vlachopoulos “Mathematical modelling of coalescence of viscous particles: An overview” *Can. J. Chem. Eng.* 101(9), 5231-5243 (2023)
147. V. Gritsichine, H.S. Marway, J. Vlachopoulos, M.R. Thompson “Improving the consistency of environmental stress cracking resistance testing for polyethylenes” *Polym. Eng. Sci.* 63(2), 478-488 (2023)
146. N.D. Polychronopoulos, L.Th. Benos, C.I. Stergiou, I.E. Sarris, J. Vlachopoulos “Viscous coalescence of unequally sized spherical and cylindrical doublets” *Soft Matter* 18, 4017-4029 (2022)
145. N.D. Polychronopoulos, I.E. Sarris, J. Vlachopoulos “A viscous sintering model for pore shrinkage in packings of cylinders” *Rheol. Acta*, 60, 397-408 (2021)
144. A. Demirci, I. Teke, N.D. Polychronopoulos, J. Vlachopoulos “The role of calender gap in barrel and screw wear in counterrotating twin screw extruders” *Polymers*, 13(7), 990 (2021)
143. N.D. Polychronopoulos, J Vlachopoulos “The role of heating and cooling in viscous sintering of pairs of spheres and pairs of cylinders” *Rapid Protot. J.* 26 (4) (2020)
142. A.K. Saad, H.A .Abdulhussain, F.P.C. Gomes, J. Vlachopoulos, M.R. Thompson “Studying the mechanism of biodiesel acting as an environmental stress cracking agent with polyethylenes” *Polymer* 191, 122278 (2020)
141. A Demirci, I Teke, A Goger, E Canbaz, J Vlachopoulos “Gelation of poly (vinyl chloride) inside a single screw extruder and its effect on product properties” *J. Vinyl Add. Techn.* 25 (S1), E174-E180 (2019)
140. N.D. Polychronopoulos and J. Vlachopoulos “Computer Flow Simulation of Moffatt Eddies in Single Screw Extrusion” *Intern. Polym.Proc.*, 33(5), 662-668 (2018)
139. N.D. Polychronopoulos, Z. Charlton, D. Suwanda, J. Vlachopoulos, “Measurements and Comparison to Predictions of Viscosity of Heavily Filled HDPE with Natural Fibers” *Adv. Pol.Tech.*, 37 (4), 1161-1167 (2018)
138. J. Boyd, W.T.J. West, S. Wu, E.S. Takacs, J Vlachopoulos, M.R. Thompson “Automated image analysis to characterize the melt densification stage of polymer sintering processes” *Polymer Testing*, 60, 242-249 (2017)

137. G. P. Balamurugan, R. N Pukadyil, M. M Malayery, M. R Thompson, J. Vlachopoulos, K. E. Nielsen, Frank A Brandys "Thermal wrinkling behavior of formable decorative film laminates," J. Plast. Film Sheet., 33, 290-308 (2017)
136. E. Takacs, M.R. Thompson, J. Vlachopoulos, K. Dunn, K.E. Nielsen, F.A. Brandys, "Factors Affecting Gloss and Color of Decorative Pressure Sensitive Adhesive Films During Thermomechanical Deformation" Pol. Eng. and Sci., 56, 12, 1357-1365 (2016)
135. M. Emami, M.R. Thompson and J. Vlachopoulos and E. Maziers "Examining the Influence of Production Scale on the Volume Expansion Behavior of Polyethylene Foams in Rotational Foam Molding" Adv. Pol. Tech., 34, DOI 21507 (8 pages)(2015)
134. E. Emami, M.R. Thompson and J.Vlachopoulos "Experimental and Numerical Studies on Bubble Dynamics in Non-Pressurized Foaming Systems" Polym. Eng. Sci., 54, 1947-1959, (2014)
133. M. Emami, M.R. Thompson and J. Vlachopoulos "Bubble Nucleation in Non-Pressurized Polymer Foaming Systems", Polym. Eng. Sci., 54, 1201-1210 (2014)
132. A. Goger, J. Vlachopoulos, M.R. Thompson "Negative Pressures in Modeling Rotating Polymer Processing Machinery Are Meaningless, But They Are Telling Something" Intern. Polym. Proc., 29, 295-297 (2014).
131. M. Thompson, B. Mu, C.M. Ewachuk, Y.Cai, K.J. Oxby and J. Vlachopoulos "Long Term Storage of Biodiesel/ Petrol Diesel blends in Polyethylene Fuel Tanks" Fuel, 108, 771-779 (2013)
130. P. Michelis and J. Vlachopoulos "Complete CNT Disentanglement-Dispersion-Functionalisation a Pulsating Micro-Structured Reactor" Chem. Eng. Sci., 90,10-16 (2013)
129. M. Emami, E. Takacs, M.R. Thompson and J. Vlachopoulos, "Visual Studies of Model Foam Development for Rotational Molding Processes" Adv. Polym. Tech.,32, E809-E821 (2013).
128. M. Emami, E. Takacs and J. Vlachopoulos, "Rotational Foam Molding of Metallocene Catalyzed Polyethylene: CBA Screening and Process Characteristics", J. Cell. Plast., 46(4), 333-351 (2010).
127. R. Elsheref, J. Vlachopoulos and A. Elkamel, "Comparison and Analysis of Bubble Growth and Foam Formation Models", Engin. Computations, 27(3-4), 387-408 (2010).
126. C.R.Santi, E. Hage, J.Vlachopoulos and C.A.Correa, "Rheology and Processing of HDPE/ Wood Flour Composites" Intern. Polym. Proc., 24, 346-353 (2009).
125. C.R. Santi, E. Hage Jr., C.A. Correa and J. Vlachopoulos, "Torque Viscometry of Molten Polymers and Composites", Appl. Rheol., 19(1), 10-16 (2009)
124. E.S. Takacs and J. Vlachopoulos, "Biobased, Biodegradable polymers for Biomedical Applications: Properties and Processability", Plast. Engineer., 64(9), 28-23, Oct. 2008.

123. V. Hristov and J. Vlachopoulos, "Effects of Polymer Molecular Weight and Filler Particle Size on Flow Behavior of Wood Polymer Composites", *Polym. Compos.*, 29, 831-829 (2008).
122. D. Kanev, E. Takacs and J. Vlachopoulos, "Rheological Evaluation and Observations of Extrusion Instabilities of Biodegradable Polyesters", *Inter. Polym. Proc.*, 22, 395-401 (2007).
121. V. Hristov and J. Vlachopoulos, "A Study of Entrance Pressure Loss in Filled Polymer Melts", *Appl. Rheol.*, 17(5), 57191 (9 pages) (2007).
120. V. Hristov and J. Vlachopoulos, "Thermoplastic Silicone Elastomer Lubricant in Extrusion of Polypropylene Wood Flour Composites", *Adv. Polym. Tech.*, 26, 100-108 (2007).
119. V. Hristov and J. Vlachopoulos, "Influence of Coupling Agents on Melt Flow Behavior of Natural Fiber Composites", *Macrom. Mat. Eng.*, 292, 608-619, (2007).
118. V. Hristov and J. Vlachopoulos, "A Study of Viscoelasticity and Extrudate Distortions of Wood Polymer Composites", *Rheol. Acta*, 46, 773-783 (2007).
117. V. Hristov, E. Takacs and J. Vlachopoulos, "Surface Tearing and Wall Slip Phenomena in Extrusion of Highly Filled HDPE/Wood Flour Composites", *Polym. Eng. Sci.*, 46, 1204-1214 (2006).
116. H.J. Larrazabal, A.N. Hrymak and J. Vlachopoulos, "On the Relationship Between the Work of Adhesion and the Critical Shear Stress for the Onset of Flow Instabilities", *Rheol. Acta*, 45, 705-715 (2006).
115. H.J. Larrazabal, A.N. Hrymak and J. Vlachopoulos, "Effect of the Chemical and Morphological Conditions of the Die Wall on the Extrusion of Linear Polyolefins", *Intern. Polym. Proc.*, 21, 132-140 (2006).
114. V. Sidiropoulos and J. Vlachopoulos, "Temperature Gradients in Blown Film Bubbles", *Adv. Polym. Techn.*, 24, 83-90 (2005).
113. A. Tinson, E. Takacs and J. Vlachopoulos, "The Role of Surface Tension in Sintering for Rotational Molding", *Rotoworld*, 1, 43-47 (2005).
112. A. Torres, A. Hrymak, J. Vlachopoulos, D. Moran and Z. DaFonseca, "The Fast and Efficient Simulation of 3D Creeping Flow in Ducts Using a Space Matching Algorithm", *Polym. Eng. Sci.*, 45, 249-259 (2005).
111. M. Thompson, C. Xi, E. Takacs, M. Tate and J. Vlachopoulos, "Experiments and Flow Analysis of a Micropelletizing Die", *Polym. Eng. Sci.*, 44, 1391-1402 (2004).
110. D. D'Agostino, E. Takacs and J. Vlachopoulos, "Foaming with Polymer Microspheres in Rotational Molding: The Effect of Coupling Agent", *J. Cell. Plast.* 40, 61-75 (2004).
109. V. Sidiropoulos and J. Vlachopoulos, "The Aerodynamics of Blown Film Cooling", *Jap. Soc. Polym. Proc. Journal (Seikei Kaku)*, 15, 740-744 (2003).

