

Oral Programme SS1

Clays and soil forming processes: an evergreen

Conveners: Eleonora Bonifacio, Markus Egli

Sunday 14 June, 2009

Chairs: Eleonora Bonifacio & Markus Egli

- 11.00 – 11.30 SS1a.Sun. KL1
*José Torrent**, *Vidal Barrón*
GENESIS AND TRANSFORMATION OF FERRIMAGNETIC MINERALS IN SOILS AS AFFECTED BY ENVIRONMENTAL FACTORS
- 11.30 – 11.50 SS1a.Sun.L2
*Peter C. Ryan**, *F. Javier Huertas*
THE ORIGIN OF FE-KAOLIN FROM PRECURSOR BEIDELLITE AND INTERSTRATIFIED KAOLIN-SMECTITE IN MOIST TROPICAL SOILS
- 11.50 – 12.10 SS1a.Sun.L3
*Jeffrey Hughes**, *Robert Gilkes*, *Yee-Kwong Leong*, *Michael Smirk*
SOME PROPERTIES OF PALLID ZONE KAOLINS FROM WESTERN AUSTRALIA IN RELATION TO GROUNDWATER COMPOSITION
- 12.10 – 12.30 SS1a.Sun.L4
*Fabien Hubert**, *Laurent Caner*, *Alain Meunier*
SOLVING COMPLEX PEDOGENESIS: USE OF DIRECT XRD PATTERN FITTING TO QUANTIFY CLAY MINERAL ASSEMBLAGE CHANGES
- 12.30 – 12.50 SS1a.Sun.L5
*Edi Mendes Guimarães**
KAOLINITE AND GIBBSITE FROM SUB-TROPICAL SOILS, DISTRITO FEDERAL, BRAZIL

LUNCH 12.50-14.20

Sunday 14 June, 2009

Chairs: Eleonora Bonifacio & Markus Egli

- 14.30 – 15.00 SS1b.Sun.L1
*Christian Mavris**, *Markus Egli*, *Michael Plötze*, *Joel Blum*, *Wilfred Haeblerli*
INITIAL STAGES OF SOIL AND CLAY MINERALS FORMATION IN THE MORTERATSCH PROGLACIAL AREA (UPPER ENGADINE, SWITZERLAND)
- 15.00 – 15.20 SS1b.Sun.L2
*Klaus Kaiser**, *Gritta Grünewald*, *Reinhold Jahn*
MINERALS AND ORGANICS IN SOIL FORMATION IN ALKALINE SUBSTRATE
- 15.20 – 15.40 SS1b.Sun.L3
*Malgorzata Grybos**, *Patrick Billard*, *Laurent Michot*, *Christian Mustin*
DISSOLUTION OF LATH-SHAPED CLAY MINERALS: EVIDENCE FOR BASAL SURFACE REACTIVITY OF NONTRONITE
- 15.40 – 16.00 SS1b.Sun.L4
*Michael Plötze**, *Gerhard Furrer*
GRANITE WEATHERING IN THE DAMMA GLACIER FOREFIELD
- 16.00 – 16.20 SS1b.Sun.L5
*Hakime Abaslou**, *Ali Abtahi*, *Soheila Sadaat Hashemi*
GENESIS AND DISTRIBUTION OF CLAY MINERALS IN A TRANSECT OF GYPSIFEROUS, CALCAREOUS AND SALINE MATERIALS (SOUTHERN IRAN)

