



**Friday 7<sup>th</sup> September 2012**  
**Living Glass**

*History & Heritage Seminar  
part of the Society of Glass Technology Annual Conference  
at the University of Cambridge,*

# **Abstracts**

**09:00 Presidential Address**

*Brian McMillan*

**09:40 Manufacturing of mouth blown glass**

*Reiner Meindl*

**10:20 Lucien Delloye**

**or how a mechanical engineer of the 19th Century "reigned" over the whole  
Continental Glass Industry during 34 years**

*Marie-Helene Chopinet*

**11:00 Refreshments**

**11:20 Tiffany Glass at the turn of the 20th Century**

*John Smith*

**12:00 Fantasy in Glass - The Paperweight Story**

*Richard Giles*

**12:40 Why you should visit the Turner Museum!**

*John Parker*

**13:00 Lunch**

**14:00 Stained Glass in Wales**

*Martin Crampin*

**14:40 Stained Glass in Portugal: memory, tradition and new challenges for the future**

*Fernando Quintas*

**15:20 Revelations: Re-creation of the Heavenly City**

*Ruth Cooke*

**16:00 Refreshments**

**16:20 Glass durability in water: A challenge for archaeology, museum conservation  
and nuclear waste immobilisation**

*Russell Hand*

**17:00 Looking to the past for a sustainable future**

*Ian Hankey*

**17:40 End of Seminar**



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# **Abstract**

## **Manufacturing of mouth blown glass**

*Reiner Meindl*

### **Abstract:**

To blow glass with a glass-maker blow pipe was the standard procedure to make sheets of glass between the 16<sup>th</sup> century and the beginning of the last century. 1905 glass was drawn from a furnace for the first time (Fourcault). Pilkington started production of industrial float glass in the 1960ies. Glashutte Lamberts is one of three companies worldwide which produce until today glass with methods and tools of medieval glass – makers. Batch (quartz sand, sodium carbonate and limestone), cullets and metal alloys are melted in ceramic pots fired with natural gas. The "Starter" gathers the molten glass onto the end of the blow pipe. He is responsible for the right amount and the perfect shape of the "gather". – The "Glass Master" rotates the glass and inflates the glass to a balloon. The red hot balloon is developed to a cylinder which finally is placed in an annealing lehr to cool down and to remove any inherent tensions. The "Cutter" scores the cylinder lengthwise. The scored glass is heated again, laid open and flattened. After the second cooling term in another annealing oven the glass sheet passes quality inspection. The special method of production - each and every sheet of glass is unique - leaves traces of the process on the surface: fine lines from the forming steel trough and small bubbles



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# **Abstract**

## **Lucien Delloye or how a mechanical engineer of the 19th Century "reigned" over the whole Continental Glass Industry during 34 years**

*Marie-Helene Chopinet*

### **Abstract:**

In 1939, in the Journal of the Society of Glass Technology was published the obituary notice of an honorary fellow, Lucien Delloye, saying that "it was appropriate that they should record something of the extraordinary respect, authority and affection associated with his name throughout the Continent of Europe, and, indeed, the world." Who was Lucien Delloye, why was he so well known in the glassmaking world? He entered the Company of Saint-Gobain in 1881 as a mechanical engineer in the general management of the plate glassworks. He began his activities in the grinding and polishing of mirrors, finding solutions to a problem quite typical of the changes taking place at this time, the necessity to decrease the costs and increase the yield in the glass factories. He was then entrusted with the task of building and directing the new factory that the Company had decided to set up in Pisa (Italy) in order to keep its share of the market in this part of Europe. His most difficult task was the training of a staff made of people quite unacquainted with this industry. In 1896, he was called to Paris as the assistant to the General Manager, M. Biver, and became General Manager at the death of the latter in 1908. He decided to build factories in Spain, Netherlands and Germany. Convinced that the future of the Continental glass industry would lie in union and organisation, he developed collaboration with the other glass manufacturers in all countries. In 1904, he united the effort of the main glass producers on the Continent and created the International Convention of Glass Factories. The First World War interrupted his work, but as soon as peace was declared the old contracting parties renewed their Association, which had Lucien Delloye as chairman during thirty-four years. He strengthened its relations by an agreement with the great manufacturers of Great Britain, and he had cordial relationships with America. The end of the nineteenth century and the beginning of the twentieth century saw major changes in techniques, in products and their commercialisation. Delloye's technical skills were quickly noticed and brought him very fast to the Management of Saint-Gobain at a time when another engineer, M. Hector Biver had already shown to the Company that the formerly "employés supérieurs" could succeed in the role of General Manager despite the fact that they did not belong to the financial partners. It is perhaps significant that the International Convention was brought about by a mechanical engineer from one of French "Grande Ecole", who had lived in London for a few years because of the 1870-1871 war between Germany and France. In a time when all associations with competitors are forbidden, it is interesting to go back to a time when agreements between them were not easy, but allowed, and most probably ensured the development of the glass industry before and after the tremendous chaos that was the First World War.