108. J. Vlachopoulos and D. Strutt, "Overview: Polymer Processing", *Mat. Sci. Tech.*, 19, 1153-1160 (2003).
107. A. Greco, A. Mafezzoli and J. Vlachopoulos, "Simulation of Heat Transfer During Rotational Molding", *Adv. Polym. Tech.*, 22, 271-279 (2003).
106. V. Sidiropoulos and J. Vlachopoulos, "Numerical Simulation of Blown Film Cooling", *J. Reinf. Plast. Comp.*, 21, 629-637 (2002).
105. B.I. Chaudhary, E. Takacs and J. Vlachopoulos, "Ethylene Copolymers as Sintering Enhancers and Impact Modifiers for Rotational Molding of Polyethylene", *Polym. Eng. Sci.*, 42, 1359-1369 (2002).
104. B.I. Chaudhary, E. Takacs and J. Vlachopoulos, Processing Enhances for Rotational Molding of Polyethylene, *Polym. Eng. Sci.*, 41, 1731-1742 (2001).
103. V. Sidiropoulos and J. Vlachopoulos, ANumerical Study of Internal Bubble Cooling (IBC) In Film Blowing@, *Intern. Polym. Proc.*, 16, 48-53 (2001).
102. M. Kontopoulou and J. Vlachopoulos, "Melting and Densification of Thermoplastic Powders", *Polym. Eng. Sci.*, 155-169, 41 (2001).
101. V. Sidiropoulos and J. Vlachopoulos, "The Effects of Dual-Orifice Air-Ring Design on Blown Film Cooling", *Polym. Eng. Sci.*, 40, 1611-1618 (2000).
100. V. Sidiropoulos and J. Vlachopoulos, "An Investigation of Venturi and Coanda Effects in Blown Film Cooling", *Intern. Polym Proc.*, 15, 40-45 (2000).
99. M. Kontopoulou, E. Takacs and J. Vlachopoulos, "An Investigation of the Bubble Formation Mechanism in Rotational Molding", *Rotation*, 28-33 (January 2000).
98. J. Vlachopoulos, M. Kontopoulou, E. Takacs and B.A. Graham "Polymer Rheology and Its Role in Rotational Molding", *Rotation*, 22-30 (November 1999).
97. V. Sidiropoulos, P.E. Wood and J. Vlachopoulos, "The Aerodynamics of Cooling of Blown Film Bubbles", *J. Reinf. Plast. Comp.*, 18, 529-538 (1999).
96. M. Kontopoulou and J. Vlachopoulos, "Bubble Dissolution in Molten Polymers and Its Role in Rotational Molding", *Polym. Eng. Sci.*, 39, 1189-1999 (1999).
95. A. Rincon, A.N. Hrymak and J. Vlachopoulos, "Transient Finite Element Analysis of Generalized Newtonian Coextrusion Flows in Complex Geometries", *Intern. J. Num. Meth. Fluids*, 28, 1159-1981 (1998).
94. A.N. Hrymak and J. Vlachopoulos, "Simulation of Coextrusion Flows of Polymer Melts", Seikei Kakou, *Journal of the Japan Soc. Polym. Proc.*, 10, 695-704 (1998).
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Space-Dependent Reactor Transients", Trans. Am. Nucl. Soc., 18, 323 (1974).

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CONFIDENTIAL RESEARCH AND CONSULTING REPORTS

Over 200 major reports have been written with the help of McMaster University staff, Polydynamics Inc. employees (B. Koziy, N. Smith, D. Strutt, V. Sidiropoulos N.D. Polychronopoulos), graduate students and postdoctoral fellows, for large and small corporations.

COMMERCIALY AVAILABLE COMPUTER SOFTWARE PACKAGES

1. POLYCAD 2-D: A General Purpose Finite Element Package for Polymer Process Analysis and Design.
2. SPIRALCAD: A Flow Simulation Package for Design of Spiral Mandrel Dies.
3. FLATCAD: A Flow Simulation Package for Flat Film and Sheet Die Design.
4. EXTRUCAD: A Simulation Package for Single Screw Extrusion. Fully reworked and renamed NEXTRUCAD (2004).
5. COEXCAD: A Flow Simulation Package for Feedblock Coextrusion.
6. CALENDERCAD: A Simulation Package for Calendaring.
7. T-FORMCAD: A Finite Element Package for Simulation of Thermoforming and Blow Molding.
8. LAYERCAD: A Simulation Package for Multilayer Flows.
9. B-FILMCAD: A Simulation Package for Bubble Formation in Film Blowing.
10. VISCOFIT and POLYBANK: These are companion software packages for fitting, storage and retrieval of material data.
11. RHEOMWD: Determination of polydispersity of polymers from rheological data.
12. XTRU-XPRT - An expert system for plastics extrusion.
13. CALCUTRUDE - For molten polymer flow calculations through dies

These packages were originally licensed through McMaster University. In 1994, a spin-off company, POLYDYNAMICS, INC. was founded by J. Vlachopoulos (www.polydynamics.com). Licensees of the software include corporations (several Fortune 500), universities and research institutes in more than 500 industrial sites and research centres in 31 countries around the world.

SEMINARS, LECTURES AND SHORT COURSES

85th Intensive Short Course on Polymer Rheology and Extrusion (online via Zoom), Association of Hellenic Plastics Industries (AHPI)

October 2023 Three 2-hour lectures

84th Intensive Short Course on Polymer Rheology and Extrusion (online via Zoom)

November-December 2023 Five 2-hour lectures

83rd Intensive Short Course on Polymer Rheology and Extrusion (online via Zoom)

April-May 2023 Five 2-hour lectures

82nd Intensive Short Course on Polymer Rheology and Extrusion (online via Zoom)

November 2022 Five 2-hour lectures

37th International Conference of the Polymer Processing Society (PPS-37), Fukuoka, Japan

April 2022 Online “On the Oring of Microplastics in Bottled Water” (available on YOUTUBE)

Invited Lecture, Drexel University, USA

February 2021 online “Plastics: Sustainability, Biodegradability and Microplastics” (available on YOUTUBE)

Phosphate Days 2020 - International Conference on Phosphates (ICP): Fundamentals, Processes and Technologies, Morocco

October 2020 “Environmental Impact of Materials Mining, Production, Use and Recycling” (available on YOUTUBE)

Europe -Africa Polymer Processing Society Conference (PPS2019), Pretoria, South Africa

November 2019 “Mathematical Modeling of Sintering of Two cylinders in Fused Filament Fabrication”

“Extrusion Problem Solving with Rheology and Flow Simulation”

80th Intensive Short Course on Polymer rheology and Extrusion, AIMPLAS, Valencia, Spain

November 2019 2 days of lectures (in Spanish)

79th Course on Processing and Rheology of Polyolefins, BOROUGE, Abu Dhabi, U.A.E.

