# ARCHAEOLOGICAL PROSPECTION 2003

INSTITUTE OF ARCHAEOLOGY AND ETHNOLOGY
POLISH ACADEMY OF SCIENCES

COMMISSION ON THE PREHISTORY OF THE CARPATHIANS POLISH ACADEMY OF ARTS AND SCIENCES

## 5<sup>th</sup> International Conference on Archaeological Prospection

September 10-14, 2003, Cracow, Poland

### INVITED LECTURE

Albert Hesse Archaeological prospection: dreams and reality

## SESSION: ARCHAEOLOGICAL PROSPECTION IN COUNTRIES OF THE NEAR EAST

Christophe Benech	oral	The study of ancient city planning by geophysical methods: the case of Dura-Europos, Syria
Mahmut G. Drahor Gökhan Göktürkler	oral	Large-scale magnetic and resistivity surveys at Burgaz archaeological site, Turkey
Stefan Groh	oral	Integrated prospection in the Upper Town of Ephesus, Turkey – a case study
Ken Hamilton Armin Schmidt	oral	Integrated archaeological geophysical assessment of an urban brown field site in Benghazi, Libya
A. Hassaneen S.Sh. Osman M.A. Abd Allah F.A. Shaaban	oral	Electrical and GPR tomographies for archaeological investigations at Mit-Raheina, Egypt
A.Gh. Hassaneen El.A. al-Sayed M.M. Soliman	oral	Geoelectrical study to delineate the effect of groundwater increment in Abusir, Egypt
Tomasz Herbich	oral	Archeological geophysics in Egypt – recent results
Roman Krivanek Miroslav Barta	oral	Geophysical prospection in South Abusir, Egypt, 2002
M. Metwaly A. Green H. Horstmeyer A. Gh. Hassaneen A. Abbas M. al-Gamili	oral	Results of high-resolution magnetic and tomographic seismic surveying at the Saqqara archaeological site, Egypt

Cornelius Meyer Burkart Ullrich	oral	Tell prospection: experiences collected in Northern Syria
S.H. Parcak	oral	New methods for archaeological site detection in Egypt <i>via</i> satellite imagery analysis: case studies from Sinai and the Delta
Mark Schurr Ian Kuijt William Finlayson	oral	Geomagnetic surveys at the PPNA site of Dhra', Jordan
F.A. Shaaban F.F. Shaaban A.M. Abbas A.H. al-Essawy	oral	Mapping buried archaeological remains using GPR surveys at Isis temple, Bahbeit el-Hegara arca, Nile Delta, Egypt
Břetislav Vachala Jaromír Procházka	oral	Surveying in Egyptology
T. F. Abdallatif H. Odah A.M. Saleh	poster	Magnetic archaeoprospection at Fayoum governorate, Egypt
Helmut Becker Jörg W.E. Fassbinder	poster	Magnetometry at Uruk (Iraq): the city of King Gilgamesch
Stefan Giese Armin Grubert Christian Hübner	poster	Geomagnetic mapping on the Early and Middle Bronze Age settlement mound Tell Mozan (Urkesch), Northeast Syria
Duncan Hale Penny Wilson	poster	Geomagnetic surveys at Sais, Sa el-Hagar, western Delta, Egypt
Tomasz Herbich David O'Connor Matthew Adams	poster	Magnetic mapping of the Northern Cemetery at Abydos, Egypt
Tomasz Herbich Joseph Wegner	poster	Magnetic survey at South Abydos: revising archaeological plans
Dominique Kassab Tezgör	poster	From hypothesis to survey, from survey to excavations and back to hypothesis: the conclusions of 10 years of work in the amphorae workshop at Sinope-Demirci
Kay Kohlmeyer Martin Marianow Thomas Goldmann Bernd Kutschan	poster	Geomagnetic prospection of the Early Bronze Age town of Tuttul/Tall Bi'a, Syria

H. Odah T.F. Abdallatif I.A. al-Hemaly E. Abd All	poster	Gradiometer survey for detecting the ancient remains distributed northeast of the Djoser pyramid, Saqqara, Egypt
Christoph Peeters Tomasz Herbich	poster	Results of magnetic survey in Deir al-Barsha, Middle Egypt
Martin Posselt	poster	The 2002 magnetometer survey at the Early Islamic city of Kharab Sayyar in Northeast Syria
G. al-Qady N. Soliman A. Taha J. Dorner	poster	Archaeological prospection in the Hyxos capital of Avaris using geoelectric resistance imaging
Mehmet Taşlialan Roger S. Bagnall Tatyana Smekalova Sergey Smekalov	poster	Magnetic survey on the acropolis of Pisidian Antioch

