

## Dr. GINA H. MOHAMMED

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### Education

- **Ph.D.** (1990) – Plant Physiology – Simon Fraser University, Canada
- **B.Sc.** (1981) – Biology – University of Toronto, Canada

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### Career Summary

- **Research Director & Co-Owner**  
P & M Technologies, Sault Ste. Marie, Ontario, Canada  
2000 – Present
- **Research Scientist**  
Ontario Forest Research Institute, Ontario Ministry of Natural Resources,  
Sault Ste. Marie, Ontario, Canada  
1990 – 2000
- **Research Scientist**  
AgriForest Technologies / Kelowna Nurseries, Kelowna, British Columbia, Canada  
1982 – 1990
- **Science & Health Writer**  
Magazines, newspapers, online sources.  
1999 – Present  
Topics: natural health approaches, herbs & nutrition, botanical medicine,  
non-traditional forest products, eco-friendly products, gardening, business ideas  
from plants & forests, inspirational.

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### Some Current Activities

- Science advisor to European Space Agency's *Fluorescence Explorer (FLEX)* Mission Advisory Group (MAG)
- Study Manager (Principal Investigator) for various ESA FLEX Study Projects
- Science Committee member for ESA's conference on *Remote Sensing of Fluorescence, Photosynthesis, and Vegetation Status* (January 2017)

## Science Projects

- Bioenergy & biofuel business opportunities and sustainable use
  - Bioindicators of forest condition and sustainability
  - Canopy fluorescence model development and testing
  - Chlorophyll fluorescence for stress evaluation of agricultural crops
  - Chlorophyll fluorescence for stress evaluation of aquatic plants
  - Chlorophyll fluorescence for stress evaluation of forest vegetation
  - Commercialization of plant micropropagation methods
  - Database of non-timber forest products (NTFPs) from Canadian forest species
  - Fluorescence Explorer (FLEX) satellite mission (*aka* Earth Explorer 8)
  - FLEX/Sentinel-3 Tandem Mission Photosynthesis Study for ESA
  - FLEX Bridge Study for ESA
  - Foliar spectral reflectance signatures in Canadian plant species (unstressed/stressed)
  - Forest condition rating using remote and ground-based physiological methods
  - Hyperspectral remote sensing of terrestrial vegetation
  - Improved stress resistance and field performance in Canadian conifers
  - Medicinals and natural health products from Canadian plants
  - New industrial uses for renewable resources in agriculture
  - Non-timber forest products – sustainable approaches
  - Non-timber forest products, Canada – business opportunities, commercial approaches
  - Non-timber forest products in Ontario – overview
  - Non-timber forest products in Alaska
  - Northern Ontario Biotechnology Innovation Plan
  - Novel seed viability test development – fluorescein diacetate
  - Pharmaceutical prospects for Ontario weed species
  - Physiological & structural requirements for stress acclimation of tissue-culture plants
  - Physiological aspects of competition tolerance in forest tree species
  - Physiological indicators of tree genetic improvement
  - Physiological techniques for plant quality assessment
  - Practical applications of chlorophyll fluorescence in research and industry
  - Remote sensing of chlorophyll fluorescence – methods development
  - Space-based technologies for remote sensing of terrestrial vegetation condition
  - Stress development and resistance in plants – structural and functional aspects
  - Sustainable use of forest biomass for bioproducts and bioenergy
  - Tissue culture and micropropagation techniques development for forest tree species
  - Traditional and novel uses of Canadian forest species
  - Wood fibre opportunities for northern tree species
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### **Clients & Collaborators**