May 2019 3 days of lectures

9th Hellenic Society of Rheology Conference, Pythagorion, Samos, Greece

June 2019 “Moffart eddies in Single Screw Extrusion”

International Polymer Processing Society Conference (PPS-35), Cesme, Izmir, Turkey
 May 2019 “Some Experiences in Problem Solving with the Help of Rheology and Flow Simulation”
 “Workshop on Rheology, Plastics Extrusion and Troubleshooting”(6 hours)
 Organized by PAGEV- Turkish Plastics Industry Foundation

78th International Intensive Short Course on Polymer Rheology and Extrusion
 May 2019 2 days of lectures (principal lecturer)

S.G. Mason Award Symposium (CSR-SCR), Ecole Polytechnique, Montreal, Quebec
 April 2019 “Rheological Issues in Digital Fabrication: SLS and FFF of Polymers and 3D Printing of Concrete”

Americas Polymer Processing Society Conference (PPS2018), Boston, MA
 November 2018 “Comparing Processes for the Production of Hollow Parts”

19th Plastic Pipes Conference (PP-XIX), Las Vegas, Nevada
 September 2018 “Innovations in Production of Corrugated Pipes”

World Environment Day, City Hall, Lamia, Greece
 June 2018 “Περιβάλλον, Ρύπανση και Ανακύκλωση Πλαστικών- Environment, Pollution and Recycling of Plastics” (in Greek)

34th International Polymer Processing Society (PPS-35) Conference, Taipei, Taiwan
 May 2018 “Extrusion of Large Diameter Pipes”

Plastics Cluster Workshop , Zlin, Czechia
 May 2018 “Problem Solving in Extrusion and Injectn Molding with the Help of Rheology and Computer Simulation” 5 hours of lectures

Petr Saha Polymer Symposium, Tomas Bata University, Zlin, Czechia
 May 2018 “Rheology of Wood Plastic Composites Extrusion”

33rd International Pol.Proc. Soc. Conference (PPS-33), Cancun, Mexico
 December 2017 “Juxtaposing Technological Progress and Modeling of Blown Film Extrusion”

76th International Intensive Short Course on polymer rheology and Extrusion, Burlington, Ontario
 October 2017 Two days of lectures

Hellenic Society of Rheology, 8th International Meeting, Limassol, Cyprus
 July 2017 “Modeling of Sintering from Rotational Molding to Additive Manufacturing”

Pol. Proc. Soc. (PPS2017) Europe-Asia Conference, Dresden, Germany
 June 2017 “Defects in Industrial Film Extrusion”

Japan Society of Polymer Processing (JSPP), 28th Annual Meeting, Tokyo, Japan
 June 2017 “Extrusion Problem Solving with Rheology and CAE”

76th international Intensive Short Course on Polymer rheology, Extrusion and Injection Molding
 May 2017 2 days of lectures, in-house at Athena Automation, Vaughan, Ontario, Canada

75th International Intensive Short Course on Polymer Rheology and Extrusion, Auckland New Zealand

November 2016 2 days of lectures (14hours), organized by Plastics New Zealand

74th International Intensive Short Course on Polymer Rheology and Extrusion, Melbourne Australia

November 2016 2 days of lectures (14 hours), organized by RMIT

Pol. Proc. Soc. (PPS2016) Asia-Australia Conference, Chengdu, China

October 2016 “Challenges in Extrusion Problem Solving with the help of Computer Simulation”

Pol. Proc. Soc (PPS-32) International Conference, Lyon, France

July 2016 “Particle Sintering from Rotational Molding to Additive Manufacturing”

Pol. Proc. Soc. (PPS2015) Europe-Africa Conference, Graz, Austria

September 2015 “The Role of Additives and Calcium Carbonate Filler in Rigid PVC Pipe Extrusion”

Special Rheology Symposium in Honor of Prof. R.I. Tanner, Samos, Greece

June 2015 “A Critical Review of Mathematical Modeling and Technological Developments in Blown Film Extrusion”

Pol. Proc. Soc. (PPS-31) International Conference, Jeju Island, S.Korea

June 2015 “Extrusion of Double-Walled Corrugated Pipe”

Canadian Society of Rheology (CSR-SCR) Mason Award Symposium, Montreal, Canada

May 2015 “The Role of PVC Rheology in Pipe Extrusion”

73rd Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

May 2015 2 days of lectures

Asian Workshop on Polymer Processing, Kenting, Taiwan

November 2014 Plenary “Challenges and Prospects for Quantitative Predictive Modeling for Cast and Blown Film Extrusion”

Panel “Competing in the Production of Hollow Products: Injection Molding, Rotational Molding, Thermoforming, Blow Molding and Additive Technology”

Polym. Proc. Soc. Europe/Africa Conference, Tel Aviv, Israel

October 2014 “Particle Coalescence (Sintering) in Polymer Processing and Beyond”

7th Hellenic Society of Rheology Conference, Crete, Greece

July 2014 “Rheology: from Homer and Heraclitus through Greek (Liquid) Fire to Problem Solving in the Polymer Processing Industry”

Polymer Processing Society (PPS-30) Conference, Cleveland , OH

June 2014 Lecture 1 “A Critical Review of Technological Developments and Mathematical Modeling in Single Screw Extrusion”

Lecture 2 “Some Issues and Experiences in Recycling of Polyethylene”

SABIC Lectures, University of Akron, Akron, OH

May 2014 Lecture 1 “Progress and Challenges in Predictive Modelling in Cast and Blown Film Extrusion”

Lecture 2 “Rheological Aspects of Highly Filled Natural Composites Extrusion”

72nd Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

April 2014 2 days of lectures

SPE Student Chapter, Chem. Eng., McMaster University, Hamilton, ON

February 2014 “What is a patent, what it takes to get one, how to defend yours and how to nullify somebody else’s”

Seminar at Clopay Corporation, Cincinnati, OH

December 2013 “Progress in Rheological Modeling and Prospects for Predictive Modeling in Film Processing”

Soc. of Rheol. (SOR) Meeting, Montreal, QC

October 2013 “On Negative Pressures Reported in Modeling of Rotating Process Machinery”

Pol. Proc. Soc. (PPS-29) Conference, Nuremberg, Germany

July 2013 “De-Agglomeration, Dispersion, and Reactive Mixing in a Pulsating Micro-Reactor”

Ingenia Polymers Conference, Bahrain

April 2013 Lecture 1 “Troubleshooting Extrusion Processes through Rheology and Flow Simulation”

Lecture 2 “Problem Solving through Rheology”

70th Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

April 2013 2 days of lectures

71st Intensive Short Course on Polymer Rheology and Extrusion

January 2013 3 days of lectures offered via internet exclusively for employees of INDESCA, Maracaibo, Venezuela

69th International Intensive Short Course, Burlington ,ON, Canada

November 2012 2 days of lectures “Polymer Rheology and Extrusion”

68th International Intensive Short Course, University of Duisburg-Essen, Germany

October 2012 2 days of lectures entitled “Rheologie der Kunststoffe und Extrusion” (in German)

XIVth Intern. Cong. Rheology, Lisbon, Portugal

August 2012 “The Role of Rheology in Rotational Foam Molding”

Polym. Proc. Soc. (PPS), Americas Meeting, Niagara Falls, Ontario, Canada
 May 2012 “Progress in Flat Die Design for Extrusion and Coating”

67th International Intensive Short Course, Brussels, Belgium
 April 2012 2 days of lectures entitled “Polymer Rheology and Extrusion”

Polym. Proc. Soc. (PPS–27) Annual International Conference, Marrakech, Morocco
 May 2011 “Defects in Industrial Extrusion”

Institute of Engineering of Polymer Materials, Torun, Poland
 April 2011 “Extrusion Die Design and Material Considerations”

University of Technology, Warsaw, Poland
 April 2011 “Computer Aided Design of Extrusion Dies”

66th International Intensive Short Course, Brussels, Belgium
 April 2011 2 days lectures on “Polymer Rheology and Extrusion”

H.A.S. L. Corporation Seminar Day, Tokyo, Japan
 February 2011 “Technological Advances in Polymer Extrusion and the Role of CAE”