COFFEE BREAK 16.20-16.40

Sunday 14 June, 2009

Chairs: Eleonora Bonifacio & Markus Egli

- 16.40 – 17.10 SS1c.Sun.L1
Nattaporn Prakongkep, Bob Gilkes, Balbir Singh*
MICROCRYSTALLINE PYRITE IN ENDOAQUODS ON THE SWAN COASTAL PLAIN, WESTERN AUSTRALIA:
PROPERTIES AND ENVIRONMENTAL CONSEQUENCES
- 17.10 – 17.30 SS1c.Sun.L2
Michal Skiba, David I. Bish*
THE NATURE OF INTERLAYERING IN CLAYS FROM A PODZOL FROM THE TATRA MOUNTAINS, POLAND
- 17.30 – 17.50 SS1c.Sun.L3
Eric Ferrage, Bruno Lanson, Dimitri Pret, Louis Mareschal, Jacques Ranger, Marie-Pierre Turpault*
EVOLUTION OF EXPANDABILITY DURING EXPERIMENTAL ALUMINIZATION OF VERMICULITE INTERLAYERS. AN
X-RAY DIFFRACTION PERSPECTIVE ON STRUCTURAL MECHANISMS
- 17.50 – 18.10 SS1c.Sun.L4
A.O. Alekseev, P.I. Kalinin, T.V. Alekseeva*
MODIFICATIONS OF THE MINERALOGICAL COMPOSITION OF SOILS AS RELATED TO STEPPE CLIMATE
DYNAMICS
- 18.10 – 18.30 SS1c.Sun.L5
Katrin Wriessnig, Franz Ottner*
PALEOSOILS IN AUSTRIAN LOESS DEPOSITS

Poster Programme SS1

Posting Time: Saturday 13 June; **Removal:** Monday 15 June, 12.50-14.30;

Attendance Time: Sunday, 14 June, 18:30–20:00

Chairs: Eleonora Bonifacio & Markus Egli

- SS1.Sun.P1 *S. Tawornpruek**, *R.J. Gilkes*
PEDOGENIC HERCYNITE, CORUNDUM AND MAGHEMITE IN PISOLITHIC DURICRUST IN LATERITIC BAUXITE IN THE DARLING RANGE, WESTERN AUSTRALIA
- SS1.Sun.P2 *Victor Ya Chertkov**
NEW CHARACTERISTICS OF INTRA-AGGREGATE STRUCTURE AND CLAY SOIL SHRINKAGE
- SS1.Sun.P3 *Michael C. Cheshire**, *David I. Bish*
ROLE AND EVOLUTION OF ORGANIC MATTER WITHIN THE SOUTHEASTERN UNITED STATES KAOLIN DEPOSITS
- SS1.Sun.P4 *Gloria Falsone, Eleonora Bonifacio**
ELECTROPHORETIC MOBILITY AND CLAY MINERALOGY OF SOME FRAGIPAN AND NON-FRAGIPAN SOIL HORIZONS
- SS1.Sun.P5 *Antonio Gianfagna**, *Simona Mazziotti-Tagliani*, *Salvatore Milli*, *Mattia Marini*, *Massimiliano Moscatelli*, *Domenico Cannata*
A COMBINED MINERALOGICAL AND SEDIMENTOLOGICAL APPROACH TO DIFFERENTIATE TURBIDITE MUDSTONES
- SS1.Sun.P6 *Georg Grathoff**, *Hans Ruppert*, *Curt Peterson*
FORMATION OF HIGH ALUMINA PHASES IN DUNAL SOILS FROM OREGON, USA
- SS1.Sun.P7 *Soheila Sadaat Hashemi*, *Majed Baghernejad**
CLAY MINERALOGICAL INVESTIGATION OF SOILS FORMED ON GYPSIFEROUS MATERIALS ON DIFFERENT SOIL MOISTURE REGIMES
- SS1.Sun.P8 *Kenan Killiç**, *Hüseyin Yalçın*
MINERALOGIC CHARACTERISTICS AND GENESIS OF VOLCANIC SOILS RELATED TO ERCIYES STRATOVOLCANO, KAYSERI PROVINCE, TURKEY
- SS1.Sun.P9 *Esmail Saberi Moghadam**, *Ahmad Heidari*, *Kazem Zamanian*
DOMINANT CLAY MINERALS IN SOILS OF IRAN AND FACTORS INVOLVED IN THEIR RELATIVE ABUNDANCE
- SS1.Sun.P10 *Jude Chukwuma Obi**
PROFILE DISTRIBUTION OF CLAY, CALCIUM, MAGNESIUM AND POTASSIUM IN SOME NIGERIAN SOILS
- SS1.Sun.P11 *Hamidreza Owliaie**, *Ebrahim Adhami*
PALYGORSKITE DISTRIBUTION IN RELATION TO CLIMATE AND PARENT MATERIAL IN SOILS OF KOHGILOUYE, IRAN
- SS1.Sun.P12 *Maria T. Cristi Sansone**, *Giacomo Prosser*, *Giovanna Rizzo*, *Saverio Fiore*
WEATHERED PROFILES DEVELOPED FROM SERPENTINITES OF THE FRIDO UNIT - SOUTHERN APENNINE, ITALY - MINERALOGICAL FEATURES
- SS1.Sun.P13 *Mahdeyeh Sheykh Shoaie**
DETERMINATION OF IMPORTANT METAL OXIDES IN THE SOILS OF KERMAN
- SS1.Sun.P14 *Peter Sipos*, *Katalin Judik**, *Tibor Nemeth*
DISTRIBUTION OF IRON AND MANGANESE IN FE-RICH NODULES FROM AN ALLUVIAL SOIL
- SS1.Sun.P15 *M. José Trindade**, *M. Isabel Dias*, *Fernando Rocha*
GEOCHEMISTRY AND MINERALOGY OF BULK ROCK AND CLAY FRACTION OF CLAYEY MATERIALS FROM ALGARVE (SOUTH PORTUGAL)
- SS1.Sun.P16 *Camille Truche**, *Jose Darrozes*, *Anne Bourguignon*, *Sabine Petit*, *Philippe Roubichou*, *François Martin*
CHARACTERIZATION OF CLAY MINERALOGY IN SWELLING SOIL BY INFRARED SPECTROMETRY AT LABORATORY AND FIELD SCALES
- SS1.Sun.P17 *Kazem Zamanian**, *Ahmad Heidari*, *Shahla Mahmoodi*
THE EFFECT OF DIFFERENT MODES OF PETROCALCIC HORIZON FORMATION ON SOIL CLAY MINERALOGY (NORTH CENTRAL IRAN)
- SS1.Sun.P18 *Soheila Dehghan*, *Shima Separdar*, *Amir Delavar**, *Ali Sarabchi*
MINERALOGY OF SOME ARID AND SEMIARID SOILS OF ABYEK PLAIN IN GHAZVIN PROVINCE, IRAN

