



MAX-PLANCK-GESELLSCHAFT

Collaboration with Max Planck Society

Aiming to promote both research and educational programs, The Cyprus Institute and the leading German Research Foundation Max Planck Society signed a Collaboration Agreement. In its initial phase, the Agreement focuses on Climate Change and the assessment of the associated implications, as well as the development of water resources in the Mediterranean and Middle-East region.

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Regional Center for Research in Archaeology and Cultural Heritage

Cyprus is located in a region that is undoubtedly one of the world's richest areas in terms of cultural heritage and archaeological sites. In this context, Cyl's Science and Technology in Archaeology Research Center (STARC) was established in 2008 in order to apply material and natural sciences, as well as digital technologies, to the fields of archeological research and cultural heritage. The center is developed in partnership with the Centre de recherche et de restauration des musées de France (C2RMF). In the short time since its launch the Center has managed to establish firm ties with the academic and scientific community of the region and to participate in various leading projects of both local and regional significance.

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STARC employs innovative digital technologies in the study of archaeological material

STARC digitally reconstructed a fragmented vessel from the Late Bronze Age, found in Cyprus. This was achieved by employing innovative new techniques and cutting edge technologies. On a similar project earlier this year, STARC contributed to a very prestigious exhibition of Cyprus Cultural Heritage artefacts which are displayed in the Smithsonian Museum in Washington.

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Advancing Research and Science in Conflict Areas

As a result of an initiative taken by Prof. Edouard Brézin, Chair of the Board of The Cyprus Institute and member of the International Scientific Council of the Israeli-Palestinian Science Organization, the two organizations, in cooperation with other partners, are jointly organizing a conference whose main goal is to bring together Israeli and Palestinian scientists.

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Jos Lelieveld in Science

The January issue of the prestigious journal Science published a paper by The Cyprus Institute's Professor and his collaborators. The article provides significant insight in mechanisms associated with the atmosphere's ability to cleanse itself of air pollutants and of some other gases, except carbon dioxide.

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Centre de recherche et de restauration des musées de France - Cyl's strategic partner

The Centre de recherche et de restauration des musées de France (C2RMF) is a joint venture of the French Ministry of Culture and the French National Center for Scientific Research (CNRS). Its mission is the implementation of the national policy concerning research, preventive conservation and restoration of French art collections, as well as the management of the related data and documents. It was established in 1998, through the merging of the Laboratoire de Recherche des Musées de France and the Service de Restauration des Musées de France, and indeed this blending of research and restoration has been a crucial factor in its emergence as an internationally renowned leader for heritage science, preservation and documentation. Multidisciplinary in character, it brings together various teams with training in physics, chemistry and other natural sciences, as well as developing their applications to Cultural Heritage analysis technologies, by working together with archaeologists, curators, restorators and art historians. It is internationally recognized for its expertise, its wide network and its specialists of scientific methods applied to archaeology, in such fields as dating, archaeometallurgy -as well as the studies of glass and ceramics-, polychromy, and the study of mineral and organic matter.

The C2RMF premises comprise of three sites, two for conservation - in Versailles and in the Pavillon de Flore of the Louvre Palace- and one site housing the research laboratory and documentation department - under the Carrousel courtyard of the Louvre. In total, C2RMF facilities cover 13,000 square meters, and engage 200 employees.

Equipped with cutting edge scientific techniques for analytical research -Ion Beam Analysis techniques with the AGLAE accelerator system, micro X-Ray diffraction, imaging methods etc-, C2RMF focuses its research on several key areas, such as history of art and history of techniques, physical-chemical characterization of materials, non-destructive examination techniques development and application, and research in conservation-restoration. C2RMF has participated in many national and European projects, notably Eu-Artech (2004-2009) & CHARISMA (2009-2013) on the integration of research infrastructures for Cultural Heritage; STACHEM (2008-2010), a Support Action coordinated by Cyl-STARC, for networking Cultural Heritage communities in the Eastern Mediterranean; and 3D-COFORM (2008-2012), for the formation of 3D virtual collections of cultural objects.

Following the successful examples of the partnerships with MIT and the University of Illinois for the development of EEWRC and



CaSToRC, respectively, The Cyprus Institute and C2RMF partnered for the development of STARC, for which the extensive expertise and level of excellence brought by C2RMF will be major assets. The partnership agreement provides, amongst others, for joint research activities, the exchange of staff and students, and a fellowship program enabling graduate students and postdoctoral researchers to be hosted at the Louvre facilities.

