The institution	**Name**: The Szewalski Institute of Fluid-Flow Machinery, Polish Academy of Sciences, Department of Photophysics and Laser Technology
	Address: 14 Fiszera St, 80-231 Gdańsk, Poland
	Represented by: name: prof. dr Gerard Śliwiński e-mail: gerards@imp.gda.pl Tel: +48 58 699 51 57; Fax: +48 58 341 6144
Is interested in the participation in a project that will be prepared and submitted in the following topic:	
Number and title of the area (from Work Programme)	Area 6.3.2.1 Assessment and conservation in cultural heritage
Number and title of the open topic (Work Programme)	ENV.2010.3.2.1-1 Non-destructive diagnosis technologies for the safe conservation of movable cultural assets

Short description of the organisation: *(including area of activity, scientific staff, expertise, equipment, collaboration, etc…)*

The IFFM is the R&D institute of the Polish Academy of Science. The institute comprises four centers which conduct research on: plasma and laser engineering, nondestructive materials analysis, energy conversion and fluid dynamics. The Pomerania Photophysics Lab. at IFFM has the regional status and is working together with conservators, restorers and archivists performing research and analyses aimed on preventive conservation of the Cultural Heritage objects in the Pomerania Region. The experienced staff (1 Prof., 3 PhD students, 4 PostDocs., and a conservation scientist) works since more than a decade in the field of the characterization of museum objects and historical artworks, organizes cyclic workshops, seminars and dissemination activities. A broad spectrum of spectroscopic and surface inspection techniques (LIPS, LIF, DRIFT, colour-metrics, Raman, NIR, XRF, and AFM, SEM, TEM), portable instruments (XRF, LIPS), the documentation (archive digitizers, 3D scanners) and laser cleaning devices, assures a complete service. The research and equipment is funded by national and international projects and its usage was/is supported and consulted by the Pan-European Programme COST-G8, G7, and D42.

Proposed contribution to the project:

The Department of Photophysics and Laser Technology of IF-FM PAS – the Pomerania Lab is vitally interested in collaboration with the international research and conservator's community.

The protocols for analysis and documentation (ISO 9001 conformance), the non-destructive testing procedures, staff and the up-to-date equipment assure a high level service including field measurements for researchers. The already accessible via the webpage of the Pomerania Lab, steadily completed databases of historical materials http://www.imp.gda.pl/konserwacja/index_e.html and also consulting, can be further developed and offered in frames of new projects.

The Pomerania Lab is interested in research on the complementary diagnosis methods for preventive conservation and investigation of the effects of contemporary conservation interventions.

Chosen references (publications, others):

M. Sawczak, A. Kamińska, G. Rabczuk, M. Ferretti, R. Jendrzejewski, G. Śliwiński, "Complementary use of the Raman and XRF techniques for non-destructive analysis of historical paint layers", Applied Surface Sci. 255 (2009) 5542–5545

M. Jasińska, A. Nowak, J.W. Łukaszewicz, G. Śliwiński, "Colour changes of a historical Gotland sandstone caused by the laser surface cleaning in the ambient air and N2 flow", Applied Physics A, Vol. 92 (2008) 211-215

A. Kamińska, M. Sawczak, K. Komar, G. Śliwiński, "Application of the laser ablation for conservation of historical paper documents", Applied Surface Science, Vol. 253 (2007) 7860-7864

K. Komar, G. Śliwiński "Non-destructive observation of the laser treatment effect on historical paper via the laser-induced fluorescence spectra", Lasers in the Conservation of Artworks, Springer Proc. in Phys., Vol. 116 (2007) 361-366

M. Sawczak, G. Śliwiński, A. Kamińska, M. Oujja, M. Castillejo, C. Domingo, M. Klossowska, "Pigment identification on a XIV/XV c. wooden crucifix using Raman and LIBS techniques", Lasers in the Conservation of Artworks, Springer Proc. in Physics, Vol. 116 (2007) 445-452

A. Kamińska, M. Sawczak, M. Oujja, C. Domingo, M. Castillejo, G. Śliwiński, "Pigment identification of a XIV/XV c. wooden crucifix by means of the Raman spectroscopic technique", J. Raman Spectroscopy 37 (2006) 1125-1130

Other information (if relevant): International / EU projects

"Net-Heritage" - running since 2008 (Era-Net project)

"Specialized laboratory for non-destructive testing and optoelectronic techniques", The Sectoral Operational Programme "Improvement of the Competitiveness of Enterprises", 2007-2008

"Non-destructive XRF technique for Pomeranian museums and conservation works", subproj. of the CEC Programme/COST G8, 2005-2006

"Laser-based techniques for analysis and conservation of historical documents", subproj. of the CEC Programme/COST G7, 2004-2006

"Artwork conservation by laser", subproj. of the CEC Programme/COST G7, 2001-2003