Kanazawa University, Kanazawa, Japan
 February 2011 “The Role of Rheology in Polymer Processing”

K – Show Special Seminar, Düsseldorf, Germany(organized by Polydynamics Inc, for visitors from Japan)
 November 2010 “Rheology and Extrusion Equipment Design

Polym. Proc. Soc. (PPS), Regional Meeting, Istanbul, Turkey
 October 2010 “Recent Progress and Future Challenges in Extrusion of Wood Polymer Composites”
 “Extrusion: Rheology, Die Design and Troubleshooting”

Canadian Plastics Industry Association (CPIA) Plastics Forum, Toronto, Canada
 October 2010 “Process Optimization through Rheology”

Polym. Proc. Soc. (PPS–26), Banff, Alberta
 July 2010 “Romancing the Rheological Design of Extrusion Dies” presented at a special session in my honour (several other speakers)

Ecole Polytechnique Montreal, Canada
 May 2010 “From Coalescing Powder Particles to Large Rotomolded Hollow Parts”

22e Entretiens Jacques Cartier Rhone –Alpes, Lyon, France.
 December 2009 “Extrusion et Rheologie des Composites Bois-Polymers” (in French)

Polym. Proc. Society (PPS) Regional Meeting, Larnaca, Cyprus
 October 2009 “Computer Simulations and Experiments in Single Screw Extrusion”

8th World Congress Chem. Eng., Montreal, Quebec

August 2009 "Modeling Advances and Current Challenges in Rotational Molding of Polymers"

Adv. Pol. Sci. Tech. (APST ONE), sponsored by Borealis, Linz, Austria

July 2009 "Improving Rotational Molding through Understanding of Fundamental Mechanisms"

Ecole Polytechnique, Montreal, Quebec

May 2009 "Extrusion et Rheologie des Composites Bois-Polymeres"

University of Akron, Akron, OH

April 2009 "From Coalescing Powder Particles to Large Rotomolded Parts"

Polym. Proc. Society Annual International Meeting (PPS-25), Goa, India

March 2009 "Selection and Modification of Resins for Rotational Molding"

PPS Americas Meeting, Charleston, SC

October 2008 "The Role of Viscosity, Elasticity and Surface Tension on Polymer Particle Coalescence"

65th International Intensive Short Course on Polymer Rheology and Extrusion, Milano, Italy

October 2008 2 days of lectures entitled "Seminario Internazionale: Reologia dei Polimeri e Ottimizzazione dell'Estrusione". Organized by Viadelo Srl. (Presented 75% in Italian and 25% in English).

Borealis, Linz, Austria

October 2008 "Challenges in Computational Analysis of Extrusion Processes"

NTU, Athens, Greece

September 2008 "Ekselikseis Stin Ekvoli Polymeron: Ylika, Kochlioantlies, Kefales" (in Greek)

PPS-24, Annual International Meeting, Salerno, Italy

June 2008 "Rethinking the Mathematical Modelling of Film Blowing"

64th International Intensive Short Course on Polymer Rheology and Extrusion, Arnhem, Netherlands

April 2008 2 days of lectures held in-house at Colbond Corporation

63rd International Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

April 2008 2 days of lectures.

62nd International Intensive Short Course on AIMPLAS, Valencia, Spain

March 2008 2 days of lectures (in Spanish).

Poliuna, Universidad Nacional, Heredia, San Jose, Costa Rica

January 2008 "Reologia de Polimeros Fundidos" (in Spanish)

SPE Extrusion Minitex and Conference at K-Show, Duesseldorf, Germany

October 2007 "Challenges in the Extrusion of PLA and Other Biodegradable Polymers"

PPS Europe Meeting, Göteborg, Sweden

August 2007 "Characterization of Wood-Filled Polymer Composites with the Help of a Capillary Viscometer"

PPS-23, Salvador, Brazil

June 2007 "Corrigir os Problemas do Processo Filme Soprado" (in Portuguese)
 June 2007 "The Influence of Matrix Molecular Weight, Fiber Size and Coupling Agents on Melt Flow Behavior of Wood Polymer Composites"

RIGAS S.A, Athens, Greece

May 2007 "Improving the Art of Selection and Modification of Polymers for Rotational Molding" (presented in Greek)

AERC 2007, Napoli, Italy

April 2007 "Flow Instabilities in Extrusion of Biodegradable Polymers"

61st International Intensive Short Course on Polymer Rheology and Extrusion

March 2007 2 days of lectures, Miura Peninsula (near Kamakura), Japan

60th International Intensive Short Course on Polymer Rheology and Extrusion

February 2007 2 days of lectures, Brussels, Belgium

D.B. Robinson Distinguished Speaker Series, University of Alberta, Edmonton, Canada

January 2007 "Optimization of Polymer Processing Operations Through Mathematical Modelling and Simulation"

PPS Regional Meeting, Roodevallei near Pretoria, South Africa

October 2006 "Rheology and Extrusion of Wood Polymer Composites"

PLAMEDIA, Tokyo, Japan

July 2006 "Modelling of the Blown Film Process Including Polymer Flow in an Extruder and the Aerodynamics of Cooling"

22nd International Meeting of PPS, Yamagata, Japan

July 2006 "Rheology of Some Biodegradable Polymers"

Sumitomo Bakelite, Kobe, Japan

June 2006 "Problem Solving in Polymer Processing with the Help of Rheology"

Sekisui Chemical, Kyoto, Japan

June 2006 "Polymer Rheology and Blown Film Extrusion"

59th International Intensive Short Course on Polymer Rheology and Extrusion

May 2006 2 days of lectures, Niagara Falls, ON.

Annual European Rheology Conference, Hersonisos, Crete, Greece

April 2006 "Surface Tearing and Wall Slip Phenomena in Extrusion of Natural Fiber Polymer Composites"

10th Anniversary of PPRC, Queen's University, Belfast, North Ireland

April 2006 "Progress in Wood Plastics Composites Around the World"

58th International Short Course on Polymer Rheology and Extrusion

February 2006 2 days of lectures, Brussels, Belgium

VIADELO/Milan Plast, Milan, Italy

February 2006 "Recent Developments in Machinery, Materials and Modelling in Blown Film Extrusion"

Future Design, R2R, Fort Lauderdale, Florida.

January 2006 "The Role of Rheology in Blown Film Extrusion"

57th International Short Course on Polymer Rheology and Extrusion

November 2005 2 days of lectures, Milan, Italy (organized by VIADELO S.R.L.)

PPS Regional Meeting, Quebec, Canada

August 2005 "Rheological Aspects of Wood-Polymer Composites Extrusion"

5th GRACM International Congress on Comp. Mechanics, Limasol, Cyprus

July 2005 "Simulation of Laminar Polymer Melt Flow and Turbulent Air-Jet Cooling in Blown Film Production"
 "John H. Argyris: Engineering Pioneer, Innovator and Visionary (1913-2004)"

56th International Short Course on Polymer Rheology and Extrusion

June 2005 2 days of lectures, Brussels, Belgium

Panhellenic Plastics Conference, Athens, Greece

March 2005 "Shediasmos Mitron Ekvolis Plastikou Basismenos se Arithmitikes Prosomoioseis kai Biomihaniki Peira"

EXTRUMA, Frankfurt, Germany

February 2005 "The Role of Rheology in Polymer Extrusion"

"25 Jahre KTP" Tagung, Paderborn, Germany (Laudatio for Prof.H. Potente)

February 2005 "Technologische Entwicklungen und Fortschritte der Modelierung bei der Blasfolienextrusion" (in German)

55th Intern. Intense Short Course on Polymer Rheology and Extrusion

February 2005 2 days of Lectures, Brussels, Belgium

PPS Regional Meeting, Florianopolis, Brazil

November 2004 "A função da Reologia para Extrusão" (in Portuguese)
 "Recent Progress and Future Challenges in Rotational Molding"

K-show SPE Minitec, Düsseldorf, Germany

October 2004 "The Role of Rheology in Polymer Extrusion"

54th Intern. Intense Short Course on Polym. Rheol. & Extrusion

August 2004 3 days of lectures, Burlington, Ontario

Hellenic Society of Rheology Meeting, Athens, Greece

June 2004 "Modeling Challenges in Plasticating Screw Extrusion"

53rd Intern. Intensive Short Course on Polymer Rheology & Extrusion

February 2004 3 days of lectures, Brussels, Belgium

Future Design, R2R Symposium, Ft. Lauderdale, FL.