C2RMF's founding Director, Dr. J.P. Mohen, has played a pivotal role in the development of STARC. He is currently a member of the STARC Scientific Expert Panel, the advisory body responsible for the scientific stewardship and evaluation of the research agenda and performance of STARC providing continuous support to its successive directors.

For C2RMF the need for promoting science and technology applications to archaeology in the Eastern Mediterranean region is of utmost importance, as is the provision of support for the establishment of related research infrastructure.

Among their ongoing joint activities, the two institutions, C2RMF and Cyl-STARC, have collaborated on the study of the remarkable sarcophagi recently discovered near Larnaca.

C2RMF will continue to contribute to the development of STARC through collaborative research, exchanges, training and advice, particularly concerning the definition of research programs and the training of scientific and technical staff, both at Cyl and at the C2RMF laboratories.

C2RMF (www.c2rmf.fr)

STARC employs innovative digital technologies in the study of archaeological material

STARC in collaboration with the Department of Antiquities of the Republic of Cyprus and the Leventis Foundation employed an innovative new technique to digitally reconstruct a vessel from the Late Bronze Age. The vessel was found in Pyla - Kokinogremmos in Cyprus, in a state so fragmented and fragile that archaeologists could only partly reassemble it. Due to its condition, a different approach was employed based on cutting edge digital technologies.

The vessel's virtual reconstruction was accomplished in three main stages: the digital acquisition of all pieces; the extraction of the profiles of each piece and estimation of its possible location along the surface of the vessel; and the reconstruction of the full geometry of the vessel. The last stage

Advancing Research and Science in Conflict Areas

The Cyprus Institute and the Israeli-Palestinian Science Organization (IPSO) in collaboration with Sapir Academic College and RTI International, and the financial support of the Richard Lounsbery Foundation, have partnered to develop a cross-national, multidisciplinary research conference. The goal of the conference is to explore and strengthen the methods by which scientific research is conducted in the conflict zones. The conference will bring together researchers from both social and natural sciences fields from Palestine, Israel, Cyprus and the United States, who will work together to identify challenges and solutions for conducting research in conflict zones. The 3-day conference (2-4 June 2011) will be held at the Cyl campus in Athalassa with approximately 40 researchers presenting their work.

The main goal of the conference is to bring together Palestinian and Israeli researchers, who are either working together on joint projects, or who wish to extend their networks by integrating researchers from Cyprus and the United States, while at the same time building international scientific networks and identifying collaborative funding opportunities. The Conference will deal with issues such as research design, sampling, methodology, ethics, standards, as well as writing and publication of results in Health, Science Education and Sustainable Development (Water and Environment). Building international scientific networks and identifying collaborative funding opportunities will also be explored.

The Israeli-Palestinian Science Organization (IPSO) is an Israeli-Palestinian NGO based in Jerusalem established in 2004. The mission of IPSO is to promote Israeli-Palestinian cooperation in high-quality research and advanced training in all areas of science and learning, to promote Israeli-Palestinian cooperation in science education, and to create a science-based bridge of good will and dialogue between Israelis and Palestinians. The governing body of IPSO is an international scientific council with 18 members, including eight Nobel laureates and one Abel laureate.

IPSO



Health, Science Education and Sustainable Development: Research and Methodological Issues in Contexts of Conflicts



PRACE-LinkSCEEM Winter 2011 Programming School

The Computation-based Science and Technology Research Center (CaSToRC), together with the Greek Research and Technology Network (GRNET), organized in January the "2011 Programming Winter School" for the Partnership for Advanced Computing in Europe (PRACE), a unique persistent pan-European Research Infrastructure for High Performance Computing. The event took place at the Cyl Campus in Athalassa and was co-organized with the "Advanced Training Workshop" of LinkSCEEM-2 project (www.linksceem.eu). The Winter School was part of the PRACE project's Education and Training task, which aims at preparing and initiating European High Performance Computing education, together with a training program for scalable computing. The School was also part of the LinkSCEEM-2 project training activities aiming to prepare the Eastern Mediterranean scientific community for the use of High Performance Computing systems.

The event was attended by 65 participants from 14 countries. Lecturers and trainers from European organizations together with CaSToRC staff members offered training on a number of topics such as performance analysis, visualization and parallel programming. The program also included a keynote lecture on "Emerging High Performance Computing Trends" delivered by Dr. Thomas Eicker from the Julich Supercomputing Centre. For the purposes of the hands-on sessions of the School, trainees were given access to a prototype High Performance Computing system at CaSToRC.

involved the smoothing of the entire surface of the virtual vessel, in order to obtain an object which could be used for further analysis. For this restoration process, STARC's scientists used a portable 3D laser scanner that sweeps an area with a pulsing laser and returns a high-definition map of the surrounding surfaces.



