

## Monday June 7-All times in AST

### Concurrent session 1 –Biodiversity & Soil health

4:10-4:40: Q&A	Ashebir	Godebo	1	Biological control of root rot complex of field pea and lentil using bacterial isolates antagonistic to <i>Aphanomyces euteiches</i>
	Tolulope	Mafa-Attoye	2	Root influence soil microbial diversity and inter-kingdom interactions in different riparian land-use systems
	Bryan	Driscoll	3	The effects of terraces and tile drainage as best management practices on labile soil carbon fractions, greenhouse gas emissions
	Stephen	Paterson	4	Aquatic dispersal of non-native earthworms in northern Canada
	Tim	Philpott	5	Impacts of burn severity on fungal communities and soil carbon pools in dry Douglas-fir forests
	Gordon	Price	6	Tracking microbial gene abundances in soils over eight years of biosolids applications to agricultural soils
	Xueming	Yang	7	Carbon loss in surface runoff and tile drainage from a clay loam soil under 53 years of consistent agricultural management

### Concurrent session 2-Pedology& Soil Science& soil mapping

4:10-4:40: Q&A	Adrienne	Arbor	9	Filling in the missing pieces: Using pedotransfer functions and machine learning techniques to augment British Columbia's soil data repository
	Komathy	Prapagar	10	Exploring the variability and dynamics of soil hydromorphism in riparian buffer systems using electromagnetic induction
	José Carlos	Lacayo	11	Hierarchical Clustering of Soil Profile Horizons: A Tool for Data Analysis in Soil classification
	Qudratullah	Rahmati	12	Mapping land suitability in areas with scarce ground data using Homosoils method
	Mano	Krishnapillai	13	Effects of surfactants Tween-80 and Triton X-100 and colder temperatures on cow manure bioremediation of hydrocarbon-contaminated soil
	Ryan	Hangs	14	Rebuilding the Fertility and Productivity of Eroded Knoll Soils in South-Central Saskatchewan
	Amana Jemal	Kedir	15	Comparison of agri-environmental phosphorus tests in boreal agricultural and natural Podzols
	Mano	Krishnapillai	16	The influence of long-term agricultural management practices on the current status of soil physico-chemical properties of a boreal podzolic agricultural soil in Cormack, Newfoundland

### Concurrent session 3- Agroecology

4:10-4:40: Q&A	Andrew	Hector	17	Developing a rapid infrared spectroscopic tool for assessment of novel lab-based soil health tests and identification of spectra patterns from Ontario soils
	Nikisha	Muhandiram	18	Soil health dynamics under an intermediate wheat grass perennial forage grain system
	Victoria	Nimmo	19	Crop functional trait response to organic amendments and intercropping
	Teresa	Porter	20	Examining selected soil properties on the Lower Fraser River delta following four-year grassland set-aside
	Caroline	Halde	22	Soil health and crop yields in four cropping systems transitioning to organic agriculture
	Francis J.	Larney	23	Cover cropping influences on soil health, weed, and pest parameters, and carrot yield and quality under organic production
	Stephen	Crittenden	24	Soil health in contrasting grazing and manure treatments in Manitoba.

## Tuesday June 8-All times in AST

### Concurrent session 1-Soil water and nitrogen use efficiency

2:30-3:00: Q&A	Iva	Henry	25	Using <sup>15</sup> N to identify spring wheat varieties and traits that improve nitrogen use efficiency
	Xueming	Yang	26	Nitrogen fertilizer replacement values of summer-seeded legumes for corn
	Yvonne	Uwituze	27	Impact of land use intensity on soil nutrients and on enzymes involved in cycling of soil carbon (C), nitrogen (N) and phosphorus (P)
	Wang	HongXiu	28	The different isotopic compositions in evaporating water and bulk soil water did not make a difference in estimated evaporative water loss
	Hida	Manns	29	Soil pores; measuring the hole in the doughnut
	Larissa	Fernandes Costa	30	Soil degradation by land use in the semiarid region of Brazil

### Concurrent session 2-GHG and carbon modelling

2:30-3:00: Q&A	Waqar	Ashiq	31	Topography controls N <sub>2</sub> O emissions differently during early and late corn growing season
	Xavier	Baril	32	The biological sink of atmospheric H <sub>2</sub> is more sensitive to spatial variation of microbial diversity than N <sub>2</sub> O and CO <sub>2</sub> emissions
	Joannie	D'Amours	33	Fertilizer and tillage effects on soil nitrous oxide emissions from organic cropping systems
	Rebecca	Johnson	34	Nitrous oxide emissions as influenced by crop rotation diversity and winter warming on two Ontario soil types
	Carmen	Roman Perez	35	How biosolids land application impacts N <sub>2</sub> O emissions and nitrogen use-efficiency in barley croplands?
	Katie	Barham	36	Exploring applicability of holos version 4.0 whole-farm greenhouse gas (GHG) emissions model in canadian farms
	E.A.	Badewa	37	Evaluating the long-term effects of biobased residues on soil organic carbon dynamics using the Century Model
	Arumugam	Thiagarajan	38	Can increased crop yields from Canadian farmlands mitigate GHG emissions through soil C sequestration?

### Concurrent session 3-Soil organic matter

2:30-3:00: Q&A	Karoland	Bourdon	<b>39</b>	Response of cultivated organic soils respiration to straw and wood chips addition
	Qianyi	Wu	<b>40</b>	Fine-tuning the methodology for measuring soil protein
	Jeewan	Gamage	<b>41</b>	Molecular-level characterization of alkali and acid extracted soil residues using Carbon Near Edge X-ray Absorption Fine Structure spectroscopy (NEXAFS)
	Nastaran	Chalabianlou	<b>42</b>	Efficacy comparison of common acid treatments used for carbonate removal from soils without affecting their organic carbon content
	Cindy	DenonCourt	<b>43</b>	Can animal manure support both carbon sequestration and nitrogen supply in agricultural soils?
	Adam	Gillespie	<b>44</b>	Soil organic carbon content decreases partly attributed to dilution by increased depth of cultivation in southern Ontario
	Richard	Osei	<b>45</b>	Species identity effect on soil C storage in European forests: broadleaves (oak, beech) versus a conifer (pine)
	Mervin	St Luce	<b>46</b>	Monitoring soil organic carbon change in Saskatchewan farms from 1996 to 2018: Comparing on-farm management practices to long-term field experiments
	Huile	Gu	<b>47</b>	Cadmium adsorption onto wheat straw and manure pellet biochars produced with or without steam activation