- Academy of Sciences, Czech Republic – Global Change Research Centre (CzechGlobe), Czech Republic
  - Applied Physics Institute "Nello Carrara", Italy
  - British Columbia Ministry of Forests, Canada
  - Centre for Research in Earth and Space Technology, Canada
  - European Space Agency (ESA), ESTEC, The Netherlands
  - Forschungszentrum Jülich, Germany
  - Great Lakes Forestry Centre, Canadian Forest Service
  - Institute for Sustainable Agriculture, National Research Council, Spain
  - Laboratoire de Météorologie Dynamique (CNRS-LMD), France
  - Lakehead University, Canada
  - Mikro-Tek, Canada
  - National Aerospace Laboratory, The Netherlands
  - National Research Council, Industrial Research Assistance Program, Canada
  - Noveltis, France
  - Ogden Publications (Herbs For Health Magazine), USA
  - Ontario Forest Research Institute, Canada
  - Ontario Ministry of Agriculture and Food, Canada
  - Ontario Ministry of Natural Resources, Canada
  - Organization for Economic Cooperation and Development, International
  - Queen's University (Dept of Geography), Canada
  - Plant Biotechnology Institute, National Research Council, Canada
  - Sault College, GIS Specialist Program, Canada
  - Shaw Development Consultants, Canada
  - SHI Consulting, Canada
  - United States Department of Agriculture, USA
  - University College London (Dept of Geography), England
  - University of Bologna (Dept of Fruit Tree and Woody Plant Science), Italy
  - University of Calgary (Dept of Biological Sciences), Canada
  - University of Milano-Bicocca (Dept of Earth & Environmental Sciences), Italy
  - University of Paris (LURE), France
  - University of Toronto (Dept of Forestry), Canada
  - University of Twente (Geo-Information Science & Earth Observation), Netherlands
  - University of Valencia (Dept of Earth Sciences and Thermodynamics), Spain
  - University of Waterloo (Dept of Biology), Canada
  - University of Zurich (Dept of Geography Remote Sensing Laboratories), Switzerland
  - Weyerhaeuser, USA
  - York University (Dept of Physics and Astronomy), Canada
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## **Career Highlights & Accomplishments**

### **Keynote addresses**

- Remote Sensing of Fluorescence, Photosynthesis, and Vegetation Status (ESA) – Frascati, Italy, January 17-19, 2017
- Non-Timber Forest Products in Alaska – Hidden Forest Values Conference, Anchorage, Alaska, November 8-9, 2001
- Making the Grade (IUFRO) – An international symposium on planting stock performance and quality assessment, Sault Ste. Marie, Ontario, September 11-15, 1994

### **Peer reviews for scientific journals**

- New Forests
- Canadian Journal of Forest Research
- Plant Cell Reports
- Biotechnic & Histochemistry
- Plant Cell, Tissue and Organ Culture
- In Vitro Cellular and Developmental Biology - Plant
- Photochemical and Photobiological Sciences
- Journal of Photochemistry and Photobiology
- Remote Sensing of Environment
- Sensors

### **Authorships and Publications**

- Over 35 peer-reviewed journal papers
- Over 100 conference presentations, publications, and posters
- Over 25 technical reports (and a few non-refereed publications)
- Several reference & textbook chapters
- More than 25 magazine articles
- Author of inspirational books and guides
- Author of *The Canadian NTFP Business Companion*

### **Participant in new & emerging technologies**

- Hyperspectral remote sensing
- Bioenergy & biofuels
- Applications of chlorophyll fluorescence
- Remote sensing of chlorophyll fluorescence
- Seed viability testing
- Plant physiological stress testing
- Co-inventor of a novel seed viability test (FDA)
- Techniques for pre-visual plant stress testing

### **Committees and chairs**

- Past Chair, Board of Governors, Sault College
- Chair, Building & Finance Committee, Sault College
- Member, Nominating and Audit Committees, Sault College
- Member, GIS Specialist Program Advisory Committee, Sault College (1999-2000)
- Chair, Canadian Tree Physiology Award Committee – Canadian Society of Plant Physiologists
- Board of Directors, Lakehead University Seedling Technology Research Cooperative
- Founder & Chair, Chlorophyll Fluorescence Working Group (International)
- Member, Ontario New Industrial Uses for Renewable Resources Committee
- Member, organizing committee, 12th North American Forest Biology Workshop
- Member, organizing committee, Non-Timber Forest Products Conference (Algoma)
- Member, Graduate student committees, University of Waterloo and York University
- Member, OMNR Science Soundness and Relevance Committee
- Member, science committee, 5th International Workshop on Remote Sensing of Vegetation Fluorescence
- Member, science committee, Remote Sensing of Fluorescence, Photosynthesis, and Vegetation Status