On a similar project earlier this year, STARC contributed to a very prestigious exhibition of Cyprus Cultural Heritage artefacts, displayed in the Smithsonian museum in Washington, USA. The contribution involved the creation of a replica of the model of an ancient boat, an extremely fragile artefact. The model boat was scanned in order to create a 3D model which then, with the help of the Department of Antiquities, was used to recreate a 3D replica model of the boat.



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Creating a Research Network in Archaeology and Cultural Heritage

STARC has developed rapidly since the beginning of 2009, expanding both its staff and its portfolio of research projects. A prime example of STARC's innovative projects is the STAR-Lab project, which aims at creating a unique infrastructure consisting of a mobile laboratory with facilities for digital data acquisition, geophysics, data processing and archaeometry, and for research, documentation, conservation and preservation of cultural heritage. A number of prominent institutions from the region participate in this innovative project under the coordination of STARC, including the C2RMF, the Italian Institute of Molecular Science and Technologies (ISTM), the Institute for Mediterranean Studies of the Foundation for Research & Technology in Greece, and the Archaeological Research Unit of the University of Cyprus.

The STAR-Lab facility will be particularly useful for archaeological field work, preventive archaeology and data collection and processing in remote areas, as well as work on immovable museum artefacts. The mobile laboratory will consist of a truck with a custom-made specially-fitted cabin on its chassis, capable of hosting two researchers and their necessary equipment for conducting field research and able to remotely communicate with the field units and the "home-base laboratory" at Cyl's Athalassa campus. The vehicle will be a self-sufficient unit and most of the analyses will be carried out directly on site.

This infrastructure will be unique in Europe and probably in the world; the

STARC is fast becoming a critical infrastructure, complementing and enhancing the research capacity of the region with the potential for further extraordinary growth

benefits at national level range from improving and speeding up archaeological research and analysis, as well as the preservation, documentation and communication of Cyprus heritage, to the possibility of training professionals and new researchers in the technologies enabled by the laboratory. On an international level, the laboratory will improve the competitiveness of The Cyprus Institute and facilitate its participation in EU projects.

STARC's thriving development is due primarily to the successful completion of the Science and Technology for Archaeology and Cultural Heritage in the Eastern Mediterranean (STACHEM) project, which provided a firm basis for a regional strategic plan for the development of research infrastructures devoted to archaeological sciences and digital heritage. The project which was coordinated by Cyl, was a collaborative effort between the following leading institutions: the Archaeological Research Unit of the University of Cyprus, C2RMF, the Cultural and Educational Technology Institute from Greece, the Department of Archaeology of the University of Athens, the Institute of Nautical Archaeology at Texas A&M University, the Italian Ministry of

Cultural Heritage and Activities, and the Kimmel Center for Archaeological Science of the Weizmann Institute in Israel. Based on STACHEM's strategic roadmap, STARC is fast becoming a critical infrastructure, complementing and enhancing the research capacity of the region with the potential for further extraordinary growth.

STARC's regional character is enhanced by the formation of strong partnerships with Eastern Mediterranean institutions and the participation in projects of regional significance. The center is in active collaboration with Tel Aviv University, the Israel Museum and Israel Antiquities Authority for the "Dead Sea Scrolls" project which studies the oldest surviving manuscripts of the Bible with the help of digital technologies. The project's first phase involves the development of a content management system which will be developed by STARC. The succeeding phase will include the development of digital interfaces for investigating the content, the creation of multimedia tools for enriching the museum experience and the creation of a virtual museum. The center has also forged close relations with Greek archaeological authorities in the context of the project Marie Curie project Tracing Identity in the Eastern Mediterranean (TIEM) which studies the medieval architectural heritage of Cyprus, Chios, Rhodes and Crete. The succeeding phase will include the development of digital interfaces for investigating the content, the creation of multimedia tools for enriching the

museum experience and the creation of a virtual museum.

