

The Centre for the Study of Manuscript Cultures (CSMC)
announces a Lecture
by

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**“...a fortified residence 'gainst the tooth of time...” in spite of
chemical, physical and microbiological interactions**

Ageing applies more or less to all materials. This natural process is ruled by physical and chemical interactions with the environment and can be considerably accelerated and in some cases slowed down by the interaction with (micro)organisms. The microbes involved are very specialized in their nutritional and environmental adaptations – but universally possess two inherent properties: to adhere to surfaces and to resist different stress conditions. Analysis of microbial communities from cultural heritage objects delivers us information on the environmental conditions they have been exposed to and enables us to predict their behaviour in the future. Examples of microbiological studies of mural painting will be given as well as universally applicable techniques to study biodeteriorative organisms and eventually prevent their damaging potential.

In order to understand detrimental functions and reaction chains new methods of study and differentiation of physical, chemical and biologically-induced or accelerated processes of material ageing have to be developed. One possible criticism that can be levelled at the present biodeterioration research is that influence of different components (e.g. environmental or biological factors) cannot be isolated in a natural complex system. We aim to address this deficiency by applying model laboratory systems comprising defined biodeterioration-related microorganisms with representative materials and environmental conditions. Methods of preservation and conservation (e.g. biocide treatments) will be especially addressed using this approach.

Thursday, 11 June 2015 at 6 pm
Room 0001, CSMC