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# *Abstract*

## **Tiffany Glass at the turn of the 20th Century**

*John Smith*

### **Abstract:**

The New York workshop of LC Tiffany, towards the end of the 19th century, completely revolutionised the technique of 'stained glass' production. Traditional glass windows were made of one layer of glass, jointed together with lead strips, the glass, clear or coloured, usually 'stained' either en grisaille or with coloured stains.

The Tiffany workshop often used several layers of glass, some transparent and some opalescent, together with staining and even etching to give a much richer effect. This paper will discuss this work using images from the three Tiffany windows in the UK :-

St Peter's Kirk, Fyvie, Aberdeenshire

St Cuthberts Parish Church, Edinburgh

St Andrews Parish Church, Kimbolton, Cambridgeshire



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## **Fantasy in Glass - The Paperweight Story**

*Richard Giles*

### **Abstract:**

Although paperweights have only been around for for about 170 years the origins of some of the techniques used in paperweight making go back to the Egyptian and Roman times. To assist with this presentation the Author will bring a small selection of weights so people can see the real thing: photographs don't really do them justice!



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# **Abstract**

## **Why you should visit the Turner Museum!**

*John Parker*

### **Abstract:**

After introducing the background to the Turner Museum glass collection, its location and opening hours, we will view some of the exciting pieces it contains. As the present curator and still a novice in the area, I also hope to gain some input from you the audience on possible ways of using the collection more effectively and some thought on whether it should be extended.



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# Abstract

## Stained Glass in Wales

*Martin Crampin*

### Abstract:

Since 2009 I have been preparing a new online catalogue of stained glass at the University of Wales Centre for Advanced Welsh and Celtic Studies. Based initially on previous research, while working on the Imaging the Bible in Wales Project (2005-8), with the addition of much new additional fieldwork, the resource now contains over 5,500 images of more than 2,000 windows in Wales, and continues to grow.

The catalogue covers the period from the fourteenth century up to the present day. It is searchable by date, subject, artist or firm and location or type of site, and provides additional information on sites and artists, with links and bibliography. During the course of this research, it has been possible to attribute, date and interpret many new windows, particularly from the Victorian period, and the catalogue therefore provides a new easily accessible resource for researching stained glass.

The funding for the project ended in October 2011, However, a second phase of the project has been initiated whereby users have been able to submit comments and corrections, as well as provide additional records and photography to make the survey more comprehensive.

The paper would deal both with the fieldwork and work attributing windows, as well as addressing the functional and technical aspects of the online catalogue.

<<http://stainedglass.llgc.org.uk>>





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# Abstract

## Stained Glass in Portugal: memory, tradition and new challenges for the future

*Fernando Quintas*

### Abstract:

The history of stained glass in Portugal is a wide subject and deserves to be studied in detail: representing the economic and social power of the Church in their most important buildings reflected also the power of the state in rhetorical and propagandistic programs in the fascist period of "Estado Novo". The Portuguese stained glass was a consequence of different economic, political, social and artistic factors, all contributing to make artists, technicians, architects and general public to have a complex and interesting relation with stained glass.

From Middle Ages to modernity, sharing with the rest of Europe a strong Christian heritage in art and architecture - a determinant factor of their proliferation in earlier times, the most important studios reflected the rich history of the country. From the beautiful stained glass examples in Batalha Monastery to the modernist drawings of artist Almada Negreiros, Portugal celebrated and integrated stained glass in very important religious and secular buildings. However, the singularity and aesthetic austerity of most recent Portuguese architecture doesn't leave much space for contemporary stained glass and contemporary artists do not seem to be specifically attracted to express themselves through stained glass. Art historians, scientists and conservators are, in fact, the ones that most frequently celebrate this art in Portugal, due to the rich heritage that the country possesses and the public and private collections still being studied.

But this art is slowly gaining new force, seducing artists and architects alike, integrating different materials to have a more assertive presence in Portuguese contemporary art.