The center's integration in the research community of Cyprus has led to the formation of collaboration with institutions as the Department of Antiquities, the Archaeological Research Unit of the University of Cyprus, of the Byzantine Museum of the Archbishop Makarios III Cultural Foundation and the Nicosia Municipality. These relations have led to initiation of joint research efforts in the study of archaeological material and works of art conducting an array of scientific and technological studies. STARC has conducted elemental and material analyses focusing on colours (pigments, colorants, tints) using advanced techniques (XRF, UV, IR, oblique light), the provenance of marble; analyses of human remains using morphology, metrics, radiography and other physical and chemical analyses; as well as investigations of historical architectural landscapes, urban environments and buildings' structural histories with the use of archaeological methods and digital technologies. The center is also collaborating with the Cypriot Department of Antiquities in a UNESCO supported effort for the preparation of management plans for the designated World Heritage Sites in Cyprus.

STARC has also been active in the development of a digital framework for Cyprus' cultural heritage which will function as a repository and a portal for the rich collections and archives of Cypriot museums and heritage authorities as part of the European Union Project "Europeana."

New fleet of Autonomous Flying Platforms for Atmospheric and Earth Surface Observations

Unmanned Aerial Systems (UASs) are versatile and cost-effective research tools in atmospheric and earth science research, which include measurements of atmospheric dust and pollution related to global change and natural disasters, archaeological site mapping and monitoring of contamination in freshwater surface reservoirs, like dams.

This is an innovative approach for recording and monitoring the conditions of both the atmosphere and earth surface

viate many of the limitations of both ground-based and satellite observations, however, their utilization is usually restricted by extremely high costs per flight hour and constrained observing times.

The Cyprus Institute's Autonomous Unmanned Aerial Systems offer a promising alternative. Their small size and weight, in contrast to conventional

The Energy, Environment and Water Research Centre 'EEWRC' hosted an international three-day workshop in March 2011 entitled "Expanding the Scope-Autonomous Flying Platforms for Atmospheric and Earth Surface Observations in the Mediterranean". EEWRC has been carrying out a project on Autonomous Flying Platforms for Atmospheric and Earth Surface Observations (APAESO; <http://eewrc.cyi.ac.cy/APAESO/APAESO>), which is funded by the Cyprus Research Promotion Foundation and is implemented by a team led by Prof. Manfred Lange and Dr. Amit Teller. The workshop explored both the potential and the requirements of using Autonomous Unmanned Aerial Systems for the scientific study of the atmosphere and earth surface in the Mediterranean region. It was organized under the auspices of COST Action ES0802 with scientists from Europe, Mediterranean and Middle East attending.

According to scientific studies, including research carried out at Cyl, the Eastern Mediterranean will be disproportionately and adversely affected by climate change, a development that is bound to add to the already existing environmental stresses. An important prerequisite for monitoring, understanding and predicting the changes in the earth system, involves the ability to obtain comprehensive environmental observations. The use of airplanes for monitoring and recording data helps to alle-

systems currently in use, enable a relatively large range at moderate fuel demand. Being operated autonomously allows systematic surveys over long distances and over relatively long time periods.

This is an innovative approach for recording and monitoring the conditions of both the atmosphere and earth surface. This new facility will in fact be unique for Europe. Data from these measurements can also be used to predict global environmental changes. The work conducted could also lead to the development of a high-tech industry for Cyprus and place the country in the forefront of Atmospheric and Earth Surface Observations. During the workshop a number of UASs as well as scientific instrumentation to be employed in such systems missions were demonstrated by Cyl scientists at the Nicosia Aeromodelling Club. The demonstration comprised flights of UASs platforms including unmanned aircraft systems being developed by The Cyprus Institute for Cypriot and European collaborators, a display of research instrumentation and a demonstration of a Control and Operation Facility for UASs missions.



The Cyprus Institute's Autonomous Unmanned Aerial Systems offer a promising alternative.

Signing of a framework agreement for cooperation with Tel Aviv University

The Cyprus Institute and Tel Aviv University signed a framework agreement for cooperation in March which will provide a framework for common research and educational programs. The fields covered include environmental sciences, with a particular focus on climate change, energy research particularly concerning solar energy, high-performance computing and computational sciences, as well as archaeology and cultural heritage.

The Agreement was signed during the official visit of the President of the Republic of Cyprus to Israel, in the presence of President Christofias and President Peres. Tel Aviv University was represented by its President Prof. Yossi Klafter and its Rector Prof. Aron Shai and The Cyprus Institute by its President Prof. Costas N. Papanicolas. The ceremony was also attended by a range of personalities from both countries, including Professor Joshua Jortner, former President of the Israel Science Academy and a founding Trustee of The Cyprus Institute. Regional partnerships with institutions of high international standing such as Tel Aviv University are outstanding assets for enhancing the role of The Cyprus Institute on the international scientific scene and fostering the role of Cyprus as a gateway between Europe and the Middle-East for research and education.