January 2004 "Aerodynamic and Heat Transfer Considerations in Blown Film Extrusion"

Queen's University, Belfast, N. Ireland

December 2003 "Extrusion of Heavily Filled Polymers for the Production of Plastic Lumber"

International Conference, New Technologies in Extrusion, Viadelo, s.r.l., Milano, Italy

November 2003 "The Role of Polymer Rheology in Extrusion"

University of Lecce, Italy

November 2003 "The Role of Polymer Rheology in Extrusion"

Polymer Processing Society (PPS) Regional Meeting, Athens, Greece

September 2003 "Some Experiences on Extrusion Die Design"

Polymer Processing Society (PPS) Annual Meeting, Melbourne, Australia

July 2003 "Extrusion of Heavily Filled Polymers for the Production of Plastic Lumber"

52nd International Intensive Short Course on Polymer Rheology and Extrusion

July 2003 3 days of lectures, Burlington, ON, Canada

Novacel, Guadalajara, Mexico

June 2003 "Reologia y Extrusion de Polimeros" (in Spanish)
52nd International Intensive Short Course, 3½ days of lectures

European Rheology Forum, Stockholm, Sweden

June 2003 "Technological Developments and Modeling of Blown Film Extrusion"

University of Ljubljana, Slovenia

April 2003 "Technological Developments in Blown Film Extrusion"

University of Thessaloniki, CPERI, Greece

March 2003 "Reologia Polimeron" (in Greek)

Panhellenic Conference on Plastics, Athens, Greece

March 2003 "Techologikes Excelixeis stin diergasis ekvolis me emfisisi gia paragogi fillou" (in Greek)

51st Course at University of Athens, Greece, Industrial Chemistry

March 2003 "Reologia Polimeron" (in Greek)-two days of lectures

ISTIL – University of Lyon, Villeurbanne, France

March 2003 "Developpements technologique et modelisation de soufflage de gaine"
(in French)

50th International Intensive Short Course on Polymer Rheology and Extrusion.

February 2003 3 days of lectures, Brussels, Belgium

PPS Regional Meeting, Taipei, Taiwan

November 2002 "Improving the Art of Selection and Modification of Polymers for
Rotational Molding"

European Conference on Rheology, Erlangen, Germany

September 2002 "Rheological Aspects of Plastic Wood Extrusion"

SPE Thermoforming Meeting, Nashville, TN

September 2002 "The Rheology of the Sheet: How the Sheet Behaves"

49th Intern. Intensive Short Course on Polymer Rheology and Extrusion

August 2002 3 days of Lectures, Burlington, Ontario, Canada

Future Design Inc. – Workshop, Toronto Ontario

June 2002 "The Aerodynamics of Air Rings"

PPS Meeting, Guimaraes, Portugal

June 2002 "Blown Film Extrusion: Technological Developments and Computer
Simulations"

48th Intern. Short Course on Polymer Rheology and Extrusion

June 2002 3 days of Lectures, Milan, Italy (organized by VIADELO)

University of Akron, Akron, Ohio

April 2002 "The Technology and Computer Simulation of the Film Blowing Process"

47th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

February 2002 3 days of Lectures

46th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Burlington, Ontario

July 2001 3 days of Lectures

3rd Pacific Rim Conference on Rheology

July 2001, "Extrudate Surface Tearing and other Problems in Extrusion of Heavily
Filled Polymers"

Hellenic Society of Rheology Meeting, Patras, Greece

June 2001 "Particle Sintering and Melt Densification in Rotational Molding"

SPE ANTEC, Dallas, Texas

May 2001 "Resolved and unresolved problems in Coextrusion"

45th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

March 2001 3 days of Lectures at EXXONMOBIL Europe (Machelen)

44th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Amsterdam, The Netherlands

December 2000 3 days of Lectures

Intern. Rheo. Congress, Cambridge, U.K.

August 2000 "The Role of Aerodynamics of Cooling and Polymer Rheology in the Film Blowing Process"

PPS Annual Meeting, Shanghai, China

June 2000 "Resolved and Unresolved Issues in Extrusion Die Design"

43rd Intern. Intensive Short Course on Polymer Rheology and Extrusion, Burlington, Ontario

June 2000 4 days of lectures

Peter Benham Distinguished Lecture, Queen's University, Belfast, N. Ireland

May 2000 "The Role of Polymer Rheology, Equipment Design and the Aerodynamics of Cooling in Film Blowing"

42nd Intern. Intensive Short Course on Polymer Rheology and Extrusion, Organized by RMIT Melbourne, Australia

April 2000 2 days of lectures

MOLDFLOW Corporation, Kilsyth, Australia

April 2000 "Facts, Fallacies, Approximations and Simulations Involving Polymer Entry Flow"

SPE Extrusion Minitex, Toronto, Ontario

March 2000 "Fundamentals of Polymer Extrusion"

PLAMEDIA Corporation, Tokyo, Japan

December 1999 "Single Screw Extrusion Modeling"

PPS Regional Meeting, Bangkok, Thailand

December 1999 "Recent Technological Developments and the Computer Simulation of the Film Blowing Process"

41st Intern. Intensive Short Course on Polymer Rheology and Processing, Univ. of Athens, Greece

November 1999 3 days of Lectures entitled "Reologia Kai Morfopollsi Polymeron" (in Greek)

MENUSIM (European Commission) Workshop, Paris, France

October 1999 "Rheological Considerations in Modelling"
"Design Considerations for Film Co-extrusion, Profiles and Wire Coating"

SPE Extrusion Minitex, Beaumont, Texas

October 1999 "The Role of Rheology in Extrusion"

40th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Burlington, Ontario

June 1999 4 days of lectures

Annual Polym. Proc. Soc. (PPS) Meeting, s'Hertongenbosch, Netherlands

June 1999 "Rethinking the Simulation of Film Blowing"

Can. Therm. Anal. Soc. Tech. Meeting, Mississauga, Ontario

May 1999 "The Importance of Rheological Characterization"

Dow Chemical, Technical Advisory Committee, Midland, Michigan

May 1999 Computer Methods for Polymer Processing Analysis and Design

US/Canada Cross-Border Plastics Alliance, Niagara-on-the-Lake

April 1999 Plastics Research and Education in the Great Lakes Region

Gordon Research Conference, Ventura, California

March 1999 "Numerical Simulation of the Film Blowing Process in the Light of the Latest Technological Innovations"

39th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Antwerp, Netherlands

December 1998 3 days of lectures

Centre Jacques Cartier, Lyon France

December 1998 "Le Role de la Structure Moléculaire et de la Rhéologie Sur l'Extrusion des Polymères" (in French)

38th Intern. Intensive Short Course on Polymer Rheology and Extrusion, Burlington, Ontario

October 1998 4 days of lectures

Soc. Plastics Engineers, SPE, Rochester Section, Rochester, New York

October 1998 "Troubleshooting the Extrusion Process"

5th European Rheology Meeting, Portoroz, Slovenia

September 1998 "Particle Coalescence and Bubble Removal in Rotational Molding"

Hellenic Society of Rheology Meeting, Crete, Greece

September 1998 "Problem Solving Using Rheology and Computer Simulation"

Polymer Processing Society (PPS) Annual Meeting, Yokohama, Japan

June 1998 "Academic Research and Industrial Applications"

37th Course organized by Ryoka Systems, Tokyo, Japan

June 1998 "Rheology and Polymer Extrusion"

SUMITOMO Chemical, Tokyo, Japan

June 1998 "Rheology and Computer Simulation in Polymer Processing"

SUMITOMO Heavy Industries, Tokyo, Japan

June 1998 "The Role of Rheology in the Simulation of Thermoforming"

