



Technion - Faculty of Civil and Environmental Engineering

The 12th Dahlia Greidinger Memorial Symposium 2016

Water-Soil-Nutrients: Integrated Solutions for Assuring Global Food and Water Security

Organized and Supported by:

The Dahlia Greidinger Memorial Fund

With

ICL-Fertilizers - Netafim - Haifa Chemicals

Technion Support: GWRI and the Moshe Yanai Fund

29 February - 2 March 2016

**Rabin Auditorium Civil and Environmental Engineering - CEE
Technion-IIT, Haifa, Israel**

Program



The 12th Dahlia Greidinger Memorial Symposium 2016

Water-Soil-Nutrients: Integrated Solutions for Assuring Global Food and Water Security

29 February - 2 March 2016

Rabin Auditorium, CEE, Technion-IIT, Haifa, Israel

Current demographic trends and projected growth in global population and standards of living are estimated to result in about 70 percent increase in food demand by 2050. Global climatic changes, the increase in population growth and societal demands pose extreme challenges on water and land resources, which together with sustainable plant-nutrient provision are essential resources for securing food production. Achieving global food security while reconciling demands on ecosystems and natural resources is one of the greatest challenges faced by humanity.

The symposium will re-examine research and development directions, needs and knowledge gaps, and identify modes to cope with the challenges to secure global food production while confronting water scarcity threats. This while considering preservation of fertile soils and sustainable provision of nutrients to plants. Emphasis will be both on irrigated and rain-fed agriculture with specific attention paid to potential solutions for developing regions and problems associated with climate change effects. Sustainable approaches for confronting global food and water security while reconciling environmental demands and conservation of natural resources will receive special attention.

Symposium Format

A three-day symposium will be held, with podium presentations delivered mainly by keynote and invited speakers. These will be accompanied by discussions aimed at: identifying knowledge gaps; generating ideas for new R&D directions and cooperation among participants; and exploring ways for knowhow dissemination focusing on regions with special needs.

Poster sessions with special encouragement given to presentations by graduate students and early-stage postdocs will be held on the 1st and 2nd March after lunches and prizes will be awarded to outstanding posters presented by the young presenters.

A post-symposium professional tour will be held on the fourth day (*3rd March*). Participants will be exposed to Israel's latest technological developments in agriculture and water use. A program is provided below detailing the time schedule for all events, oral presentations and a detailed list (alphabetic order) of posters to be presented by graduate students and postdocs (beginners) that will compete for "Outstanding Poster Prizes" and posters to be presented by researchers.



The 12th Dahlia Greidinger Memorial Symposium 2016

Sunday, February 28th

19:30-21:00: Get-Together Dinner – Bay View Hotel

International participants, Organizing committee and associates (participants staying at the Forchheimer Technion Guesthouse, will be picked-up at 19:00)

Monday, February 29th

8:10: Shuttles to Technion from: 1. Hotel Bay View; 2. Hof Carmel Train-station

Rabin Auditorium – Civil and Environmental Engineering

8:15-9:00 **Registration**

9:00-9:40 **Welcome Greetings and Introduction**

Avi Shaviv, Chair Organizing Committee
Prof. P. D. Feigin - Vice President for Strategic Projects; Technion-IIT
Prof. Oded Rabinovitch, Dean Civil Env. Eng; Technion-IIT
Greidinger Family Representative

Session 1

Global estimates: Closing Gaps of the Increasing Food and W Demand While Preserving Natural Resources and Challenging Ecological Demands