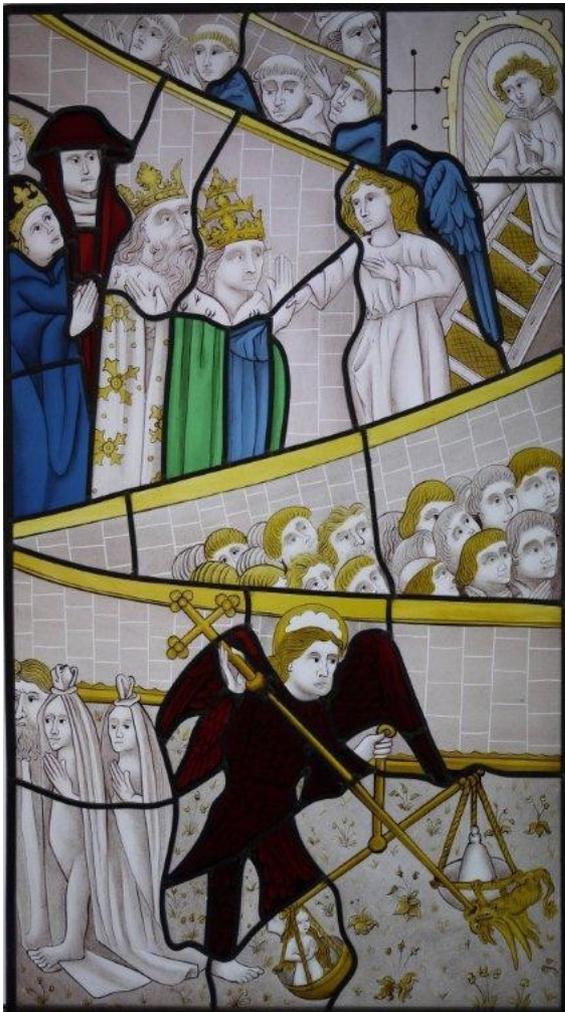
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# Abstract

## Revelations: Re-creation of the Heavenly City

Ruth Cooke



### Abstract:

The 15th century York glass of the Savile Chapel at Thornhill Parish Church is in an advanced state of deterioration. A project to conserve the window was initiated, but the prognosis was problematic. The condition of the window raised issues about how, if at all, it might be conserved, and presents a number of ethical dilemmas for those charged with its care. Attack by water vapour is the likely cause of the deterioration of much of the glass in the Savile chapel windows. A set of six sensors was deployed to study the ambient conditions faced by the east window. These have provided vital information about the environment within the chapel, and the conclusions have informed the long and detailed discussions about the future programme. After careful consideration of the ethical issues and the nature of this particular case, the decision was made to remove the

worst affected window for conservation within the building, and to restore the iconography using more durable glass. For the past year Jonathan has been recreating the window from archival drawings, other primary sources and the remaining evidence provided by the deteriorated glass. This paper provides a review of that process and a preview of the new window due to be installed next month.



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## **Glass durability in water:**

### **A challenge for archaeology, museum conservation and nuclear waste immobilisation**

*Russell Hand*

#### **Abstract:**

Although on a day to day basis we may view glasses as durable materials, archaeologists, museum conservationists and scientists working on nuclear waste vitrification all know that glasses are not immune from attack by water. In this paper I will review our understanding of the chemical durability of silicate and borosilicate glasses in the presence of water. In particular I will consider the basic processes of ion exchange into glass surfaces, hydration and recondensation at glass surfaces, and crystallisation of alteration products on glass surfaces. These processes can lead to the development of surface "gel" layers, modified surface alteration layers as well alteration minerals. The pattern of attack in any particular case reflects the glass composition, the exact nature of the attacking solution and the rate of flow over the glass. These issues will all be considered and the mutual lessons that can be learned by an exchange of understanding and data between archaeologists, museum conservationists and scientists working on waste vitrification explored.



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### Looking to the past for a sustainable future

Ian Hankey

#### Abstract:

In the 1960's, Harvey Littleton kick started the studio art glass movement and uttered the now famous quote, "Technique is cheap". This simple quote has had a huge influence on the craft movement as a whole, and the acquisition of technical skill in and of itself was (quite rightly at the time), seen as restrictive.

As a craft practitioner and member of a research cluster at Plymouth College of Art, I will present the practical outcomes of my research regarding the design of a prototype glass furnace, based on 17th century design and thinking in order to develop a new sustainable business model. As the workshop is so basic, I have for the last seven months been working in very similar ways to those used centuries ago.

I will discuss 17th century making processes and how I have used and been inspired by methods of manufacture and the mode of thinking of the glassmakers from that time. I will discuss how much of the aesthetic of the 17th Century glass was informed primarily by the making process and the strengths and limitations of the glass that was used at the time, showing examples of work from my furnace and referring to examples of historic blown glass.



In this talk, I look at modes of thinking before the industrial revolution and tacit skill, knowledge and understanding from the perspective of a maker. I have spoken and published papers on the subject of tacit skill over the last 10 years, but for the first time, I will attempt to articulate clearly the importance of reflective rationality in modern society and the vital role of autonomy, mastery and purpose in the acquisition of tacit knowledge, demonstrating the dramatic decline in the credibility and therefore the importance of the craft practitioner in today's world of technical rationality.

Finally I will conclude that there needs to be a re evaluation of the role of the craftsman in modern society if we are to

avert the very real threat of the death of the studio glassblowing movement. Technology must be re-introduced into art colleges and, though Littleton's quote was pertinent at the time, when we look around us and see the state of UK manufacturing, technique when applied to glassmaking is becoming increasingly rare, and is very precious indeed.