

ghe Greenhouse Engineering

Alex Turkewitsch, P.Eng. Ltd.

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**Alexander Turkewitsch,
B.A.Sc., M.A.Sc., P.Eng.
President, Greenhouse
Engineering**



EDUCATION

1980 M.A.Sc. (Mechanical Engineering), University of Waterloo, Waterloo, Ontario
1977 B.A.Sc. (Systems Design Engineering, Structural), University of Waterloo, Waterloo, Ontario

PROFESSIONAL AFFILIATIONS

Registered Professional Engineer, Association of Professional Engineers of the Province of Ontario (PEO), 1980.
Member, Association of Professional Engineers of the Province of Nova Scotia (APENS), 1991.
Registered Professional Engineer, Association of Professional Engineers of New Brunswick (APENB), 1995.
Registered Professional Engineer, Association of Professional Engineers and Geoscientists of Manitoba (APEGM), 1999.
Registered Professional Engineer, Association of Professional Engineers and Geoscientists of Alberta, 2007
Member, Canadian Society of Agricultural Engineers (CSAE), 1996
Member, American Society of Agricultural and Biological Engineers (ASABE), 1995.
Senior Member, Society of Plastics Engineers (SPE), 1994.
Charter Member, Canadian Association for Earthquake Engineering (CAEE).
Member, American Association for the Advancement of Science (AAAS), 1996.
Charter Member, Institute of Biological Engineers (IBE).
Corporate Member, The Association of Horticulture Professionals (OHA).
Member and Executive Committee, Association of Educational and Research Greenhouse Curators (AERGC).
Member and Former President, NCERA-101 USDA Committee on Controlled Environment Technology and Use
Member, Ontario Society of Professional Engineers (OSPE), Sector Representative, Consulting and/or Construction, Committee of 100, 2001.
Member, American Association of Steel Construction, 2010.
Member, International Code Council (ICC), 2011.
Member, American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), 2012.

EXPERIENCE

March 1999 - Present: Greenhouse Engineering, division of Alex Turkewitsch, P.Eng. Ltd., Toronto, Ontario

- President
- Greenhouse specialist consultant
- Structural and cladding systems design for commercial, institutional and research greenhouses, growth chambers and phytotron facilities
- Planning, specifying, designing and implementing commercial, institutional and research greenhouse, growth chambers and phytotron facilities
- Design and supply specialized subsystems, including irrigation, ventilation, fogging, cooling, shading, heating, automation and mechanization.

1996 - 1999: Nexus Corporation and National Greenhouse Company, Northglenn, Colorado; Pana, Illinois; Darlington, South Carolina and Toronto, Ontario

- Technical Support Engineer for North America
- Design services for commercial, institutional and research greenhouse facilities
- Structural, mechanical, electrical and control systems design as related to greenhouse facilities
- Design of containment facilities with high light transmitting cladding systems
- New product development.

1991 - 1996: Frank Jonkman & Sons Ltd., Bradford, Ontario

- Chief Engineer
- Design - build and project management services for commercial, institutional and research greenhouse facilities
- Structural, mechanical, electrical and control systems design as related to greenhouse facilities
- Design of light transmitting cladding systems.

1980 - 1990: Growers Technical Services Ltd., Mississauga, Ontario

- Senior Engineer
- Design services to the commercial greenhouse industry, greenhouse builders and manufacturers, governments, educational institutions and horticultural research stations
- Light weight structural design of greenhouses
- Technical sales support for greenhouse control equipment and control computers, automated environmental systems, irrigation and nutrient feeding systems, lighting, heating and ventilation
- Design and project management services for greenhouse structural, mechanical, electrical and control systems and total package projects.

1979 - 1980: Advanced Greenhouses Ltd., Waterloo, Ontario

- Design Engineer-in-Training and Secretary-Treasurer
- Government contracts and design services related to the greenhouse industry
- Design and prototype testing of a line of energy efficient greenhouses
- Greenhouse structural design

1978: Hothfield Systems Inc., Lindsay, Ontario

- Design Engineer-in-Training
- Solar heating systems
- Greenhouse structures and movable insulation systems

1977 – 1978: Waterloo Research Institute, Waterloo, Ontario

- Research Coordinator
- Contract research for federal and provincial governments
- Preparation of research proposals