Chaired by Avi Shaviv

9:40-10:30 Lincoln Taiz, *University of California Santa Cruz, USA:*

AGRICULTURE, POPULATION GROWTH, AND THE CHALLENGE OF CLIMATE CHANGE

10:30-11:00 *Coffee Break*

11:00-11:40 Cassman, Kenneth G., *University of Nebraska –Lincoln, USA:*

TRAJECTORIES IN CROP YIELDS, WATER AND NUTRIENT EFFICIENCIES

11:40-12:20 Sparks, Donald L., *University of Delaware, USA:*

GRAND CHALLENGES IN GLOBAL SECURITY: THE WATER, CLIMATE, SOIL AND FOOD NEXUS

12:20-12:50 Fereres, Elias, *University of Córdoba, Spain:*

ASSESSING CLIMATE CHANGE IMPACTS ON FOOD SECURITY: THE ROLE OF SOIL AND WATER

12:50-14:00 *Lunch – at Grand Water Research Institute*



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Session 2

Sustainable Approaches for Increasing Crop Production Sustaining Soil Fertility and Improving Nutrient Use Efficiency

Chaired by Gad Shahar

- 14:00-14:35** Zhang, Fusuo, *China Agricultural University, Beijing, China:*
INTEGRATED SOIL-CROP SYSTEMS MANAGEMENT FOR FOOD SECURITY AND SUSTAINABILITY
- 14:35-15:00** Imas, Patricia, *ICL-Fertilizers, Israel:*
GLOBAL AND REGIONAL FERTILIZER CONSUMPTION DEVELOPMENTS
- 15:00-15:20** Shaviv, Avi, *Technion-IIT, Israel:* Needs for Re-examining Fertilizer Utilization Approaches
- 15:20-15:40** Aguilar, O. Mario, *Universidad Nacional de La Plata, Argentina:*
AN APPROACH TO EVALUATE POTENTIALITY FOR BIOLOGICAL NITROGEN FIXATION IN SOIL: METAGENOMIC ANALYSIS OF NIFH SEQUENCES IN DNA AND RNA EXTRACTED FROM ARGENTINEAN SOILS UNDER DIFFERENT AGRICULTURAL MANAGEMENT
- 15:40-16:00** *Coffee Break*

Session 2 (continued)

Chaired by Oene Oenema

- 16:00-16:20** Castellano, Michael, *Iowa State University, Ames, USA:*
DIVERSE CROP SYSTEMS AS A MODEL FOR OPTIMIZING NITROGEN CYCLING
- 16:20-16:40** Fan, Xiaolin, *South China Agricultural University, China:*
CONTROLLED / SLOW RELEASE FERTILIZERS: EFFECT ON AGRO-PRODUCTION AND ENVIRONMENT IN CHINA
- 16:40-17:00** Ergas, Sarina J., *University of South Florida, USA:*
NOVEL PROCESSES FOR ENERGY AND NUTRIENT RECOVERY FROM SWINE WASTE
- 17:00-17:20** Guohua Li, *China Agricultural University, Beijing, China:*
IDENTIFYING POTENTIAL STRATEGIES IN THE KEY SECTORS OF CHINA'S FOOD CHAIN TO IMPLEMENT SUSTAINABLE PHOSPHORUS MANAGEMENT
- 17:20-17:40** Bar-tal, Asher, *ARO, Volcani Center, Israel:*
DOES ORGANIC MANAGEMENT AFFECT SOIL ORGANIC MATTER AND IMPROVE SOIL FERTILITY UNDER MEDITERRANEAN CLIMATE?

17:45: Shuttles to: 1. Hotel Bay View; 2. Hof Carmel Train-station

19:50: Walk to Reception at the Greidinger Residence (From Hotel Bay View)

20:00: Reception at Greidinger Family Residence (International participants, organizing committee)