Oral Programme SS2

Contributions of soil mineralogy to solve agricultural, environmental, technological and other practical problems

Conveners: Jock Churchman, Elisabetta Barberis

Tuesday 16 June, 2009

Chair: Jock Churchman

- 11.00 – 11.30 SS2a.Tue.KL1
Robert Fitzpatrick, Mark D Raven, Paul Shand*
SOIL MINERALS IN THE ENVIRONMENT, INDUSTRY AND THE JUSTICE SYSTEM
- 11.30 – 11.50 SS2a.Tue.L2
Mark D Raven, Robert W Fitzpatrick*
IMPORTANCE OF CLAY MINERALOGY IN THE FORENSIC COMPARISON OF SOILS
- 11.50 – 12.10 SS2a.Tue.L3
R. Jahn, I. Janßen, R. Horn*
RHEOLOGICAL INVESTIGATION OF PADDY SOILS WITH MIXED MINERALOGY
- 12.10 – 12.30 SS2a.Tue.L4
*Katrin M. Tiefenbach, Franz Ottner**
CLAY MINERALS AND THEIR INFLUENCE ON MASS MOVEMENTS
- 12.30 – 12.50 SS2a.Tue.L5
Edna Patricia P Mendoza, Sandra G. Catane, Chelo S. Pascua, Mark Albert H. Zarco*
SUITABILITY OF VOLCANIC SOILS AND SEDIMENTS IN METRO MANILA, PHILIPPINES FOR LANDFILL LINER MATERIAL

LUNCH 12.50-14.20

Tuesday 16 June, 2009

Chair: Elisabetta Barberis

- 14.30 – 15.00 SS2b.Tue.L1
Fabien Hubert, Laurent Caner, Alain Meunier*
IDENTIFICATION AND QUANTIFICATION OF SOIL REACTIVE CLAYS MINERALS BY DIRECT XRD PROFILE FITTING
- 15.00 – 15.20 SS2b.Tue.L2
Baiq Emelda Yusiharni, Bob Gilkes*
REHYDROXYLATION OF HEATED GIBBSITE, KAOLINITE AND GOETHITE: AN ASSESSMENT OF PROPERTIES AND ENVIRONMENTAL SIGNIFICANCE
- 15.20 – 15.40 SS2b.Tue.L3
Puvvadi V Sivapullaiah, Gullapalli Sankara*
GEOTECHNICAL BEHAVIOUR OF SOIL WITH AN INTERSTRATIFIED MINERAL
- 15.40 – 16.00 SS2b.Tue.L4
*Sofia Lessovaia**
SHALLOW SOILS FROM BASIC AND ULTRABASIC ROCKS, RUSSIA: MINERAL COMPOSITION AND CHEMICAL PROPERTIES
- 16.00 – 16.20 SS2b.Tue.L5
Wanpen Wiriyakitnateekul, Claude Hammecker, Somchai Anusontpornperm, Suddha Boonrod*
CLAY MINERALOGY OF SOILS DERIVED FROM SANDSTONE ALONG A TOPOSEQUENCE IN NORTHEAST, THAILAND