SELECTED GREENHOUSE PROJECTS

- Sep 2012- Job Name: AAFC London Southern Crops Protection and Food Research Centre - Pesticide-Free Wing
Location: Agriculture and Agri-food Canada, London, ON
Job Description: Greenhouse Consultant for complete research greenhouse package – Level PPC2 and PPC2-A containment facility
Contact: Dr. Karl Volkmar, Director AAFC London, kvolkmar@agr.gc.ca
- Sep 2012- Job Name: University of Connecticut Torrey Greenhouse Complex Renovation
Location: Agriculture and Agri-food Canada, London, ON
Job Description: Greenhouse Consultant for renovation, recladding, structural upgrades and systems upgrades, including computer control system for 14,000 sq.ft. greenhouse complex originally constructed in 1958.
Contact: John Robitaille AIA, University Architect john.robitaille@uconn.edu

- June 2012- Job Name: NAIT Boreal Research Institute – Research Greenhouse Complex
Location: Northern Alberta Institute of Technology, Peace River, AB
Job Description: Greenhouse Consultant for complete research greenhouse package
Contact: Dr. Raymond Thomas, raymond@nait.ca 780 274 0368
- May 2012- Job Name: Wilfred Laurier University Centre for Cold Regions and Water Science
Location: Wilfred Laurier University, Waterloo, ON
Job Description: Greenhouse Consultant for complete rooftop research greenhouse package – Level PPC2 and PPC2-A containment facility
Contact: Michael Welk, Project Coordinator, Physical Resources mwelk@wlu.ca
- Oct 2010- Job Name: AAFC Southern Crops Protection and Food Research Centre – New Containment Greenhouse
Location: Agriculture and Agri-food Canada, London, ON
Job Description: Greenhouse Consultant for complete greenhouse package, including renovation and upgrades to existing greenhouses
Contact: Georges Darche, AAFC Regional Engineer and Project Manager, georges.darche@zgr.gc.ca
- Feb 2010- Job Name: AAFC Harrington Research Greenhouse Facility
July 2011 Location: Agriculture and Agri-food Canada, Harrington, PEI
Job Description: Greenhouse Consultant for design-build research greenhouse package
Contact: Georges Darche, AAFC Regional Engineer and Project Manager, georges.darche@zgr.gc.ca
- Jan 2010- Job Name: AAFC SPARC Greenhouse and Header House
Location: Agriculture and Agri-food Canada, Swift Current, SK
Job Description: Greenhouse Consultant for design-build research greenhouse package
Contact: Georges Darche, AAFC Regional Engineer and Project Manager, georges.darche@zgr.gc.ca
- Sep 2009- Job Name: Lufa Farms Urban Rooftop Vegetable Production Greenhouse
Aug 2010 Location: Montreal QC
Job Description: Greenhouse specialist consultant
Contact: Kurt Lynn, Partner, kurt@klynn.ca
- May 2009- Job Name: Bowditch Hall Research and Teaching Greenhouses
March 2012 Location: University of Massachusetts, Amherst, MA
Job Description: Greenhouse specialist consultant – complete greenhouse package for new construction and upgrades to existing greenhouses
Contact: Jacob Werner, Payette Associates Architects, Boston MA, 617 895 1134, jwerner@payette.com
- May 2009- Job Name: Niagara Health and Biosciences Research Complex – Rooftop Greenhouse Facility and
Dec 2012 Phytotron
Location: Brock University, St. Catharines, ON
Job Description: Greenhouse specialist consultant - Phytotron, including air conditioned containment greenhouses on the rooftop and a phytotron (growth chamber) facility.
Contact: Mark Garber, Architects Alliance, 416 907 7220, mgarber@architectsalliance.com
- Nov 2008- Job Name: Replacement of 17 Zone Greenhouse Control Computer
July 2012 Location: Ontario Forest Research Institute, Sault Ste-Marie, ON
Job Description: Prime consultant for design, bid and construction administration for a greenhouse control system replacement.
Contact: Ed Cappelli, Building Manager, 705 946 2981, ed.cappelli@ontario.ca
- Aug 2008- Job Name: Kwantlen University New Research Greenhouses
Nov 2010 Location: Langley, BC
Job Description: Greenhouse specialist consultant – complete greenhouse package. Includes recirculating irrigation system, closed greenhouse concept, geothermal system.
- May 2008- Job Name: NCC Greenhouse Sector – Palmhouse Rehabilitation, Ceremonial Greenhouse and Utilitarian
Dec 2010 Greenhouse Renovations – Governor General’s Residence, Rideau Hall
Location: Ottawa, ON
Job Description: Greenhouse specialist consultant – historical restoration of century greenhouse, including reglaze, mechanical, electrical and control systems, irrigation, fogging and shading