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Tuesday, March 1st

8:10: Shuttles to Technion from: 1. Hotel Bay View; 2. Hof Carmel Train-station

8:15-8:45 Registration

Session 3

Advances in Plant Biology to Secure Food and Water Productivity

Chaired by Nirit Bernstein

8:45-9:15 Gepstein, Shimon, *Technion-IIT, Israel:*

GENETICALLY MODIFIED PLANTS AS THE SOLUTION FOR THE COMING FOOD, WATER AND ENERGY GLOBAL CRISES

9:15-9:45 Xu, Guohua, *Nanjing Agricultural University, China:*

IMPROVING NUTRIENT EFFICIENCY BY PLANTS

9:45-10:05 Granot, David, *ARO, Volcani Center, Israel:*

SENSING SUGAR AND SAVING WATER

10:05-10:25 Shabtai Cohen, *ARO, Volcani Center, Israel:*

HYDRAULIC LIMITATIONS OF PINE TREES AND A MODEL OF NECTARINE CANOPY CONDUCTANCE AND WATER USE

10:25-10:40 Discussion

10:40-11:00 Coffee Break

Session 4

Sustainable Improvements in Water productivity, Soil Fertility and Nutrient Use Efficiency in Irrigated Crop Production

Chaired by Alex Furman

11:00-11:30 Suarez, Donald L., *Salinity Laboratory USDA-ARS, USA:*

PLANT RESPONSE AND NUTRITIONAL NEEDS AS AFFECTED BY SALINITY AND DROUGHT STRESS

11:30-12:00 Ben-Gal, Alon (a) and Yermiyahu, Uri (b), *ARO, Gilat Center, Israel:*

DETERMINING BEST MANAGEMENT PROTOCOLS FOR IRRIGATION AND FERTIGATION: A MULTIDISCIPLINARY CASE STUDY FOR OIL OLIVES

12:00-12:30 Ingber, Yossi, *Netafim Ltd., Israel:*

DEVELOPMENT OF DRIP IRRIGATION IN FOOD PRODUCTION – FROM A SINGLE FARMER TO MEGA PROJECTS FOR SMALL HOLDERS

12:30–14:15

Lunch and Poster Session (Grand Water Research Institute)



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Session 4 (continued)

Chaired by Anat Lowengart-Aycicegi

- 14:20-14:50** Tarchitzky, Jorge, *The Hebrew University, Israel:*
SUSTAINABLE USE OF TREATED WASTEWATER FOR IRRIGATION – THE ISRAELI EXPERIENCE
- 14:50-15:10** Marcelis, Leo, *Wageningen UR, the Netherlands:*
WATER AND NUTRIENT SUPPLY IN GREENHOUSE HORTICULTURE: CONTROL OF PRODUCTION, QUALITY AND SUSTAINABILITY
- 15:10-15:30** Raz, Dubi, *Netafim Ltd., Israel:*
DRIP IRRIGATION CONTRIBUTION FOR FOOD SECURITY AND CLIMATE CHANGE MITIGATION: A HOLISTIC APPROACH FOR RESPONSIVE IMPLEMENTATION
- 15:30-15:50** Dilia Kool and Nurit Agam, *Ben-Gurion University, Sde Boqer, Israel:*
EVAPOTRANSPIRATION PARTITIONING IN AN ARID WINE VINEYARD
- 15:50-16:00** *Short break*

Session 5

Decision Support Approaches and Technologies for Improving Resource-Utilization Efficiency

Chaired by Victor Alchanatis

- 16:00-16:30** Yafit Cohen, *ARO, Volcani Center, Israel:*
SPATIALLY VARIABLE PRESCRIPTION OF WATER AND NUTRIENTS DRIVEN BY HISTORICAL AND ON-THE-GO ACQUIRED DATA
- 16:30-16:50** Linker, Rafi, *Technion-IIT, Israel:*
IMPROVING IRRIGATION AT THE FARM LEVEL: AN OVERVIEW OF THE EU FP7 PROJECT FIGARO
- 16:50-17:10** Fridman, Shmulik, *ARO, Volcani Center, Israel:*
EVALUATING THE ROLE OF WATER AVAILABILITY IN DETERMINING THE YIELD/PLANT POPULATION DENSITY RELATIONSHIP IN RAIN-FED OR SPRINKLER-IRRIGATION CROP PRODUCTION
- 17:10-17:30** Du, Changwen, *Chinese Academy of Sciences, Nanjing, China:*
APPLICATION OF MID-INFRARED AND RAMAN SPECTROSCOPY IN THE CHARACTERIZATION OF SOIL ORGANIC MATTER
- 17:30-18:00** **Discussion – Chaired by Anat Lowengart-Aycicegi and Victor Alchanatis**