TETRAPAK, Lund, Sweden

February 1998 "Troubleshooting the Extrusion Process"

Simulation Seminar, Odensee, Denmark

February 1998 "Recent Progress and Future Challenges in Computer-Aided Polymer Processing Analysis and Design"

36th Course at MOBIL Plastics Europe, Luxembourg

February 1998 3-day Short Course on Polymer Rheology and Extrusion

35th Short Course on Polymer Rheology and Extrusion, Brussels, Belgium

December 1997 3 days of lectures

33th Short Course on Troubleshooting of Extrusion, Can. Plast. Ind. assoc. (CPIA), Toronto, ON

November 1997 Full day of lectures

32nd Course -EXXON, Brussels (Machelen), Belgium

October 1997 3-day Short Course on Polymer Rheology and Extrusion

Ind. Res. Dev. Inst. (IRDI), Midland, Ontario

October 1997 "Polymer Properties and the Process of Injection Molding"

Associação Bras. Polim. (ABPOL) Conference, Salvador, Brazil

September 1997 1. 31st Full day short course "Polymer Rheology and Processing"

September 1997 2. "Computer Methods in Polymer Processing"

PPS European Meeting, Gothenburg, Sweden

August 1997 "A Rational Approach to Fault Diagnosis and Troubleshooting in Plastics Extrusion"

NATO Advanced Study Institute on Plastics Recycling, Antalya, Turkey

June 1997 "Processing of Recycled Plastics"

30th Short Course on Polymer Rheology and Extrusion, Burlington, Ontario

June 1997 4 days - Principal lecturer and course director

Brockhouse Institute for Materials Research, McMaster University

April 1997 "Mathematical Modelling in Polymer Processing"

Mobil Chemical, Rochester, N.Y.

April 1997 "Die Design and Simulation for Coextrusion"

22nd Australasian Polymer Symposium, Auckland, New Zealand

February 1997 "Computer Aided Polymer Process Analysis and Design"

29th Short Course on Polymer Rheology and Extrusion, Amsterdam, The Netherlands
December 1996 3 days - Principal lecturer and course director

28th Short Course on Polymer Rheology and Extrusion, Burlington, Ontario
September 1996 4 days - Principal lecturer and Course Director

27th Short Course on Polymer Rheology and Extrusion, KTH (Royal Inst. Tech.), Stockholm, Sweden
September 1996 3 days of lectures

PPS-12, Sorrento, Italy
May 1996 "Some New Results in Rotational Molding"

26th Short Course on Polymer Rheology and Extrusion (3 days), Milano, Italy
March 1996 Principal lecturer

Seminar on Extrusion Die Design, Toronto, Ontario
April 1996 Principal lecturer, Organized by CPI (SPI)

25th Short Course on Polymer Rheology and Extrusion, Düsseldorf, Germany
December 1995 Principal lecturer and course director

Dow Chemical, Freeport, Texas
November 1995 "Computer Simulation in Polymer Processing"

Eastman Kodak, Rochester, NY
September 1995 "Computer Methods for Polymer Process Analysis and Design"

24th Short Course on Polymer Rheology and Extrusion (4 days), Tokyo, Japan
September 1995 Principal lecturer

3rd Intern. Congress on Ind. Appl. Math. (SIAM), Hamburg, Germany
July 1995 "Simulation of Blow Molding and Thermoforming"

23rd Short Course on Polymer Rheology and Extrusion (4 days), Burlington, Ontario
July 1995 Several Lectures (Course Director and principal lecturer)

22nd Short Course on Polymer Rheology and Processing (4 days), Porto Carras, Greece
June 1995 Several Lectures (Course director and principal)

OCMR Workshop on Extrusion Die Design (Co-organizer), Toronto, Ontario
June 1995 "The Role of Rheology in Extrusion"

ABPol – Associação Brasileira de Polímeros, Sao Paulo, Brazil
May 1995 1. "Computer Methods in Polymer Processing Analysis and Design"
 21st Short Course on Polymer Rheology and Processing (3 days),
 (Principal lecturer)
 2. Special lecture on "Polymer processing and rheology" at Brasil Plast'95

Rotomolding Workshop, McMaster University, Hamilton, Ontario

May 1995 Organizer, lecturer and discussion panelist

Woodfibres and Plastics Conference, Madison, Wisc.

April 1995 "Computer Simulation of Extrusion, Injection Molding
and Thermoforming"

HANWHA Group, Daejeon, Korea

March 1995 Two Lectures on Polymer Rheology and Processing

PPS-11, Seoul, Korea

March 1995 "Extrusion Die Design"

General Tire, Akron, Ohio

April 1995 "Extrusion Die Design"

University of Akron, Akron, Ohio (Akron Polymer Lecture)

April 1995 "Computer Methods for Polymer Process Analysis and Design"

Case Western Reserve University, Cleveland, Ohio

March 1995 "Computational Challenges in Extrusion and Injection Molding"

20th Short Course on Polymer Rheology and Extrusion (3 days), Brussels, Belgium

December 1994 Several lectures (Course director and principal lecturer)

General Electric, Corporate R and D, Schenectady, NY

November 1994 "Flow Instabilities in Extrusion and Injection Molding"

NATO Advanced Study Institute, Alvor, Portugal

October 1994 1. Thermoforming and Blowmolding
2. Extrusion Die Design

European Rheology Conference, Sevilla, Spain

September 1994 "The Role of Rheology in Thermoforming and Blowmolding"

19th Course Eastman Chemical, Kingsport, Tenn (4 days)

June 1994 Short Course on Polymer Rheology and Extrusion (Principal lecturer)

18th Short Course on Polymer Rheology and Processing (4 days), Burlington, Ontario

May 1994 Several lectures (Course director and principal lecturer)

Plastics-Wood Fibres Conference, Toronto

April 1994 "Computer Modeling in Polymer Processing"

IRDI - Toronto

March 1994 "Computer Modeling in Polymer Processing"

17th Short Course - Organized by RMIT, Melbourne, Australia

December 1993 One day of lectures on computer modeling of polymer processing

PPC-3, Gold Coast, Australia

December 1993 "The Role of Molecular Structure in Polymer Processing"

Ryoka Systems, Tokyo, Japan

October 1993 "The CAPPA-D Software Packages"

16th Short Course on Polymer Processing and Rheology (5 days)- Corfou, Greece

June 1993 Several lectures on Polymer Rheology and Processing
(Course Director and principal lecturer)

15th Short Course on Polymer Processing and Rheology (4 days)-Burlington, Ontario

May 1993 Several lectures on Polymer Rheology and Processing
(Course Director and principal lecturer)

O'Sullivan Corporation, Winchester, VA.

May 1993 "Rheology and Computer Modeling of Thermoforming"

T.T.I. Automotive Trim Seminar, Troy, Michigan

March 1993 "Rheology and Computer Modeling of Thermoforming", Detroit,
Michigan.

Bridgestone Corporation, Tokyo, Japan

November 1992 "Computer-Aided Polymer Processing"

Mitsubishi Petrochemical, Yokaichi, Japan

November 1992 "Computer-Aided Polymer Processing"

40th Japan Society of Rheology Meeting, Kobe, Japan

November 1992 "Rheological Challenges in Polymer Process Modelling"

Polymer Processing Society Meeting, Prague, Czechoslovakia

September 1992 "The Effects of Multiple Extrusion on the Reprocessability of HDPE".

NUMIFORM, Sophia Antipolis, France

September 1992 "Some Experiences in Creating and Using Software for Polymer Processing
and Design".

International Congress on Rheology, Brussels, Belgium

August 1992 "Modeling of Thermoforming and Blow Molding."

14th Short Course on Polymer Rheology and Processing, Porto Carras, Greece (5 days)

June 1992 Several lectures on Polymer Rheology and Processing
(Course director and principal lecturer)

Polymer Processing Society Meeting, New Delhi, India

March 1992 Computer Simulation and Equipment Design for Polymer Processing.

13th Indesca, Maracaibo, Venezuela

February 1992 "Procesamiento de Polimeros: Fundamentos y Metodos Computacionales",
Twenty-four hours of lectures in Spanish.