Tel Aviv University is Israel's largest academic institution, offering an extensive range of study programs in the arts and sciences. Its faculty includes nationally and internationally renowned scholars and scientists, many of whom are leaders in their fields. It is a major center of education and research, comprising nine faculties, 106 departments, and 90 research institutes.



2011 Solar Car Challenge

The 2011 race will take place on June 19th in Geroskipou, Paphos and for the first time, the solar vehicles will race each other on public roads. Local teams from various secondary schools as well as international teams will construct their own cars or modify their existing ones, design their own engineering systems and race their vehicles through a much more demanding terrain. Unlike most race cars, solar cars are designed with strict energy constraints imposed by the race regulations. These rules limit the energy that could be used to only that collected from solar radiation, starting with a full charged battery.



Collaboration Agreement with the Max Planck Society

The Cyprus Institute and the leading German Research Foundation Max Planck Society have signed a Memorandum of Understanding, aiming to promote joint research and educational programs. In the initial phase, the Agreement focuses on Climate Change and the assessment of the associated implications, as well as the development of water resources in the Mediterranean and Middle-East region. The President of the Max Planck Society, Prof. Peter Gruss, commenting on the collaboration with The Cyprus Institute stated that for the Society it offers an excellent opportunity to develop science-based solutions for combating the negative consequences of climate change and expressed his hope to further integrate states of the Middle East in creative partnership, but primarily to raise awareness in political circles of the problems and challenges resulting from climate change.

The Max Planck Society is a foundation in Germany that coordinates and supervises 80 research centers of excellence, the renowned Max Planck Institutes, with a wide range of international activities. It is considered one of the top research foundations in the world with more than half a century of tradition in carrying out outstanding basic research in the life and natural sciences, and the humanities. Since its foundation, numerous scientists from the Max Planck Society have been awarded the Nobel Prize in various scientific fields.

The Agreement was signed under the broader context of cooperation between Cyprus and Germany and coincided with the official visit of the German Chancellor Angela Merkel to Cyprus in January. The agreement is of tremendous significance for The Cyprus Institute and Cyprus, given the leadership position that Germany holds in research and innovation worldwide and its important role in the broader European research scene. The Cyl maintains that the strategic objective of transforming Cyprus into a regional center for research and education is fostered by undertaking such high-profile partnerships.

Dr. Titos Christofides, Under Secretary to the President, addressed the ceremony attended by ministers, government officials, and representatives from the Max Planck Society and the German government.

Two New Board Members

The Cyprus Institute's Board of Trustees recently appointed two new board members to its body to contribute to the development of the Institute. The new members are:



Mr. **George Georghiou**, Permanent Secretary of the Planning Bureau, Secretary to the Council of Ministers, and Chairman of the Board of Directors of the Cyprus Research Promotion Foundation.



Professor **Christopher Pissarides**, Norman Sosenow Chair in Economics at the London School of Economics (LSE), Nobel Laureate in Economics for 2010.

CYI UPDATES

New Recruitment for the Office of Development and Communications



Ms. **Elena Zomeni** was recently appointed as the Executive Director of Development and Communications. Ms. Zomeni, previously at the University of Cyprus, has extensive experience in Communications and Development. She coordinated the first fundraising campaign led by an institution of higher education in Cyprus, and raised successfully capital and other assets.

I N B R I E F

Institute Professor's paper published in the Science journal

The prestigious journal Science published in its January issue a paper by The Cyprus Institute's Professor **Jos Lelieveld** and collaborators from the USA, The Netherlands and Germany entitled "Small Inter-Annual Variability of Global Atmospheric Hydroxyl". The article provides significant insight in mechanisms associated with the atmosphere's ability to cleanse itself of air pollutants and some other gases, except carbon dioxide. In their paper, the authors report new findings on the inter-annual variability of hydroxyl radical concentrations in the troposphere, the lower portion of the atmosphere. The hydroxyl radical is the primary oxidant for many greenhouse gases and hazardous air pollutants, thus determining their concentration in the Earth's atmosphere and their influence on climate and air quality.



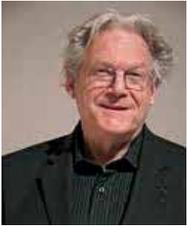
Lelieveld and his collaborators argue that the oxidising capacity of the atmosphere is much more stable and well buffered from environmental perturbations than previously thought. This is an important step toward understanding hydroxyl's role, especially in its effect on methane concentrations (an important greenhouse gas in climate forcing) and improving model-based global warming projections.