## SESSION: INTERPRETATION AND PRESENTATION OF PROSPECTION RESULTS

Michael Doneus	oral	Aerial archaeological prospection of the Viking Age settlement in Haithabu
Jörg W.E. Fassbinder Doris Ebner Josef Lichtenauer Qin Jaoming Jiang Baolian Liang Xiaoqing Yang Tianmin Zhao Qiang Qi Yang	oral	Magnetometry at Zhaolun, the "Asian Central Bank" of the Han dynasty, Shaanxi Province, China
Roberto Gabrielli Teresa Iuliano Paolo Mauriello Dario Monna Daniela Peloso	oral	A contribution to archaeological prospection. Examples of resistivity surveys in the Mediterranean area
Ivan Kuzma Ján Tirpák	oral	Three new circular enclosures from Slovakia
Paul Linford	oral	Integrated use of caesium vapour total field and gardiometer magnetometer surveys to maximise data recovery and archaeological interpretation: field examples from the United Kingdom
Krzysztof Misiewicz Krzysztof Makowski	oral	Geophysical survey of the Tablada de Lurin cemetery, Peru
Artur Poręba Bogdan Żogała Kazimierz Klimek Maria Łanczont Jolanta Nogaj-Chachaj	oral	The application of electromagnetic profilings in archaeology – case study of Cieszacin Wielki grave mounds, Poland
Norbert Schleifer Andreas Weller	oral	Using induced polarization (IP) for the mapping of wooden plankways
Armin Schmidt	oral	The lost village of Tidover – magnetic susceptibility survey as part of a sequential prospection strategy
Ch. Schweitzer	oral	A contribution to archaeological prospection in Lower Saxony, Germany, illustrated by some recent geophysical surveys

Sandy Winterbottom Tom Dawson	oral	Testing multi-spectral airborne remote sensing for detecting archaeological sites under the sands of the Inner Hebrides of Scotland
Mariusz Błoński Peter Milo Krzysztof Misiewicz	poster	Geophysical survey of the Medieval stronghold at Nasielsk, Central Poland
Marek Dulinicz Peter Milo Krzysztof Misiewicz Mieczysław Rekowski	poster	Magnetic prospection at the site of Bocheń, Central Poland
Ercan Erkul Wolfgang Rabbel Harald Stümpel	poster	Combined geophysical survey at Selinus, Sicily
Vladimir V. Glazounov Natalia N. Efimova	poster	Processing and interpretation of magnetic fields of heterogeneous archaeological objects
Ken Hamilton Armin Schmidt	poster	Archaeological investigation of the Some battle site by ground penetrating radar
Tomasz Herbich Roman Křivánek Krzysztof Misiewicz Judith Oexle	poster	Magnetic surveys of the site Burg Gana (Hof/Stauchitz) in Saxony
Alette Kattenberg	poster	The application of magnetic methods for archaeological heritage management in The Netherlands
Roman Křivánek	poster	Magnetic prospection of various types of large ditch enclosures (or fortifications) of prehistoric Bohemia

## SESSION: INTEGRATED PROSPECTION APPROACHES

A.B. Belinski S.V. Merkulov	oral	The use of modern technologies in archaeological prospection: experience from SUO "Nasledie"
Paul Cheetham Tim Darvill Roger Doonan Bronwen Russell	oral	Mann's landscapes revealed
V. Gaffney H. Patterson S. Piro D. Goodman Y. Nishimura	oral	Multimethodological approach to study and characterise the Forum Novum site (Vescovio), Italy
John Gale Paul Cheetham Steve Burrow	oral	The Knowlton Neolithic and Early Bronze Age Landscape Project – geophysical survey in a Late Neolithic and Early Bronze Age ritual landscape
J.M. Maillol D.L. Ciobotaru I. Moravetz	oral	Investigations of the magnetic and electrical response of archaeological structures at the Early Neolithic site of Movila lui Deciov, Banat, Romania
John Peukert	oral	Beaming into Hollywood
Michael Doneus Wolfgang Neubauer Stefan Groh Klaus Löcker Sirri Seren	poster	Prospecting the Roman military camp of Zwentendorf, Austria
Tim Horsley Armin Schmidt Steve Dockrill	poster	The potential of archaeological prospection techniques in Iceland
Martin Posselt Thomas Saile	poster	Early Neolithic settlements in Germany and Poland.  Latest results of a magnetometer survey approach to the investigation of Early Neolithic architecture and settlement pattern throughout Central Europe
G. Ranieri P.G. Spanu R. Zucca G.P. Deidda R. Deiana S. Erriu M. Nuvoli	poster	Synergic use of very high resolution geophysical methods to delineate the archaeological strata of the Phoenician site of Neapolis, Sardinia, Italy
Baoquan Song	poster	The interpretation of aerial photographs in the Linzi Project