Contact: Mona Lamontagne, Project Manager, NCC Design and Construction, 613 239 5490

- Oct 2007-
Nov 2011 Job Name: Richardson College for the Environment – Rooftop Greenhouse Facility
Location: University of Winnipeg, Winnipeg MB
Job Description: Greenhouse specialist consultant – complete greenhouse package
Contact: Doug Hanna, Number Ten Architectural Group, 204 942 0981, dhanna@numberten.com
- Oct 2007 Job Name: Wesleyan University – New Rooftop Greenhouse Facility
Location: Middletown, CT
Job Description: Greenhouse specialist consultant – structure and systems, including new facility and temporary greenhouse during construction of new Molecular and Life Sciences Building.
Contact: Prof. Sonia Sultan, Department of Biology, Wesleyan University, 860 685 3493, sesultan@wesleyan.edu
- Feb 2007-
Feb 2009 Job Name: ILRI BecA Facilities Upgrade Project
Location: Nairobi, Kenya
Job Description: Plant growth facilities greenhouse specialist consultant – structure and systems, 50% Level 2P containment.
Contact: Ash Randev, Project Site Manager, +254-20 422-3064, a.randev@cgiar.org
- Dec 2006-
Oct 2007 Job Name: Algonquin College Control Systems Replacement
Location: Ottawa, Ontario
Job Description: Prime consultant on project to replace a greenhouse control system with a new Argus greenhouse computer system.
Contact: Udo Friesen, Facilities Operations and Maintenance Services, Algonquin College, 613 727 4723 ext 7214, friesenu@algonquincollege.com
- Dec 2006-
Jun 2007 Job Name: AAFC – Southern Crops Protection and Food Research Centre – New Containment Greenhouse Needs Assessment
Location: Agriculture and Agrifood Canada, London, ON
Job Description: Feasibility study, needs assessment, conceptual design and construction cost estimates for a containment research greenhouse facility and support building.
Contact: Demetre Bomis, Regional Engineer, AAFC, 519 457 1470 ext 302, bomisd@agr.gc.ca
- Dec 2006 Job Name: University of Texas at Austin – Brackenridge Field Laboratory - Matz Coral Reef Greenhouse
Location: Austin, TX
Job Description: Greenhouse specialist consultant – structure and systems, for a UV transmitting greenhouse structure and related environmental control systems to house coral reef tanks for research relating to coral reef bleaching.
Contact: Paul Shelander, Senior Project Manager, University of Texas at Austin, 512 475 8438, paul.shelander@austin.utexas.edu
- Sept 2006 -
Dec 2009 Job Name: Monsanto Corporation – Automated Greenhouse Project
Location: Research Triangle Park, NC
Job Description: Greenhouse specialist consultant – structure and systems, for a greenhouse facility featuring automated crop movement. Simulation and prediction of cooling effectiveness for specific greenhouse crops.
Contact: Jim O'Brien, Mystic Operations, Monsanto Corporation, 860 572 5204, jim.obrien@monsanto.com
- Sept 2006-
Aug 2010 Job Name: New Research and Production Greenhouses, Alberta Agriculture, Crop Diversification Centre South
Location: Brooks, AB
Job Description: Greenhouse prime consultant for production and research greenhouse wings, including structural, mechanical, electrical, controls, and specialized greenhouse systems. Design of a custom recirculating irrigation system.
Architect: Stantec Architecture, Calgary AB, Nils Pedersen, nils.pedersen@stantec.com
Contact: Dr. Ron Howard, Plant Pathology Research Scientist, 403 362 1328, ron.howard@gov.ab.ca
- Apr 2006 -
Oct 2007 Job Name: Rockcliffe Yard, City of Toronto Parks Department
Location: Toronto, ON
Job Description: Structural Design and systems for a reglaze and renovation of a production greenhouse.