18:00: Shuttles to: 1. Hotel Bay View; 2. Hof Carmel Train-station



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Wednesday, March 2nd

8:10: Shuttles to Technion from: 1. Hotel Bay View; 2. Hof Carmel Train-station

8:15-8:45 Registration

Session 6

Bridging Gaps: Sharing and Disseminating Knowhow and Technology

Chaired by Alon Ben-Gal

8:45-9:10 Fishman, Ram, *Tel Aviv University, Israel:*

SOCIO-ECONOMIC BARRIER TO INCREASE THE EFFICIENCY OF WATER AND NUTRIENT USE IN DEVELOPING COUNTRIES: UNDERSTANDING SMALLHOLDER FARMERS.

9:10-9:30 Korir, Nicholas Kibet, *Kenyatta University, Kenya:*

INTEGRATED WATER, SOIL AND NUTRIENT MANAGEMENT FOR EFFICIENT AND SUSTAINABLE FOOD PRODUCTION IN SUB SAHARAN AFRICA- SUCCESS, CHALLENGES AND OPPORTUNITIES

9:30-9:50 Rao, V. Praveen, *Agricultural University, Hyderabad, India:*

SUCCESSFUL LARGE-SCALE IMPLEMENTATION OF DRIP IRRIGATION IN SMALL HOLDERS PLOTS IN INDIA – ECONOMICS AND IMPACT ASSESSMENT

9:50-10:10 Shamir, Uri, *Technion-IIT, Israel:*

SHARING KNOWHOW AND EXPERIENCE FOR SECURING SUSTAINABLE WATER PRODUCTIVITY – USAID PROJECTS IN THE MENA REGION AS EXAMPLE

10:10-10:40 Discussion

10:40-11:00: Coffee Break

Session 7

Indicators and Benchmarks for Sustainable Food Production and Resource Conservation

Chaired by Fusuo Zhang

11:00-11:30 Bittman, Shabtai, *Pacific Agri-food Research Center, CA:*

MITIGATING NITROGEN EMISSIONS TO IMPROVE CROP PRODUCTION: AN INTEGRATED APPROACH

11:30-12:00 Oene Oenema, *Wageningen University UR, the Netherlands:*

AN EASY-TO-USE NITROGEN USE EFFICIENCY INDICATOR FOR AGRICULTURAL AND FOOD SYSTEMS

12:00-12:20 Migliorati, Max De Antoni, *QUT, Australia:*

REDUCING NITROUS OXIDE EMISSIONS WHILE SUPPORTING SUBTROPICAL CEREAL PRODUCTION IN OXISOLS

12:20-12:40 Shepon, Alon, *Weizmann Institute of Science, Israel:*

ASSESSING THE ENVIRONMENTAL BURDENS AND IMPLICATIONS TO FOOD SECURITY OF LIVESTOCK CONSUMPTION IN THE USA

12:40-13:00 Discussion



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13:00–14:50 *Lunch and Continued Poster Session (Grand Water Research Institute)*

15:00-15:15 *Posters Summary and Awards (Rabin Auditorium)*

Panel Discussion

15:20–16:45 **Main Targets and Challenges for Assuring Global Food and Water Security**
Chaired by Donald Sparks and Hillel Magen

Participants: Asher Bar-Tal, Shabtai Bittman, Kenneth G. Cassman, Ram Fishman, Leo Marcelis, Rao, V.
Praveen, Guohua Xu

16:45-17:00 Farewell and Concluding remarks

Thursday, March 3rd

Professional and Sight Seeing Tour (more details to be provided separately)

8:00 Leave from Bay View Hotel; Main stations: Caesarea National Park, The Dan Region Wastewater Treatment Plant (“Shafdan”); Gilat Center – ARO (Northwest Negev Area).