### **Conference session chairs**

- 5th International Workshop on Remote Sensing of Vegetation Fluorescence – Session 1: Relationship Between Fluorescence and Photosynthesis (co-chair with Joe Berry), Paris, April 2014
- Non-Timber Forest Products in Alaska – Hidden Forest Values Conference, Anchorage, Alaska, November 2001
- Forest Management Impacts on Ecosystem Processes – 14th North American Forest Biology Workshop, Québec City, Québec, June 1996
- Making the Grade (IUFRO) – An international symposium on planting stock performance and quality assessment, Sault Ste. Marie, Ontario, September 1994
- The Role of Physiology and Genetics in Forest Ecosystem Research and Monitoring – 12th North American Forest Biology Workshop, Sault Ste. Marie, Ontario, August 1992

### **Science advisories**

- European Space Agency – Fluorescence Explorer (FLEX) Mission Advisory Group
- FLEX panel member at ESA's *Earth Explorer 8 (EE8)* User Consultation Meeting
- Ontario Forest Research Institute Science Advisory Team
- OFRI Core Team for Sustainable Forestry II Cabinet Submission
- OFRI Management Team
- IRAP Project – Chlorophyll Fluorescence and Performance of Northern Ontario Trees
- OMNR Nursery Problem Advisory Team
- Forest Research Advisory Council of Canada
- Canadian Space Agency (CSA), European Space Agency (ESA), and NASA
- Ontario Renewable Resource Research Grants Program
- Reviewer of Ontario and Canadian research grant proposals
- Reviewer of U.S. federal grant proposals

### **Awards and honours**

- Two OFRI Certificates of Recognition for Scientific Achievement
- OFRI 'Best All-Around Scientist' Award
- B.C. Chamber of Commerce Award “Best new made-in-BC product”, awarded to our research group at AgriForest Technologies Ltd.
- Fellowship from Organization for Economic Cooperation & Development

### **Media exposure**

- Plant physiology expert on CBC Radio's Quirks & Quarks science program
- Featured scientist in the British Columbia Pavilion movie “*Our BC*” at EXPO '86
- National & local TV, radio, and newspaper interviews

### **Academic affiliations**

- Adjunct Professor at University of Waterloo (Biology) (1993-2000)
  - Member of graduate student committees at University of Waterloo and York University
  - External examiner for Lakehead University
  - Member of American Geophysical Union (AGU)
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### **Publications**

- Peer-reviewed journal papers: 40
  - Reference & business guides: 1
  - Textbook chapters: 6
  - Technical reports: 26
  - Technical response letters: 1
  - Conference presentations: 104
  - Keynote presentations: 3
  - Consumer magazine articles: 27
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**Journal Papers**