### SESSION: PROCESSING AND VISUALISATION OF PROSPECTION DATA

T. Ako H. Kamei Y. Yotsuya M. Okita	oral	Application of 3D-migration to GPR survey at the Tenpaku-site, Mie, Japan
Norbert Buthmann Bruno Wirtz Benno Zickgraf	oral	Magnetometer survey of Celtic salt exploitation in the Seille river valley (Moselle, France) and an approach to 3D presentation of magnetic anomalies
M.C. Capanna S. Piro	oral	The location and characterization of magnetic bodies from archaeological prospection using 2D cross-correlation
F. Caratori Tontini C. Carmisciano M. Ciminale O. Faggioni S. Monti	oral	Marine geomagnetic high definition metrology: possible archaeological applications
Dean Goodman Yasushi Nishimura Hiromichi Hongo	oral	Horizon slice in archaeological prospection
Pasomphone Hemthavy Hiroaki Watanabe Hiroyuki Kamei	oral	Topographic correction to compensate for changes in surface elevation in GPR image by applying F-k migration
Jürg Leckebusch	oral	The use of antenna arrays for GPR surveying in archaeology
Neil Linford	oral	From hypocaust to hyperbola: ground penetrating radar surveys over mainly Roman remains in the United Kingdom
Meg Watters	oral	Getting more from our data through data fusion and modelling
Sergey Alekseychuk	poster	3D GIS in archaeology: a comprehensive approach to the reconstruction of archaeological monuments
Salvatore Piro	poster	High-resolution GPR surveys for the study of <i>domus</i> del Centenario, Pompcii, Italy
Anne Roseveare Martin Roseveare	poster	A proposed method for the robust classification of texture in magnetic survey data
Anne Roseveare Martin Roseveare	poster	Inline quality assessment for data processing in archaeological geophysics

## SESSION: GIS AND PROSPECTION

George Indruszewski	oral	Oberlausitz. A GIS-based Medieval landscape modelling of the Sorbian/German region
Dmitry Korobov	oral	Investigation of agricultural terraces in the South of Russia
Wolfgang Neubauer Michael Doneus Alois Eder-Hinterleitner Klaus Löcker	oral	The Early Neolithic monumental enclosure Weinsteig-Grossrussbach
Wolfgang Neubauer Alois Eder-Hinterleitner Sirri Seren Helmut Becker Jörg W.E. Fassbinder	oral	Magnetic survey of the Viking Age settlement of Haithabu, Germany
Julien Thiesson Eric Marmet Alain Tabbagh	oral	First comparative test of magnetic viscosity and magnetic susceptibility mapping
Alois Eder-Hinterleitner Peter Melichar Wolfgang Neubauer Michael Doneus Sirri Seren	poster	The city map of ancient Carnuntum – combining archaeological prospection, photogrammetry and GIS
G.P. Garbuzov Y.V. Gorlov	poster	Use of space remote sensing data for the archaeological mapping of the Taman peninsula, Russia
G.P. Garbuzov S.V. Gusev N.S. Saveliev P.M. Shulgin	poster	The remote sensing background in the "Irendyk" reserve project, Southern Ural, Russia

### SESSION: ARCHAEOLOGICAL FEEDBACK

Nico Fröhlich Martin Posselt Norbert Schleifer	oral	Excavating in "blind" mode. Magnetometer survey, excavation and magnetic susceptibility measurements of a multiperiod site at Bad Homburg, Germany
Chris Gaffney John Gater	oral	Why scan when you can do detailed survey?
Yasushi Nishimura	oral	GPR survey for detecting post-hole houses: two examples of surveys for the identification of low-contrast soil structures
R.W. Vernon J.G. McDonnell A. Schmidt A. Powell E. Godfrey B. Spence	oral	The geophysical assessment of the Myers Wood ironworking complex near Huddersfield, England: fiction (?) then fact
Luis Barba Gregory Pereira	poster	Geophysical study of Loma Guadalupe archaeological site in Michoacan, Mexico
Michael Doneus Gabriele Scharrer	poster	Archaeological feedback of aerial archaeological interpretation of an Early Medieval graveyard at Frohsdorf, Lower Austria
Martin Fera Wolfgang Neubauer Michael Doneus Alois Eder-Hinterleitner	poster	Magnetic prospecting and targeted excavation of the prehistoric settlement Platt-Reitlüsse, Austria
Bronwen Russell Tim Darvill	poster	Geophysical survey in the archaeological record: the Archaeological Investigations Project
Zakhar Slepak Gulchachak Nugmanova	poster	Historical analysis and geophysical surveys to define remains of ancient stone buildings

### SESSION: TECHNICAL ASPECTS

Ercan Erkul	poster	Development of a mobile multi-sensor system: first results
Wolfgang Rabbel		
Harald Stümpel		
A.R. Walker	poster	Prospection with the new FM 256 fluxgate gradiometer
		system and other instrumental techniques