19:00 Stop in Tel Aviv on the way back to Haifa

20:30 Back in Haifa



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List of Posters

Graduate Students and Post-Docs

(First Authors/Presenters Only; alphabetic order and numbered)

1. Katie Baransy-Karkaby, *Technion, IIT, Israel*

IN SITU MODIFICATION OF DESALINATION MEMBRANES FOR IMPROVED PERFORMANCE

2. Maya Benami, *Ben-Gurion University of the Negev, Israel*

RAPID MPN-QPCR SCREENING FOR PATHOGENS IN AIR, SOIL, WATER, AND AGRICULTURAL PRODUCE

3. Suzanne Boxman, *University of South Florida, USA*

AQUACULTURE WASTEWATER FOR CROP PRODUCTION: EVALUATING THE PERFORMANCE OF A MARINE AQUAPONIC SYSTEM PRODUCING TWO SPECIES OF SALTWATER VEGETABLES

4. Sarit Brand-Klibanski, *the Hebrew University of Jerusalem, Israel.*

THE INFLUENCE OF SOLUBLE ORGANIC MATTER ON GYPSUM PRECIPITATION – IMPLICATION ON SOIL SALINIZATION

5. Shira Bukchin, *Tel Aviv University, Israel*

A GLOBAL MODEL OF SMALLHOLDER AGRICULTURE EXPOSURE TO CLIMATE CHANGE IMPACTS

6. Krishna Kumar Choudhary, *ARO Volcani Center, Israel*

DETERIORATION OF PEA (*PISUM SATIVUM L*) RHIZOSPHERIC SOIL HEALTH UNDER ELEVATED ULTRAVIOLET-B IRRADIATION IN THE INDO-GANGETIC PLAINS OF INDIA

7. Itay Cohen, *Ben-Gurion University of the Negev, Israel*

SIMULATIONS LOW NITROGEN AND HIGH IRRADIANCE IMPAIR PLANT PERFORMANCE

8. Sharon Dabach, *UC Davis, USA*

N₂O EMISSIONS UNDER PROPOSED IRRIGATION AND FERTIGATION BEST MANAGEMENT PRACTICES FOR ALMOND



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9. Anwar Dawas, *Technion, IIT, Israel*

LIMITING OF NITRITE OXIDATION IN FIXED BED NITRIFICATION REACTOR IN TWO STAGES
ANAMMOX PROCESS

10. Alon Eliran, *Tel Aviv University, Israel*

MODELLING OF MILLIMETRE-WAVE RADIATION INTERACTION WITH HIGH-SPATIAL-RESOLUTION
LAYERED SOIL SUBSTANCES

11. Revital Eshed, *Technion, IIT, Israel*

REAL-TIME MONITORING OF N-SPECIES ISOTOPES BY FOURIER TRANSFORM INFRARED (FTIR)
SPECTROSCOPY – A NOVEL TOOL TO INVESTIGATE SHORT-TERM ISOTOPE DYNAMICS AND N₂O
FORMATION IN SOIL