- Drusch, M., Moreno, J., Del Bello, U., Franco, R., Goulas, Y., Huth, A., Kraft, S., Middleton, E., Miglietta, F., Mohammed, G., Nedbal, L., Rascher, U., Schuttemeyer, D. and Verhoef, W. 2017. The FLuorescence EXplorer (FLEX) mission concept – ESA's Earth Explorer 8 (EE8). *IEEE Transactions on Geoscience and Remote Sensing*. 55(3): 1273-1284.
- Van der Tol, C., Rossini, M., Cogliati, S., Verhoef, W., Colombo, R., Rascher, U., Mohammed, G. 2016. A model and measurement comparison of diurnal cycles of sun induced chlorophyll fluorescence of crops. *Remote Sensing of Environment*. 186: 663-677.
- Verrelst, J., Van der Tol, C., Magnani, F., Sabater, N., Rivera, J.P., Mohammed, G., Moreno, J. 2016. Evaluating the predictive power of sun-induced chlorophyll fluorescence to estimate net photosynthesis of vegetation canopies: A SCOPE modelling study. *Remote Sensing of Environment*. 176: 139-151.
- Ač, A., Malenovský, Z., Olejníčková, J., Gallé, A., Rascher, U. and Mohammed, G. 2015. Meta-analysis assessing potential of steady-state chlorophyll fluorescence for remote sensing detection of plant water, temperature and nitrogen stress. *Rem. Sen. Environ*. 168: 420-436.
- Verrelst, J., Rivera, J.P., Van der Tol, C., Magnani, F., Mohammed, G. and Moreno, J. 2015. Global sensitivity analysis of SCOPE v1.53 model: What drives canopy-leaving sun-induced fluorescence? *Rem. Sen. Environ*. 166: 8-21.
- Zarco-Tejada, P.J., Miller, J.R., Harron, J., Hu, B., Noland, T.L., Goel, N., Mohammed, G.H. and Sampson, P.H. 2004. Needle chlorophyll content estimation through model inversion using hyperspectral data from Boreal Conifer Forest Canopies. *Rem. Sen. Environ. (BOREAS Special Issue III)* 89: 189-199.
- Sampson, P.H., Zarco-Tejada, P.J., Mohammed, G.H., Miller, J.R., Noland, T.L. and Fleming, R.L. 2003. Hyperspectral remote sensing of forest condition: Estimation of chlorophyll content in tolerant hardwoods. *For. Sci.* 49(3): 381-391.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H., Noland, T.L. and Sampson, P.H. 2002. Vegetation stress detection through Chlorophyll a+b estimation and fluorescence effects on hyperspectral imagery. *J. Environ. Qual.* 31: 1433-1441.
- Noland, T.L., Mohammed, G.H. and Seymour N.H. 2001. An improved fluorescein diacetate seed viability test for jack pine, black spruce, and white spruce. *Seed Sci. Technol.* 29: 509-516.
- Noland, T.L., Mohammed, G.H. and Wagner R.G. 2001. Morphological characteristics associated with tolerance to competition from herbaceous vegetation for seedlings of jack pine, black spruce, and white pine. *New For.* 21: 199-215.
- Sampson, P.H., Treitz, P.M. and Mohammed G.H. 2001. Remote sensing of forest condition in tolerant hardwoods: An examination of spatial scale, structure, and function. *Can J. Remote Sensing* 27(3): 232-246.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H., Noland, T.L. and Sampson, P.H. 2001. Estimation of chlorophyll fluorescence under natural illumination from hyperspectral data. *International Journal of Applied Earth Observation and Geoinformation (JAG) (Special Issue on Applications of Imaging Spectroscopy)* 3(4): 321-327.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H., Noland, T.L. and Sampson, P.H. 2001. Scaling-up and model inversion methods with narrow-band optical indices for chlorophyll content estimation in closed forest canopies with hyperspectral data. *IEEE Transactions on Geoscience and Remote Sensing (Special Issue on Hyperspectral Remote Sensing)* 39(7): 1491-1507.
- Parker, W.C. and Mohammed, G.H. 2000. Photosynthetic acclimation of shade-grown red pine (*Pinus resinosa* Ait.) seedlings to a high light environment. *New Forests* 19(1): 1-11.
- Sampson, P.H., Mohammed, G.H., Zarco-Tejada, P.J., Miller, J.R., Noland, T.L., Irving, D., Treitz, P.M., Colombo S.J., Freemantle, J. 2000. The Bioindicators of Forest Condition Project: A physiological, remote sensing approach. *For. Chron.* 76(6): 941-952.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H. and Noland, T.L. 2000. Chlorophyll fluorescence effects on vegetation apparent reflectance: I. Leaf-level measurements and model simulation. *Rem. Sens. Environ.* 74(3): 582-595.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H., Noland, T.L. and Sampson, P.H. 2000. Chlorophyll fluorescence effects on vegetation apparent reflectance: II. Laboratory and airborne canopy-level measurements with hyperspectral data. *Rem. Sens. Environ.* 74(3): 596-608.