Contact: Mario Peccia, Project Manager, Toronto Parks and Recreation, 416 395 7916,
plpecci@toronto.ca

- Feb 2006-
June 2012
- Job Name: New York University – Center for Comparative Genomics - rooftop greenhouse facility
Location: New York, NY
Job Description: Greenhouse specialist consultant –structure and systems, for an air conditioned research greenhouse facility to be constructed as a building renovation and refit at 12-16 Waverly Place, Washington Square, Manhattan.
Contact: Robert Winston, Project Director, Einhorn Yaffee Prescott Architecture and Planning PC, 917 981 6009, rwinston@eypae.com
- Jan 2006-
Feb 2006
- Job Name: York University – Glamor Laboratory Rooftop Greenhouse
Location: Dorset, Ontario
Job Description: Schematic design and construction cost estimates for a greenhouse for phytoplankton and zooplankton research.
Contact: Peter Thompson, Senior Planner, York University, 416 736 2100 ext 33648,
thompson@fbo.yorku.ca
- Dec 2005 -
Dec 2006
- Job Name: Centennial Park Conservatory, City of Toronto Parks Department
Location: Etobicoke, ON
Job Description: Structural Design, programming and construction cost estimates for a greenhouse restoration project, covering 12 production greenhouses and one public conservatory in three wings.
Contact: Mario Peccia, Project Manager, Toronto Parks and Recreation, 416 395 7916,
plpecci@toronto.ca
- Nov 2005-
May 2006
- Job Name: North Dakota State University – New research greenhouse complex
Location: Minot, ND
Job Description: Greenhouse specialist consultant – structure and systems.
Contact: Brian Jenks, Weed Scientist, NDSU, 701 857 7677, bjenks@ndsuxt.nodak.edu
- Sept 2005-
August 2007
- Job Name: University of Toronto – Historical Restoration of Conservatory at the President’s Residence
Location: Toronto, Ontario
Job Description: Prime consultant for historical restoration and upgrades to the ca 1910 conservatory attached to the residence of the President of the University of Toronto. Upgrades include motorizing vents, control computer, evaporative cooling system and automated sun shades.
Contact: Dr. David Naylor, President, University of Toronto, 416 978 2121, president@utoronto.ca
- August 2005 -
Feb 2007
- Job Name: AAFC Central Experimental Farm Research Greenhouse Complex
Location: Ottawa, Ontario
Job Description: Greenhouse specialist consultant – structure and systems, for a plant growth facility consolidation project featuring Level 2P containment.
Contact: Patrick Plue, P.Eng., Engineer/Project Leader, Agriculture and Agri-food Canada, Ottawa, ON, 613 759 6928, pluep@agr.gc.ca
- August 2005 -
Dec 2005
- Job Name: Trent University – New research greenhouse
Location: Peterborough, Ontario
Job Description: Greenhouse consultant to Conviron – greenhouse manufacturer
- June 2005 -
Jan 2009
- Job Name: University of Hawaii Greenhouse and Shade Structures Replacement and Renovation
Location: University of Hawaii at Manoa, Magoon Facility
Job Description: Greenhouse specialist consultant
- Jan 2005 -
Jul 2005
- Job Name: AAFC Research Center Reglaze
Location: Kentville, Nova Scotia
Job Description: Prime consultant
- Feb 2005-
Oct 2006
- Job Name: Iqaluit Community Greenhouse Project
Location: Iqaluit, NU
Job Description: Greenhouse designer of the conceptual plan and the demonstration greenhouse. Design of floating permafrost foundations, greenhouse structure and ventilation. Solar storage bench design (rock bed storage).
Contact: Ash Randev, Ardesco Design Management, Inc., 613 739 1530

Feb 2005 - Mar 2008 Job Name: Colgate University – New research greenhouse facility
Location: Hamilton, NY
Job Description: Greenhouse specialist consultant – structure and systems for a new air conditioned research greenhouse facility, to operate at Level 2P+ containment.
Contact: Leslie Sims, AIS, Senior Associate, Shepley Bulfinch Richardson and Abbott Architects, 617 451 1700 ext 363, lsims@sbra.com

August 2004 - Jul 2008 Job Name: Laval University Replacement Greenhouse Complex
Location: Laval University, Ste.-Foy, QC
Job Description: Greenhouse prime consultant – structure and systems, for 3 new research greenhouse blocks, one block for greenhouse crops research, a second for forestry (Level 2P containment) and a third for plant based research (Level 2P and Level 2P+ containment).
Contact: Prof. Jean Caron, Dép. sols et génie agroalimentaire, Université Laval, (418) 656-2131 ext 2881, jean.caron@sqa.ulaval.ca