12th Short Course on Extrusion, Milwaukee, Wisconsin

September 1991 "Computer Modeling of Polymer Extrusion".

IUPAC - Rheology of Polymer Melts Meeting, Prague, Czechoslovakia

July 1991 "CAD-CAM Methods in Polymer Processing"
and discussion leader on rheological measurements.

Electrolux, Stockholm, Sweden

June 1991 "Rheology and Computer Modeling of Thermoforming"

11th Neste Chemicals, Porvoo, Finland

June 1991 Short Course on "Rheology and Polymer Processing"
Thirty hours of lectures.

U. Tampere, Finland

June 1991 "Simulation of Injection and Compression Molding"

Enimont, Nivelles, Belgium

March 1991 "Simulation of Injection Molding and Other Polymer Processes"

DSM, Geleen, The Netherlands

February 1991 "Computer Modeling in Polymer Processing"

Technical University, Zlin, Czechoslovakia

February 1991 "Computer Modeling in Polymer Processing"

10th Indesca, Maracaibo, Venezuela

December 1990 "Procesamiento de Polimeros: Fundamentos y Metodos Computacionales",
Twenty four hours of lectures in Spanish.

Dow Chemical, Midland, USA

November 1990 "Computer Modelling in Polymer Processings"

9th Short Course on Polymer Processing, Burlington, Ontario (4 days)

October 1990 "Several Lectures on Rheology and Processing"
(Course director and principal lecturer)

Canadian Rheology Group (Short Course), Sheridan Park, Ontario

October 1990 "Introduction to Rheology"

European Rheology Meeting, Edinburgh, U.K.

September 1990 "Thermoforming of Thermoplastics"

Dow Chemical, Terneuzen, Netherlands

August 1990 "Some New Results on Coextrusion and Thermoforming"

BASF, Ludwigshafen, Germany

August 1990 "EDV Methoden bei der Kunststoffverarbeitungsberechnung"
(in German)

Royal Institute of Technology (KTH), Stockholm, Sweden

August 1990 "Computer Simulation of Injection Molding"

Polymer Processing Society Meeting, Nice, France

April 1990 "The Control Volume Method for Die Design"

PACIFICHEM, Honolulu, Hawaii

December 1989 "Thermal Control of Polymer Melt Extrusion"

8th Short Course on Polymer Processing, Burlington, Ontario (3 days)

October 1989 "CAD-CAM Methods in Polymer Processing" (Course Director)

7th Course Portas, Czechoslovakia (Organized by VUGPT, Gottwaldov (Zlin))

August 1989 Polymer Rheology and Processing
(Principal lecturer of Short Course , 3 days)

6th Short Course on Polymer Processing, Porto Carras, Greece (5 days)

June 1989 Several lectures on Rheology and Processing (Course Director)

5th Course at Royal Institute of Technology, Stockholm, Sweden

June 1989 "Melt Rheology and Process Modelling" (Short Course, 4 days)

Mitsubishi Petrochemical, Yokkaichi (Japan)

April 1989 "CAD-CAM Methods in Polymer Processing"

Mitsubishi Kasei, Yokohama (Japan)

April 1989 "CAD-CAM Methods in Polymer Processing"

Instituto de Ciencia y Tecnologia de Polimeros, Madrid, Spain

March 1989
1. "Reologia de Polimeros Fundidos" (in Spanish)
2. "Análisis de Moldeo a Inyección" (in Spanish)
3. "Análisis d'Extrusión" (in Spanish)

CEMEF, Ecole N.S. Mines de Paris-Sophia Antipolis, France

February 1989 "Simulation d'écoulements dans les filières d'extrusion par éléments finis"
(in French)

CEMEF, Ecole N.S. Mines de Paris, Sophia Antipolis, France

December 1988 "Simulation numérique du remplissage de moules d'injection" (in French)

Royal Institute of Technology, Stockholm, Sweden

November 1988 "CAD-CAM Methods in Polymer Processing"

Senter for Industriforskning, Oslo, Norway

November 1988 "CAD-CAM Methods in Polymer Processing"

4th One-day Short Course, Bohlin Reologie, Lund, Sweden

November 1988 "CAD-CAM Methods in Polymer Processing" (6 hrs)

X Intern. Congress on Rheology, Sydney, Australia

August 1988 "Rheological Problems in the Injection Molding of Polymers"

Rheology Workshop, Melbourne, Australia.

August 1988 "Extrudate Swell: Experiments, Mechanisms and Simulations".

3rd Short Course on Polymer Processing, Porto Carras, Greece (5 days)

June 1988 Several Lectures on Rheology and Processing (Course Director)

2nd Short Course on Polymer Processing, Burlington, Ont. (5 days)

May 1988 Several Lectures on Rheology and Processing (Course Director).

Alcan International Ltd. Kingston, Ontario

April 1988 CAD-CAM Methods in Polymer Processing

SPE ANTEC, Atlanta, Ga.

April 1988 POLYCAD: A Finite Element Program for Polymer Flow Analysis Through Extrusion Dies

Intern. Polym. Proc. Group, Berkeley, Ca.

January 1988 "CAD-CAM Methods in Polymer Processing"

AIChE National Meeting, New York, NY

November 1987 "Finite Element Analysis of Non-Isothermal Polymer Melt Flows"

TAPPI Conference, Polym. Lam. Coat., San Francisco, CA

September 1987 "Interface Determination in Multilayer Extrusion"

Cong. Interamer. Ing. Chim., Lima, Peru

June 1987 "El Metodo de los Elementos Finitos por la Simulation de Processos de Flujo de Polimeros" (in Spanish)

Short Course on Polymer Production (organized by A.E. Hamielec)
held at McMaster University and Porto Carras, Greece (two weeks)

June 1987 Several lectures on Polymer Rheology, Processing and CAD-CAM methods.

FIRST SHORT COURSE ON POLYMER RHEOLOGY AND PROCESSING, PORTO CARRAS, GREECE

June 1-5, 1987 5 days of lectures (course director and principal lecturer)

Canadian Engineering Centennial, Montreal, Quebec

May 1987 "Success and Failures of CAD-CAM Methods in Polymer Processing"

Polym. Proc. Soc. Meeting, Stuttgart ,Federal Republic of Germany
April 1987 "Numerical Simulation of Transient Mold Filling"

Soc. Rheol. Meeting, Santa Monica, CA
January 1987 "Some Free Boundary Problems in Polymer Processing"

Daicel Chemical Co., Himeji (Japan)
September 1986 "Successes and Failures of CAD-CAM in Polymer Processing"

World Congress of Chemical Engineering, Tokyo , Japan
September 1986 "Finite Element Simulation of Injection Mold Filling"

Intern. Polym. Proc. Group Meeting, Tokyo ,Japan
September 1986 "Numerical Techniques and Problems in Polymer Processing"

Intern. Heat Transf. Conf., San Francisco, CA
August 1986 "Finite Element Simulation of Non-Isothermal Low-Re Flows"

European Rheology Meeting, Prague ,Czechoslovakia
June 1986 "The Fountain Effect in Injection Mold Filling"

Short Course on Polymer Production Technology (organized by A.E. Hamielec) Poerto Carras, Greece
"Polymer Rheology"

McMaster University, Short Course on Polymer Production Technology
May 1986 "Polymer Rheology"

Baker-Perkins Inc., Saginaw, Michigan
April 1986 "POLYCAD: A Finite Element Program for Polymer Process Analysis and Design"

State University of New York at Buffalo, NY
October 1985 "CAD-CAM-CAE in Polymer Process Engineering"

CEMEF, École des Mines, Sophia Antipolis (France)
July 1985 "Recherches Sur la Mise en Oeuvre des Polymères" (in French)

Inter. Conf. Num. Meth. Lam. Turb Flow, Swansea, U.K.
July 1985 "Numerical Simulation of Reactive Polymer Flows"

PAC CHEM 84, Honolulu, Hawaii
December 1984 "Numerical Simulation of Polymer Flows Through Process Equipment"

Third International Conference on Reactive Polymer Processing, Strasbourg, France
September 1984 "Computer-Aided Modeling of Reactive Polymer Flows"

International Polymer Processing Group Meeting, Strasbourg, France
September 1984 "Polymer Engineering Research at McMaster"

Akron Polymer Conference, Akron, OH

May 1984 "Recent Advances in Computer-Aided Simulation of Polymer Melt Flows".