- Mohammed, G.H. and Parker, W.C. 1999. Photosynthetic acclimation in eastern hemlock (*Tsuga canadensis* (L.) Carr.) seedlings following transfer of shade-grown seedlings to high light. *Trees - Structure and Function* 13 (3): 117-124.
- Wagner, R.G., Mohammed, G.H. and Noland, T.L. 1999. Critical period of interspecific competition for northern conifers associated with herbaceous vegetation. *Can. J. For. Res.* 29(7): 890-897.
- Mohammed, G.H., Noland, T.L. and Wagner, R.G. 1998. Physiological perturbation in jack pine (*Pinus banksiana* Lamb.) in the presence of competing herbaceous vegetation. *For. Ecol. Manage.* 103: 77-85.
- Binder, W.D., Fielder, P. and Mohammed, G.H. 1997. Applications of chlorophyll fluorescence for stock quality assessment using different types of fluorometers. *New Forests* 13(1-3): 63-89.
- Mohammed, G.H. 1997. Making the grade: a synopsis. *New Forests* 13(1-3): 3-6.
- Mohammed, G.H. 1997. The status and future of stock quality assessment. *New Forests* 13(1-3): 491-514.
- Mohammed, G.H., Noland, T.L., Parker, W.C. and Wagner, R.G. 1997. Pre-planting physiological stress assessment to forecast field growth performance of jack pine and black spruce seedlings with stress-testing and physiological assessment. *For. Ecol. Manage.* 92: 107-117.
- Noland, T.L. and Mohammed, G.H. 1997. Fluorescein diacetate as a viability stain for tree roots and seeds. *New Forests* 14: 221-232.
- Noland, T.L., Mohammed, G.H. and Scott, M. 1997. The dependence of root growth potential on photosynthetic rate and root starch content in jack pine seedlings. *New Forests* 13(1-3): 105-119.
- Wagner, R.G., Noland, T.L. and Mohammed, G.H. 1996. Timing and duration of herbaceous vegetation control around four northern coniferous species. *N. Z. J. For. Sci.* 26 (1-2): 39-52.
- Menes, P.A. and Mohammed, G.H. 1995. Identifying the root collar on forest tree seedlings. *For. Chron.* 71(3): 304-310.
- Mohammed, G.H. 1995. Making the Grade – the keynote speaker's synopsis. *Seedling Physiol. Rep.* Winter 1995. pp.2-3.
- Mohammed, G.H., Binder, W.D. and Gillies, S.L. 1995. Chlorophyll fluorescence: a review of its practical forestry applications and instrumentation. *Scand. J. For. Res.* 10: 383-410.
- Mohammed, G.H., Gillies, S.L. and Vidaver, W.E. 1992. Ex vitro photosynthetic activity in plantlets of tissue-cultured Douglas-fir. *Tree Physiology* 10: 403-410.
- Mohammed, G.H. and Vidaver, W.E. 1991. Early development of Douglas-fir plantlets following transfer to the greenhouse. *Plant Science* 76: 259-265.
- Mohammed, G.H. and Vidaver, W.E. 1991. Plantlet morphology and the regulation of net water loss in tissue-cultured Douglas-fir. *Physiol. Plant.* 83: 117-121.
- Mohammed, G.H. and Vidaver, W.E. 1990. The influence of acclimatization treatment and plantlet morphology on early greenhouse-performance of tissue-cultured Douglas-fir [*Pseudotsuga menziesii* (Mirb.) Franco]. *Plant Cell, Tissue and Organ Culture* 21: 111-117.
- Mohammed, G.H., Patel, K.R. and Vidaver, W.E. 1989. The control of adventitious root production in tissue-cultured Douglas-fir. *Can. J. For. Res.* 19: 1322-1329.
- Mohammed, G.H. and Patel, K.R. 1989. Tissue culture micropropagation of Douglas fir. *New Forests* 3: 125-139.
- Mohammed, G.H. and Vidaver, W.E. 1988. Root production and plantlet development in tissue-cultured conifers. *Plant Cell, Tissue and Organ Culture* 14: 137-160.
- Dunstan, D.I., Mohammed, G.H. and Thorpe, T.A. 1987. Morphogenetic response of vegetative bud explants of adolescent and mature *Picea glauca* (Moench) Voss in vitro. *New Phytologist* 106: 225-236.
- Mohammed, G.H., Dunstan, D.I. and Thorpe, T.A. 1986. Influence of nutrient medium upon shoot initiation on vegetative explants excised from 15 to 18 year old *Picea glauca*. *N. Z. J. For. Sci.* 16(3): 297-305.
- Dunstan, D.I., Mohammed, G.H. and Thorpe, T.A. 1986. Shoot production and elongation on explants from vegetative buds excised from 17 to 20 year old *Pseudotsuga menziesii*. *N. Z. J. For. Sci.* 16(3): 269-282.
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## Reference & Business Guides

Mohammed, Gina H. 2011. *The Canadian NTFP Business Companion: Ideas, Techniques and Resources for Small Businesses in Non-Timber Forest Products & Services*. Sault Ste. Marie (Ontario): Candlenut Books. 867 pages. ISBN: 978-0-9731097-2-6 (CD-ROM).