Award for Cyl Professor



The Council of the Israeli Meteorological Society (IMS) awarded Prof. **Zev Levin** the "IMS Achievement Award" in recognition of his professional achievements and contributions to the Israeli Meteorological Society. Prof. Levin joined the Energy, Environment and Water Research Center (EEWRC) in January 2009. He participates and coordinates EEWRC's integrated study on climate change, and its impacts in the Eastern Mediterranean and Middle East. Levin is Professor Emeritus of Atmospheric Physics at the Tel Aviv University.

Some open questions for future research at STARC and in Cyprus



By Jean-Pierre Mohen

Cyprus played an essential role in the Mediterranean during antiquity, and in spite of the richness of its archaeological excavations and of its museums, a number of stimulating enigmas remain. This column describes four major ones, as seen from a French perspective based on my personal interests.

The first relates to the first human settlements in Cyprus, some 12.500 years ago. The first visitors to the island had to sail 45 to 70 kilometres from neighbouring coasts, and what they found must have been surprising to them, as strange animals, such as pigmy elephants and hippopotami, lived on the island at that time. This is thought to be the proof of a specific evolution: normal size animals reached the island from the mainland, and later when it was separated they evolved within small isolated populations. These elephants and hippopotami, which did not seem to be particularly dangerous animals, did not resist for long to the arrival of hunters. It is, however, believed that some survived for a few centuries after the arrival of humans. Could there have been any other similar examples on the island? It may be that little savage pigs, probably brought 11.400 years ago, represent the same natural isolated evolution, surviving as domesticated animals until around 10.500 years ago. These were found at Akrotiri-Aetokremmos, the site with the most ancient human traces on Cyprus. The first inhabitants of Cyprus were not only hunters-gatherers, but also began to cultivate certain plants, probably including wheat, and constructed circular

houses made of stones covered with clay, which allowed for a relatively sedentary mode of living. In one of these villages, Shillourokambos, the grave of a man was found, whose skeleton laid close to a skeleton of a cat. This is probably a sign that the mouse-eating cat was associated to his master, a cultivator of grain that had to be stored in houses or pits. This is the oldest cat found in Cyprus! And one of the most ancient manifestations of the proximity between man and a domesticated animal, an important aspect of the Neolithic revolution, typical of a new attitude related to the birth of agriculture and the domestication of animals an important aspect of the Neolithic revolution, typical of a new attitude related to the birth of agriculture and the domestication of

STARC, with the support of C2RMF and of its other high level partners, can make further significant contributions

animals, whose emergence remains to be fully understood. When thinking of ancient Cyprus, one thinks of kupro, the name of copper from which came its reputation and prosperity. Research on this activity has only begun to reveal its main features. The veins of ore must be found, partly exploited in the mountains at the heart of the island, where wood was also available for the furnaces. It has yet to be fully revealed how the island emerged as an economic centre on the basis of its bronze, which mixes copper with tin. Where are the ancient facilities that produced metal for the whole Mediterranean and in particular the Middle-East and Egypt? A very interesting program of chemical analyses of the impurities contained in antique copper weapons or

tools, and their comparison with samples of copper ores from Cyprus could provide crucial information on this link and the local metallurgical activity. The analysis of samples could be carried out jointly by the Cyprus Institute in Nicosia and C2RMF in Paris. It would also be interesting to investigate the origin of the tin that was used to produce bronze; it probably came from Western Europe by boat. Here, underwater archaeology could shed light on its origin by exploring antique shipwrecks in the deep waters around Cyprus. Why did Cyprus turn later towards the West and established enhanced ties? It is possible that the island was attracted by commercial opportunities that had then emerged on the Greek, Italian and even Spanish coasts. These are issues that one would wish to investigate further; there is, however, a difficulty as most of the important material comes from ancient shipwrecks, and those that are near Cyprus lie at significant depths which means that investigations need to be undertaken with sophisticated techniques (eg. underwater vehicles); they would undoubtedly reveal undiscovered aspects of antique Cyprus. These are but a few of the fascinating open issues that come to mind when thinking of the role and history of Cyprus in antiquity; they are of major importance for understanding the development of Mediterranean; many prominent archaeologists have contributed to them, and unfortunately it is impossible to mention them all here. I am confident that STARC, with the support of C2RMF and of its other high level partners, can make further significant contributions, and I am eager to witness its development.

Jean-Pierre Mohen is former Director of C2RMF, in charge of the design of the new Musée de l'Homme, Paris.