Mar 2004 - June 2004 Job Name: DeCloet Greenhouse Manufacturing Energy Research and Demonstration Greenhouse
Location: Delhi, Ontario
Job Description: Control systems, electrical and mechanical designs

Feb 2004 - May 2004 Job Name: AAFC Central Experimental Farm Relocation and Consolidation Study
Location: Agriculture and Agri-Food Canada Research Station, Ottawa
Job Description: Greenhouse specialist consultant

Jan 2004 - Apr 2004 Job Name: AAFC London Feasibility Study
Location: Agriculture and Agri-Food Canada Research Station, London, Ontario
Job Description: Greenhouse specialist consultant

Dec 2003 - Mar 2004 Job Name: AAFC Charlottetown Building Evaluation
Location: Agriculture and Agri-Food Canada Research Station, Charlottetown, Prince Edward Island
Job Description: Greenhouse specialist consultant

Dec 2003 - Mar 2004 Job Name: AAFC Kentville Building Evaluation
Location: Agriculture and Agri-Food Canada Research Station, Kentville, Nova Scotia
Job Description: Greenhouse specialist consultant

Dec 2003 - May 2004 Job Name: Pennsylvania State University High Tech Research Greenhouse (Convicon CRG)
Location: Penn State University, State College, Pennsylvania
Job Description: Greenhouse structure consultant

Nov 2003 Job Name: Canadian Museum of Nature new conservatory facility
Location: Victoria Building, Museum of Nature, Ottawa
Job Description: Greenhouse specialist consultant – structure and systems for a new conservatory to house the museum' plant collection and serve as a teaching facility.
Contact: Barry Padolsky, Barry Padolsky Architects Inc., 613 241 7198, email@padolsky-architects.com

Oct 2003 - Oct 2004 Job Name: University of Guelph Greenhouse Renovation
Location: University of Guelph Bovey Building Greenhouse Complex
Job Description: Prime consultant on greenhouse renovation and update

Sept 2003 - Job Name: University of Hawaii Greenhouse Renovation
Location: University of Hawaii at Manoa, Pope Laboratory
Job Description: Greenhouse specialist consultant

May 2003 - Jun 2009 Job Name: Syracuse University Life Sciences Building Rooftop Greenhouse
Location: Syracuse University, Syracuse, NY
Job Description: Greenhouse and growth chamber facility specialist consultant – structure and systems, for an air conditioned rooftop research greenhouse facility to operate at Level 2P containment.
Contact: Jeffrey Puleo, AIA, Senior Associate, Ellenzweig Architecture / Planning, 617 491 5575, puleo@ellenzweig.com

Oct 2002 - Jul 2003 Job Name: Washington College Dunning/Decker Science Building Rooftop Greenhouse
Location: Chestertown, MD