Wednesday 17 June, 2009

Chairs: Elisabetta Barberis & Jock Churchman

- 08.50 – 09.20 SS2c.Wed.L1
~~*Georgina Holbeche*, Robert Gilkes, Richard George*~~
~~AUTHIGENIC PLYGORSKITE IN VALLEY FLOOR SOILS IN WESTERN AUSTRALIA~~
- 09.20 – 09.40 SS2c.Wed.L2
Wen Feng Tan, Dong Liu, Li Huang, Fan Liu*
COMPOSITION OF CLAY MINERALS IN AGGREGATES AND THEIR EFFECT ON AGGREGATE STABILITY IN RED SOILS UNDER DIFFERENT EROSION FROM CHINA

- 09.40 – 10.00 SS2c.Wed.L3
*Myriam Duc**, *Lamis Makki*, *Aurélie Maloula*, *Jean-Pierre Magnan*
 ROLE OF CARBONATE ON SWELLING/SHRINKAGE OF CLAYEY SOILS
- 10.00 – 10.20 SS2c.Wed.L4
*Daniela De Benedetto**, *Annamaria Castrignano*
 SPATIAL RELATIONSHIP BETWEEN CLAY CONTENT AND GEOPHYSICAL DATA
- 10.20 – 10.40 SS2c.Wed.L5
*Niousha Mehraban Rad**
 INVESTIGATION OF PHYSICAL, CHEMICAL AND MINERALOGICAL STUDIES OF TRANSPORTED SEDIMENTS IN SEFID-ROOD DAM

COFFEE BREAK 10.40-11.00

Wednesday 17 June,, 2009

Chairs: Elisabetta Barberis & Robert Fitzpatrick

- 11.00 – 11.30 SS2d.Wed.L1
*Pietro Iavazzo**, *Paola Adamo*, *Maria Boni*, *Stephen Hillier*, *Mariavittoria Zampella*
 MINERALOGICAL FORMS OF Pb AND Zn IN SOIL SAMPLES FROM A FORMER Pb MINING AREA IN MOROCCO AND INFERENCES FOR SPECIATION
- 11.30 – 11.50 SS2d.Wed.L2
Soheila Sadaat Hashemi, *Majed Baghernejad**, *Hakime Abaslou*
 ADSORPTION BEHAVIOR OF ZINC ON CLAY MINERALS AND ITS VARIABILITY IN DIFFERENT SOIL
- 11.50 – 12.10 SS2d.Wed.L3
~~*Matthew Landers**, *Robert Gilkes*, *Markus Grafe*, *Martin Wells*~~
~~LOCATION OF NICKEL IN RAPIDLY DEHYDROXYLATED GOETHITE IN OXIDE-TYPE NI-LATERITE ORES: EXAFS AND XANES INVESTIGATION~~
- 12.10 – 12.30 SS2d.Wed.L4
*Suphicha Thanachit**, *Somchai Anusontpornperm*, *Wanpen Wiriyakitnateekul*, *Irbkheoruenromne*, *Anchalee Suddhiprakarn*
 MINERALOGICAL IMPLICATION FOR AGRICULTURAL USES OF SOILS DEVELOPED ON CALCITE BEARING ROCKS
- 12.30 – 12.50 SS2d.Wed.L5
Melissa Fraser, *Jock Churchman**
 VARIABILITY OF CLAY MINERALOGY IN A VERTISOL IN A FLAT CALCAREOUS LANDSCAPE AND ITS EFFECT ON PASTURES

Poster Programme SS2

Posting Time: Monday 15 June, 20.30-22.30; **Removal:** Wednesday 17 June, 12.50-14.30;