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## Textbook Chapters

- Mohammed, G.H., Zarco-Tejada, P.J. and Miller, J.R. 2003. Applications of chlorophyll fluorescence in forestry and ecophysiology. Chapter 3, In: J.R. DeEll and P.M.A. Toivonen (Eds.) *Practical Applications of Chlorophyll Fluorescence in Plant Biology*. Dordrecht: Kluwer Academic Publishers, ISBN 1-4020-7440-9, pp. 79-124.
- Zarco-Tejada, P.J., Miller, J.R. and Mohammed, G.H. 2002. Remote sensing of solar-induced chlorophyll fluorescence from vegetation hyperspectral reflectance and radiative transfer simulation. Chapter 11, In: R.S. Muttiah (Ed.) *From Laboratory Spectroscopy to Remotely Sensed Spectra of Terrestrial Ecosystems*. Dordrecht: Kluwer Academic Publishers, ISBN 1-4020-0753-1, pp. 233-269.
- Mohammed, G.H., McLeod, G.R., Menes, P.A. and Timmer, V. 2001. Bareroot stock production. In: R.G. Wagner and S.J. Colombo (Eds.) *Regenerating the Canadian Forest: Principles and Practice for Ontario*. Markham: Fitzhenry & Whiteside, pp. 265-279.
- Mohammed, G.H., McLeod, G.R., Menes, P.A. and Timmer, V. 2001. A comparison of bareroot and container stock. In: R.G. Wagner and S.J. Colombo (Eds.) *Regenerating Ontario's Forests*. Markham: Fitzhenry & Whiteside, pp. 343-348.
- Zarco-Tejada, P.J., Miller, J.R., Mohammed, G.H., Noland, T., and Sampson, P.H. 2000. Optical Indices as Bioindicators of Forest Condition from Hyperspectral CASI data. Chapter 10, In: J.L. Casanova (Ed.) *Remote Sensing in the 21st Century: Economic and Environmental Applications*. Rotterdam: Balkema.
- Dunstan, D.I., Mohammed, G.H. and Thorpe, T.A. 1986. Shoot primordia induction on bud explants from 12-15 year old Douglas fir: the requirement for BA and  $\text{NH}_4\text{NO}_3$  in dormant collections. In: Moo-Young, M., Hasnain, S. and Lamptey, J. (eds.) *Biotechnology and Renewable Energy*. London, New York: Elsevier Applied Science Publishers, pp. 12-19.
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## Technical Reports