Stevens Institute of Technology, Hoboken, NJ

November 1983 "Some Experiences in Using Numerical Methods for Polymer Flow Problems".

Intern. Polym. Proc. Group Meeting, Montreal, Quebec

November 1983 "General Considerations in Modeling and the Application of Numerical Methods to Polymer Processing".

McMaster University, Short Course on Polymer Production Technology, organized by A. E. Hamielec

May 1983 "Rheology of Polymer Melts"

PACHEC-83, Seoul, Korea

May 1983 "Analysis of Plastics Extrusion and Calendering by Numerical Methods".

Kyoto University, Japan

May 1983 "Finite Element and Finite Difference Methods in Polymer Processing".

Rohm and Hass, Bristol, PA

April 1983 "The Use of Numerical Methods for the Simulation of Polymer Processing Problems".

III Coloquio Nacional de Macromoleculas, U.Simon Bolivar, Caracas, Venezuela

November 1982 "The Use of Numerical Methods for the Simulation of Polymer Processing Problems. Applications to Extrusion and Calendering".

Société de Machines pour la Transformation des Plastiques, Paris, France

July 1982 "Simulation Numerique du Calandrage et d'Extrusion" (in French)

École d'Application des Hauts Polymères, Université de Strasbourg, France

July 1982 "Simulation Numerique d'une Extrudeuse Monovis" (in French)

Institut Algerien du Petrole, Boumerdes, Algeria

June 1982 "Calandrage des Thermoplastes" (in French)
"Modelisation d'Extrusion" (in French)

Deutsches Kunststoffinstitut, Darmstadt, Federal Republic of Germany

May 1982 "Numerische Berechnungen und Experimentelle Ergebnisse beim Kalandrieren und Extrudieren" (in German)

E.S. Physique et Chimie Industrielle, Paris, France

May 1982. "Le Gonflement et la Rupture de l'Extrudat des Polymères" (in French)

Institut für Kunststofftechnologie, University of Stuttgart, Federal Republic of Germany

May, 1982 "Numerische Berechnungen und Experimentelle Ergebnisse beim Kalandrieren und Extrudieren".

Centre de Mise en Forme des Matériaux, Sophia Antipolis (France)

April 1982 "Calandrage de Matières Thermoplastiques" (in French)

Conference of European Rheologists, Graz, Austria

April 1982 "Numerical Simulation of a Single Screw Plasticating Extruder".

Institut de Mécanique de Grenoble (France)

March 1982 "Gonflement à la Sortie et Rupture d'Extrudat" (in French)

CEMEF, Ecole des Mines, Sophia, Antipolis, France

November 1981 "La Rupture d'Extrudat" (in French)

CEMEF, Ecole des Mines, Sophia, Antipolis, France

October 1981 "Le Gonflement a la Sortie de la Filiere" (in French)

World Congress Chemical Engineering, Montreal, Quebec

October 1981 "Extrudate Swell in Polymer Rheology - A Review"

CEMEF, Ecole des Mines, Sophia Antipolis, France

September 1981 "Recherches sur la Mise en Oeuvre des Polymeres a McMaster" (in French)

University of Toronto, Dept. of Chemical Engineering

March 1981 "Numerical Simulation of Calendering"

McGill University, Montreal, Quebec

November 1980 "Calendering of Thermoplastics"

Intern. Rheol. Congress, Naples, Italy

August 1980 "Rheology in Calendering of Thermoplastics"

US and Japan Joint Meeting on Rheology, Kona, Hawaii

April 1979 "Calendering of PVC: Experiments vs. Theory"

Solvay, Bruxelles, Belgium

August 1978 "Calandrage des Thermoplastes" (in French)

IUTAM Symposium, Louvain-La-Neuve, Belgium

August 1978 "Heat Transfer in Polymer Melt Flows"

SPE-ANTEC, Washington, D.C.

May 1978 "Viscous Dissipation in the Calendering of Power-law Fluids"

Dunlop Research, Sheridan Park, Mississauga, Ontario

June 1977 "Numerical Methods in Rheology and Heat Transfer"

Joint C.I.C.-A.C.S. Viscoelasticity Symposium, Montreal

May 1977 "Post-Extrusion Die Swell"

35th Annual Technical Conference, Soc. Plast. Engrs., Montreal

April 1977 "Should You Use Finite Difference or Finite Element Methods for Polymer Flow Problems"

General Tire & Rubber Co., Akron, Ohio

October 1976 "Polymer Rheology-Processing and Numerical Methods", Also, discussion on Extruder Control

26th Can. Chem. Engrg. Conference, Toronto, Ontario

October 1976 "An Analysis of Thermoplastics Calendering"

University of Alberta, Chem. Engrg. Dept., Edmonton, Alberta

September 1976 "Finite Element and Finite Difference Methods for Non-Newtonian Fluid Flow Problems"

Dunlop AG, Forschungslabor, Frankfurt, W. Germany

September 1976 (i)"Das Kalandrieren Nicht-Newtonischer Flüssigkeiten" (in German)
(ii)"Strangaufweitung und Schmelzbruch im Relation zu Molekularen und Geometrischen Parametern" (in German)

VII Intern. Rheol. Congress, Gothenburg, Sweden

August 1976 "A Comparative Study of Melt Fracture in Capillaries and Slits"

Stevens Institute of Technology, Chem. Engrg. Dept., Hoboken, U.S.A.

February 1976 "Finite Element and Finite Difference Methods for Non-Newtonian Fluid Flow Problems"

I.K.T. Univ. of Stuttgart, Germany

June 1975 "Die Methode der Finiten Elemente für Fließprobleme" (in German)

Deutsches Kunststoff Institut, Univ. of Darmstadt, Germany

May 1975 "Strangaufweitung and Schmelzbruch im Relation zu Molekularen Parametern" (in German)

E.A.H.P., Univ. of Strasbourg, France

May 1975 "Calandrage des Thermoplastes" (in French)

E.A.H.P., Univ. of Strasbourg, France

May 1975 "Gonflement et rupture de fusion lors de l'extrusion des Polymères" (in French)

Jahrestagung der Deutschen Rheologen, Berlin, F. R. Germany

April 1975 "Die Methode der Finiten Elemente, angewandt auf Probleme bei der Kalanderberechnung" (in German)

I.K.T. Univ. of Stuttgart, Germany

January 1975 "Einige Rheologische Untersuchungen" (in German)

Heat Transfer in Plastics Processing, Bradford, U.K.

April 1974 "Numerical Studies of Non-Newtonian Fluid Flow and Heat Transfer"

Society of Rheology Meeting, Montreal, Quebec

October 1973 "Laminar Non-Newtonian Jets"

Intern. Rheol. Congress, Lyon, France

August 1972 "Die Swell and Melt Fracture: Effects of Molecular Weight Distribution"

Soc. Rheology Meeting, Knoxville, Tenn.

October 1971 "Experimental Evaluation of Expressions Predicting Die Swell"

Canadian High Polymer Forum, Waterloo, Ontario

August 1971 "Critical Stress and Recoverable Shear for Polymer Melt Fracture"

CANCAM, Calgary, Alberta

May 1971 "Some New Results on Compressible Turbulent Impinging Jets of Hot Air"

AIChE Annual Meeting, Chicago, Ill.

November 1970 "Some New Results on Polymer Melt Fracture"

AIChE National Meeting, Atlanta, Georgia

February 1970 "A Finite Difference Solution of the Boundary Layer Equations"

Meeting of Engineering Science in Biomedicine, St. Louis, Mo.

November 1969 "A New Viscosity Model for Blood"

McMaster University, Hamilton, Ontario

April 1968 "Heat and Momentum Transfer in the Compressible Turbulent Wall Jet"
Seminar and job interview