Job Description: Greenhouse specialist consultant

- July 2002 -
Jan 2003 Job Name: University of Pennsylvania Greenhouse Relocation
Location: University of Pennsylvania at Philadelphia
Job Description: Greenhouse consultant
- July 2002 -
July 2006 Job Name: University of Florida ICBR Biotechnology Laboratory Pavilion and Cancer & Genetics Research Center
Location: University of Florida at Gainesville
Job Description: Greenhouse and growth chamber facility specialist consultant
- Jan 2002 -
Mar 2002 Job Name: Removable Foam Insulation for Improving Energy Efficiency of Greenhouses
Location: Delhi, Ontario
Job Description: Engineering consultant for control systems, data acquisition and monitoring
- Nov 2001-
Dec 2004 Job Name: Science Complex Rooftop Phytotron Facility
Location: University of Guelph
Job Description: Greenhouse and Growth Chamber Facility Consultant: design research Greenhouse Package, including Structure, Mechanical, Electrical and Control Systems
- Oct 2001-
Dec 2002 Job Name: Research Greenhouse for the School of Biological Sciences, Section of Integrative Biology
Location: University of Austin, Texas
Job Description: Greenhouse Consultant: design Greenhouse Package and all systems
- Aug 2001-
June 2003 Job Name: Science Laboratory, UC Davis
Location: University of California at Davis
Job Description: Greenhouse Specialist Consultant
- Apr 2001-
May 2003 Job Name: New Rooftop Research Greenhouses
Location: University of Toronto, ON
Job Description: Complete greenhouse and systems design
- Jan 2001 -
Apr 2002 Job Name: York University, Biology Department Research Greenhouse
Location: North York, ON
Job Description: Greenhouse Specialist Consultant – structure and systems, for a 680 m² greenhouse and growth chamber facility
Contact: Peter Thompson, Senior Planner, York University, 416 736 2100 ext 33648,
thompson@fbo.yorku.ca
- Jan 2001 -
Mar 2001 Job Name: Biogrowth Systems, Inc.
Location: Johnston, IA
Job Description: Specifications and bid documents- 10 acre sweet pepper greenhouse production facility
- Jan 2001 Job Name: Scapeart Inc.
Location: Lafayette, IL
Job Description: Design greenhouse electrical system for greenhouse garden centre
- Dec 2000 -
Mar 2001 Job Name: Agri-Starts, Inc.
Location: Apopka, FL
Job Description: Greenhouse electrical and drainage system design - 5300 m² commercial greenhouse
- Nov 2000 -
Jan 2001 Job Name: Illinois College, New Science Building, Rooftop Greenhouse
Location: Jacksonville, IL
Job Description: Value engineering and design review – greenhouse and systems
- Sep 2000 -
April 2007 Job Name: University of Pennsylvania, Life Sciences Quad, Research Greenhouse
Location: Philadelphia, PA
Job Description: Greenhouse Specialist Consultant
- Sep 2000 -
May 2001 Job Name: McGill University, Rooftop Phytotron Renovations and Upgrades
Location: Montreal, QC

Job Description: Design-build extensive greenhouse renovations and performance upgrades

- Jul 2000 - Mar 2001 Job Name: Replacement Greenhouse Complex, Atlantic Cool Climate Crop Research Centre
Location: AAFC, St. John's NF
Job Description: Feasibility study, 320 m² research greenhouse facility
- Apr - Jul 2000 Job Name: Aventis Crop Science Greenhouse Renovation
Location: Aventis Crop Science, Research Triangle Park, NC
Job Description: Design/build 330 m² sub irrigation benching system
- Mar- Jun 2000 Job Name: New BioSciences Building, Rooftop Research and Teaching Greenhouse Facility
Location: Vanderbilt University, Nashville, TN
Job Description: Greenhouse Specialist Consultant, 440 m² Rooftop Greenhouses, 6 compartments
- Mar- Jun 2000 Job Name: Exelixis Rooftop Research Greenhouse Facility
Location: Exelixis Pharmaceuticals, South San Francisco, CA
Job Description: Design/build custom shade and light control system, 300 m² Rooftop Greenhouses, 3 compartments
- Mar 2000 Job Name: CEF Greenhouse Expansion - Building 50
Location: AAFC, Central Experimental Farm, Ottawa, ON
Job Description: Assessment of condition and construction cost estimates
- Mar 2000 Job Name: Wes-Cor Nurseries, New Production Greenhouse Range
Location: Sarasota, FL
Job Description: Design greenhouse electrical system
- Jan - Jul 2000 Job Name: New Science Building, Rooftop Research Greenhouse Facility
Location: Rowan University, Glassboro, NJ
Job Description: Greenhouse Specialist Consultant, 112 m² Rooftop Greenhouses, 3 compartments
- Jan - Jul 2000 Job Name: Honey Garden Centre
Location: 3250 Markham Road, Scarborough, ON
Job Description: Structural Design and Structural Review, 400 m² Garden Centre Greenhouses
- 2000 Job Name: Agriculture Canada, Lethbridge Research Centre
Location: Lethbridge, Alberta, Canada
Job Description: Value engineering for a research greenhouse complex, 24,000 sq.ft., in 35 zones. Greenhouse structure with glass glazing, radiant heating and ventilation systems with irrigation, shading, evaporative cooling and benching.
Architect: Nils Pedersen, nils.pedersen@stantec.com
- Nov 1999- Jul 2000 Job Name: Cereon Genomics New Research Facility
Location: Cambridge, MA
Job Description: Design/build multi-tiered sub irrigation system for 10 Conviron controlled environment growth rooms, 280 m² floor area, 440 m² growing area
- Nov 1999- Jan 2000 Job Name: New Rooftop Research Greenhouses
Location: University of Toronto, ON
Job Description: Greenhouse specialist consultant, concept drawings, conceptual design, construction cost estimates