12. Jason Fischel, *University of Delaware, USA*

SUPERFUND CYCLING: THE FATE OF HEXAVALENT CHROMIUM IN THE SUBSURFACE ENVIRONMENT

13. Moshe Halpern, *Gilat Research Center, Israel*

LONG TERM PHOTOSYNTHETIC RESPONSE TO ELEVATED CO₂ UNDER DIFFERENT N FERTIGATION
REGIMES

14. Huang Yajie, *China Agricultural University, Beijing, China*

MAPPING SOIL ORGANIC MATTER BY KRIGING COMBINED WITH CLUSTERING OF SELF-ORGANIZING
MAP

15. Oz Kira, *Technion, IIT, Israel*

REMOTE SENSING OF PESTICIDE DRIFT: A TOOL FOR ESTIMATING AND REDUCING AIR POLLUTION IN
AGRICULTURE

16. Alon Levy, *National Center for Mariculture, Israel*

PERIPHYTON- BASED BIOFILTER: A NOVEL ELEMENT IN SUSTAINABLE LAND-BASED MARICULTURE

17. Jin Li, *South China Agricultural University, China*

EFFECT OF FERTILIZER PH ON THE FUNCTIONAL DIVERSITY OF MICROBIAL COMMUNITIES IN SOIL
INOCULATED FOC



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18. Olabiyi Obayomi, *Ben-Gurion University of the Negev, Israel*

FATE OF PATHOGENS IN WASTEWATER IRRIGATED SOIL

19. William Osterholz, *Iowa State University, USA*

HOW DO GROSS AND NET NITROGEN MINERALIZATION RELATE TO SOIL ORGANIC MATTER QUANTITY AND QUALITY?

20. Indira Paudel, *ARO Volcani Center, Israel*

IMPACT OF TREATED WASTEWATER ON GROWTH, RESPIRATION, AND HYDRAULIC CONDUCTIVITY OF CITRUS ROOT SYSTEMS IN LIGHT AND HEAVY SOILS

21. Hanna Ouaknin, *Technion, IIT, Israel*

MODELING NITROGEN PROCESSES IN A LAYERED SOIL

22. Matan Rahav, *The Hebrew University of Jerusalem, Israel*

THE EFFECTS OF TREATED WASTEWATER IRRIGATION ON SOIL WETTABILITY AND THE SPATIAL DISTRIBUTION OF WATER AND SOLUTES

23. Iael Rajj, *Ben-Gurion University of the Negev, Israel*

MODELLING OF MULTICOMPONENT SOLUTE TRANSPORT FOR LYSIMETER DESIGN

24. Oshri Rinot, *Technion, IIT, Israel*

ION EXCHANGE RESINS FOR IMPROVED PREDICTION OF NITROGEN MINERALIZATION AND NITRIFICATION RATES IN SOILS

25. Ji Shasha, *China Agricultural University, Beijing, China*

EFFECT OF FOLIAR APPLIED FZ ON PHYSIOLOGICAL CHARACTERISTICS OF SOYBEAN WITH DRIP IRRIGATION UNDER WATER DEFICIT

26. Idit Shefer, *Technion, IIT, Israel*

IDENTIFYING CONTAMINANTS AND MAJOR SPECIES IN SOILS USING SPECTRAL INDUCED POLARIZATION



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27. Natali Shirron, *Technion, IIT, Israel*

REDUCTION IN STRESS RESPONSE SIGNALING ENABLES GROWTH UNDER STRESS CONDITIONS- A POTENTIAL MECHANISMS OF CYTOKININ-INDUCED STRESS TOLERANCE

28. Inbar Shtutman, *Ben-Gurion University of the Negev, Israel*

SELF-RELIANCE?! ASSESSING ISRAEL'S NATIONAL FOOD SECURITY COMPONENTS THROUGH-OUT THE YEARS

29. Pavel Trifonov, *Ben-Gurion University of the Negev, Israel*

RELEASE DYNAMICS OF DISSOLVED ORGANIC MATTER IN SOIL AMENDED WITH BIOSOLIDS

30. Elazar Volk, *Technion, IIT, Israel*

HYDRAULIC PROPERTIES OF UNSATURATED BIOFILM-AFFECTED SOILS

31. Natasha Walbaum, *Ben-Gurion University of the Negev, Israel*

BERRY, IT'S HOT OUTSIDE! PREVENTING OVER-EXPOSURE OF CLUSTERS TO RADIATION AND HIGH TEMPERATURES

32. David Yalin, *The Hebrew University of Jerusalem, Israel*

INSIGHTS FROM SOIL REDOX MEASUREMENTS CONCERNING THE EFFECTS OF TREATED WASTEWATER ON AVOCADO PLANTS GROWN IN CLAY SOILS

33. Wu Youjie, *China Agricultural University, Beijing, China*

MAIZE WATER UPTAKE FROM DIFFERENT LAYERS AND ROOT-ZONES UNDER ALTERNATE FURROW IRRIGATION USING STABLE HYDROGEN AND OXYGEN ISOTOPES