Attendance Time: Tuesday, 16 June, 18:30–20:00

Chairs: Jock Churchman & Robert Fitzpatrick

- SS2.Tue.P1 *Majid Baghernejad*, Mostafa Emadi*
A CASE STUDY ON SOIL CLAY MINERALS IN SOME SELECTED HIGHLY CALCAREOUS SOILS OF SEMI-ARID REGIONS, SOUTHERN IRAN
- SS2.Tue.P2 *Hassen Benmessaoud, Mahdi Kalla*
STUDY THE EFFECT OF MECHANICAL DUNES ON SOIL PROPERTIES AND EVOLUTION OF VEGETATION IN THE REGION OF BISKRA – OUMACHE - (ALGERIA)
- SS2.Tue.P3 *Fortunato De Santis, Maria Luigia Giannossi, Salvatore Margiotta*, Vito Summa, Fabio Tateo*
THE COMPOSITIONAL CHARACTERS OF THE SOILS OF SOME SOUTHERN APPENINES LANDSLIDES (BASILICATA REGION)
- SS2.Tue.P4 *Maria Luigia Giannossi, Salvatore Margiotta*, Luca Medici, Vito Summa, Fabio Tateo*
THE EFFECT OF SOIL-WATER INTERACTION PROCESSES ON THE MECHANICAL PROPERTIES OF THE SOILS INVOLVED IN SOME LANDSLIDES IN THE BASILICATA REGION (SOUTHERN ITALY)
- SS2.Tue.P5 *Siroos Jafari*, Majid Baghernejad, Richard J. Heck*
INFLUENCE OF SUGARCANE PRODUCTION AND ROTATION CROPPING ON THE CLAY MINERAL ASSEMBLAGE
- SS2.Tue.P6 *Siroos Jafari*, Majid Baghernejad*
EFFECTS OF WETTING AND DRYING, AND CLAY MINERAL PROPORTIONS ON POTASSIUM FIXATION IN SOME CULTIVATED AND UNCULTIVATED SOILS, IRAN
- SS2.Tue.P7 *Yu Jian*, Yan Yongli, Shi Jigang, I. Shainberg*
DRYING AND CLAY PERCENT EFFECTS ON SUPERABSORBENTS WATER RETENTION
- SS2.Tue.P8 *Jae Gon Kim*, Jeong Sik, Park Chul, Min Chon*
DISPERSION AND ARSENIC DISSOLUTION OF IRON OXIDE RICH SOIL WITH PHOSPHATE AND ANIONIC SURFACTANT
- SS2.Tue.P9 *Abdul K. Kurd*, David N. Chapman, Gurmel S. Ghataora, Alexander C. Royal*
A REVIEW OF THE LITERATURE RELATED TO INVESTIGATING SOIL RESPONSE DUE TO LEAKAGE FROM BURIED WATER PIPES
- SS2.Tue.P10 *N. Madhavan**
USE OF SMALL SEDIMENT PARTICLES TO REMOVE UNWANTED FLUORIDE ELEMENT FROM DRINKING WATER
- SS2.Tue.P11 *Ernest M.M. Marwa*, Andrew A. Meharg, Clive M. Rice*
HEAVY METALS AND ACCESSORY MINERALS IN THE TANZANIAN VERMICULITES WITH RESPECT TO POTENTIAL AGRICULTURAL APPLICATIONS
- SS2.Tue.P12 *Ali Sanaei Raad, Javad Lajevardi Joboni*, Hadi Ahmadi*
ASSESSMENT OF SHEAR STRENGTH PARAMETERS OF FINE SOILS USING FUZZY LOGIC
- SS2.Tue.P13 *Salim Al-Naqib Ali, Al-Juboury*, Kotayba Al-Youzbake*
MINERALOGY OF FRAGIPANS IN ALLUVIAL FAN SEDIMENTS AT SINJAR AREA, NE IRAQ
- SS2.Tue.P14 *Jianhui Cai*, Jiuling Li*
SOIL MINERALOGY OF DEXING MINING ENVIRONMENTS, CHINA
- SS2.Tue.P15 *I. Caner*, F. Hubert, e. Montarges Pelletier, E. Joussein, H. Rogeon, C. Chenu, C. Moni, F. Claret, B. Watts*
ORGANIC MATTER STABILISATION ONTO FINE CLAY FRACTIONS OF TWO SOILS: APPLICATION OF STXM AND C NEXAFS SPECTROSCOPY