- Mohammed, G.H., Colombo, R., Moreno, J., van der Tol, C., Rascher, U.; Ač, A., Alonso, L., Celesti, M., Cogliati, S., Damm, A., Fawcett, D., Gomez-Dans, J., Henry, C., Lewis, P., MacBean, N., Magnani, F., Malaprada, J., Matveeva, M., Olejnicková, J., Pernokis, D., Pinto, F., Raddi, S., Rajh Vilfan, N., Rivera, J.P., Rossini, M., Sabater, N., Schickling, A., Tenjo, C., Verhoef, W., Verrelst, J., Servera, J.V.; and Drusch, M. 2016. 2014 FLEX/Sentinel-3 Tandem Mission FLEX Bridge Study. European Space Agency. ESTEC Contract No. 000112341/14/NL/FF/gp, Final Report, January 2016. 187 p. + CD/DVD.
- ESA. 2015. Report for Mission Selection: FLEX. ESA SP-1330/2 (2-volume series), European Space Agency, Noordwijk, The Netherlands. ISBN: 978-92-9221-428-9, July 2015. 197 p.  
*This report is based on contributions from the FLEX Mission Advisory Group (MAG): José Moreno (Chair), Yves Goulas, Andreas Huth, Elizabeth Middleton, Franco Miglietta, Gina Mohammed, Ladislav Nedbal, Uwe Rascher, and Wout Verhoef. Scientific content was compiled by Matthias Drusch, with additional contributions from Roberto Colombo, Micol Rossini, Dirk Schüttemeyer, and Remo Bianchi. Technical content was compiled by Umberto Del Bello and Antonio Gabriele, with contributions from Stefan Kraft, Jean-Loup Bezy, Pedro Jurado, and Raffaella Franco.*
- Mohammed, G.H., Goulas, Y., Magnani, F., Moreno, J., Olejnicková, J., Rascher, U., van der Tol, C., Verhoef, W.; Ac, A., Daumard, F., Gallé, A., Malenovský, Z., Pernokis, D., Rivera, J.P., Verrelst, J.; Drusch, M. 2014. 2012 FLEX/Sentinel-3 Tandem Mission Photosynthesis Study. European Space Agency. ESTEC Contract No. 4000106396/12/NL/AF, Final Report, July 2014. 159 p. + CD/DVD.
- Mohammed, G. 2014. Potential Application of Solar-Induced Fluorescence for Food Security and Early Stress Detection. Supplementary report for the 2012 FLEX/Sentinel-3 Tandem Mission Photosynthesis Study, European Space Agency, July 2014. 14 p.
- Magnani, F., Olioso, A., Demarty, J., Germain, V., Verhoef, W., Moya, I., Goulas, Y., Cecchi, G., Agati, G., Zarco-Tejada, P., Mohammed, G., van der Tol, C. 2009. Assessment of Vegetation Photosynthesis through Observation of Solar Induced Fluorescence from Space. ESA Contract No. 20678/07/NL/HE, Final Report. October 2009. 256 p.
- Miller, J.R., Berger, M., Goulas, Y., Jacquemoud, S., Louis, J., Mohammed, G., Moise, N., Moreno, J., Moya, I., Pedrós, R., Verhoef, W., and Zarco-Tejada, P.J. 2005. Development of a Vegetation Fluorescence Canopy Model. European Space Agency. ESTEC Contract No. 16365/02/NL/FF, Final Report, April 2005. 138 p. + CD.
- Mohammed, G.H. 2002. Forest Genetics and Tree Improvement in Ontario: Synopsis of a Science Workshop. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 151. 13 p.
- Noland, T.L. and Mohammed, G.H. 2002. Competition Tolerance of Bareroot and Container Seedlings of Jack Pine, White Pine, and Black Spruce Ten Years After Planting. Forest Research Partnership, Mattawa, Ontario. On-line publication ([www.forestresearch.ca](http://www.forestresearch.ca)).
- Mohammed, G.H., Noland, T.L., Irving, D., Sampson, P.H., Zarco-Tejada, P.J. and Miller, J.R. 2000. Natural and stress-induced effects on leaf spectral reflectance in Ontario species. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Report No. 156. 34 p. ISBN 0-7778-9387-8, ISSN 0381-3924.
- Mohammed, G.H. 1999. Non-timber forest products in Ontario: An overview. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 145. 64 p.**
- Noland, T.L., Mohammed, G.H. and Seymour, N.H. 1999. Using the fluorescein diacetate staining method to estimate seed viability of jack pine, black spruce, and white spruce. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Note No. 58. 4 p.
- Sampson, P.H., Mohammed, G.H., Colombo, S.J., Noland, T.L., Miller, J.R. and Zarco-Tejada, P.J. 1998. Bioindicators of forest sustainability: Progress report. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 142. 18 p.

- Mohammed, G.H. and Noland, T.L. 1997. Influence of time of day and sampling methodology on chlorophyll fluorescence in jack pine (*Pinus banksiana* Lamb.), black spruce (*Picea mariana* (Mill.) B.S.P.) and eastern white pine (*Pinus strobus* L.). Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Report No. 142. 14 p.
- Mohammed, G.H., Sampson, P.H., Colombo, S.J., Noland, T.L. and Miller, J.R. 1997. Bioindicators of forest sustainability: Development of a forest condition rating system for Ontario. Project strategy. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 137. 22 p.
- Noland, T.L. and Mohammed, G.H. 1997. Fluorescein diacetate: a new viability stain for tree seeds. Canadian Tree Improvement Association – Tree Seed Working Group News Bulletin 26: 4-6.
- Smith, W. and Mohammed, G.H. 1997. Inoculation with mycorrhizal fungi (*Hebeloma* spp.) can increase drought stress resistance and improve field performance for jack pine, black spruce and white spruce. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Report No. 145. 10 p.
- Noland, T.L. and Mohammed, G.H. 1994. Development of a competition tolerance index for black spruce, jack pine, and eastern white pine. Annual report – year 2, 1993-1994. 35 p.
- Harvey, E.M., Mohammed, G.H. and Noland, T. 1993. A bibliography on competition, tree seedling characteristics, and related topics. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 108. 120 p.
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