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Researchers

(First Authors and other Presenter Only; alphabetic order and numbered)

34. Hanna Poffenbarger / Michael Castellano, *Iowa State University, USA*

NITROGEN FERTILIZER RATE EFFECTS ON SOIL ORGANIC CARBON IN IOWA CROP SYSTEMS.

35. Alon Gamliel, *ARO Volcani Center, Israel*

DIDAS - A USER-FRIENDLY SOFTWARE PACKAGE FOR ASSISTING DRIP IRRIGATION DESIGN AND SCHEDULING.

36. Fei Ma, *Chinese Academy of Sciences, Nanjing, China*

SOIL NUTRIENTS PREDICTION BASED ON MID-INFRARED DIFFUSE REFLECTANCE SPECTROSCOPY AND FOURIER TRANSFORM MID-INFRARED PHOTOACOUSTIC SPECTROSCOPY.

37. Yazhen Shen, *Chinese Academy of Sciences, Nanjing, China*

APPLICATION OF COORDINATION COMPLEXES OF Fe^{III}-TA IN MODIFYING AQUEOUS POLYACRYLATE TO SLOW NUTRIENTS RELEASE OF COATED FERTILIZER

38. Voogt Wim, *Wageningen University and Research, The Netherlands.*

IMPROVEMENT OF THE PHOSPHORUS USE EFFICIENCY BY REDUCTION OF THE SOIL BUFFER FOR GREENHOUSE VEGETABLE CROPS.

39. Shinichi Takeuchi, *Minami Kyushu University, Japan*

SAP FLOW OF MANGO AND GUAVA ORCHARDS IRRIGATED WITH TREATED WASTEWATER IN JERICHO CITY, PALESTINE



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Publications

An abstract book will be prepared and delivered via email and posted on the symposium site. Instructions for abstracts, manuscripts and posters are provided in the website.

Symposium Proceedings – will be prepared based on manuscripts to be sent by the presenters **by 31st**

March 2016. Publication of a selected set of manuscripts in Soil Science Society of America Journal - SSSAJ (as done in 2013: <https://dl.sciencesocieties.org/publications/sssaj/tocs/78/1#top>) is under consideration and in any case it will be subject to a review process. More details to come up soon.

Additional Information

Accommodations: Special rates in Haifa Hotels will be offered to participants.

Registration: A registration fee of \$250 is required to cover expenses for a conference arrangements, booklet, lunches and coffee breaks.

Please note: Participants presenting an oral presentation or posters are exempted from registration fees.

Important Submission Dates

Manuscript submission for proceedings (see link below for instructions)

<http://tx.technion.ac.il/~dgsymp16/Guidelines%20For%20Submission%202016.pdf>

**March, 31st
2016.**

Organizing Committee

Chair- Dr. A. Shaviv, CEE, Technion-IIT;

Co-Chair- Hillel Magen, Director of IPI

Dr. Asher Bar-Tal, ARO, Volcani Center

Dr. Alex Furman CEE, Technion-IIT

Dr. Alon Ben-Gal, ARO, Gilat Center

Dr. Patricia Imas, ICL Fertilizers;

Ron Seligmann, Haifa Chemicals

Dubi Raz, Netafim

Gershon Kalyan, Fertilizers & Chemicals Ltd.

Symposium Coordinator: Paz Nativ, CEE, Technion-IIT

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Avi Shaviv – Phone: 972-77887-2602; E-mail: agshaviv@tx.technion.ac.il



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