PUBLICATIONS

- 1997 Turkewitsch, A., "Strength Design of Curved Glass Cladding for Greenhouses", American Society of Agricultural Engineers, Paper No. 97-4063, August, 1997.
- 1984 Turkewitsch, A., "Greenhouse Control Computers - Understanding Programs and Applications", Greenhouse Canada, Vol. 4, No. 1, January 1984.
- 1983 Turkewitsch, A., "Computer Assisted Environmental Control", Greenhouse Canada, Vol. 3, No. 7, July 1983.
- 1980 Towning, D. J. and A. Turkewitsch, "Energy Efficient Greenhouse Design and Operation", Agriculture Canada, D.S.S. Contract 07SZ.01843-0-1908, February 1980.
- 1979 Turkewitsch, A. and B. L. Wills, "Computer Simulation of Greenhouse Radiation Reception", Proceedings of the 1979 Summer Computer Simulation Conference, Toronto.
- 1979 Turkewitsch, A. and E. Brundrett, "Light Levels in Insulated Greenhouses", American Society of Agricultural Engineers and Canadian Society of Agricultural Engineering, Paper No. 79-4023, June 1979.
- 1979 Brundrett, E. and A. Turkewitsch, "Energy Balances for Solar Storage Greenhouses", American Society of Agricultural Engineers and Canadian Society of Agricultural Engineering, Paper No. 79-4024, June 1979.
- 1978 Brundrett, E., A. Turkewitsch, E. Hoel and H. Tiessen, "Energy Conservation and Solar Heating Systems for New and Existing Greenhouses", Volumes 1 and 2, Waterloo Research Institute, University of Waterloo, ISSN # 0705/7393, March 1978.
- 1978 Turkewitsch, A. and E. Brundrett, "An Evaluation of a New Greenhouse System using Low Grade Heat", 1978 Annual Conference of the Canadian Nuclear Association.

Speaking Engagements

- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Greenhouse /Environmental Conditions – What can be Achieved?", Toronto, ON, July 2012
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Measuring and Reporting Environmental Conditions in Greenhouses", Portland OR, July 2011
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "NCR-101 Update", University of Illinois at Urbana-Champaign, Urbana-Champaign IL, July 2010
http://www.aergc.org/news/news_archive.php#anchor2010
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Greenhouse Glazing – the Whole Story", Duke University, Durham NC, July 2009
- International Controlled Environment Meeting, joint meeting of the Australasian Controlled Environment Working Group, the USDA NCR101 Committee on Controlled Environment Technology and Use and the Controlled Environment, and the UK Controlled Environment Users Group, "Performance Verification of New Research Greenhouse Facilities, Kennedy Space Centre, FL, March 2008
<http://www.lssc.nasa.gov/als/ncera/Session%20F/Turkewitsch%20NCERA%20101.pdf>
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Irrigation for Research and Collections Greenhouses", Texas Tech University, Lubbock, TX, July 2008
- Genetic Strategies for Control of Dengue Virus Transmission, GC7 # 316, Annual Networking Meeting, UC Irvine, "An Update on the Tapachula Field Cage Design", Irvine, CA, June 2008
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Containment Considerations for Greenhouse Facilities", University of Connecticut, Storrs, CT, August 2007
- Genetic Strategies for Control of Dengue Virus Transmission, GC7 # 316, Annual Networking Meeting, UC Irvine, "Cage Design Considerations", Irvine, CA, June 2007
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Supplemental Lighting for Plant Growth in Greenhouses", National Research Council, Saskatoon, SK, July 2006
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Controlling Heat and Light using Shading", Fordham University and Bronx Botanical Garden, Bronx, NY, July 2005
- International Controlled Environment Meeting, joint meeting of the Australasian Controlled Environment Working Group, the USDA NCR101 Committee on Controlled Environment Technology and Use and the Controlled Environment, and the UK Controlled Environment Users Group, "New Perspectives on Air Conditioning for Research Greenhouse Compartments", Brisbane, Australia, March 2004
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Air Conditioning Research Greenhouse Compartments", Santa Cruz, CA, July 2004
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Commissioning a new Research Greenhouse Facility", Donald Danforth Centre and Washington University, St. Louis, MO, July 2003
- AERGC Annual Meeting, the Association of Educational and Research Greenhouse Curators, "Greenhouse Specification for Value and Performance", University of Guelph, Guelph, Ontario, July 2000