



REMBRANDT NOW: TECHNICAL
PRACTICE, CONSERVATION AND
RESEARCH

Book of Abstracts

13-15 November 2014, Sainsbury Wing Lecture Theatre,
The National Gallery, London

THE
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GALLERY

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REMBRANDT NOW: TECHNICAL PRACTICE, CONSERVATION AND RESEARCH

13-15 November 2014, Sainsbury Wing Lecture Theatre, The National Gallery, London

Conference Convener: Ashok Roy, The National Gallery

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The 'Keynote Lecture' will be given by Ernst van de Wetering on Friday 14 November, 2014, at 4.30 pm

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Young Rembrandt and Lastman: disciple or partner? New results from French Collections

Pierre Curie

Centre de Recherche et de Restauration des Musées de France (C2RMF), Paris

The recent restoration of *Balaam's Ass* (Cognacq-Jay Museum, Paris) and Lastman's *Laban Searching for the Idols* (Boulogne-sur-Mer) by the Centre de Recherche et de Restauration des Musées de France (C2RMF) studio at the Pavillon de Flore, in the Louvre, Paris, has shown a clearly direct link, both technically and stylistically, between the approach of the master and his pupil. However, one can now seriously reconsider what each painter contributed to these two works, and eventually ask the same question in the case of *The Stoning of Saint Stephen* (Lyons), one of the earliest paintings by young Rembrandt in France. In another field, the work on *Le Mas d'Agenais-Crucifixion* has clearly proven that the painting had been transferred in the nineteenth century – a fact that had previously been ignored and which we will explain, and that illustrates why it is necessary to review what is generally accepted as certainty with regard to Rembrandt.

In search of Rembrandt's underdrawing

Jørgen Wadum

Statens Museum for Kunst (SMK), Copenhagen

Since the initiation of the Rembrandt Research Project in the late 1960s, technical studies of Rembrandt's paintings have gained increasing importance in understanding his working methods. Twenty years later the first National Gallery study in the series of *Art in the Making* was launched with a focus on Rembrandt and his paintings at the National Gallery.

Examining the artist's works with dendrochronology, X-radiography and macro photography became the norm, as well as complementing these results with cross-sections of ground and paint layers, together with scientific analysis of binding media and pigments. Significant advances were made in understanding the materials and properties of the master's use of and experimentation with supports and media.

However, although some infrared photographs were randomly executed, infrared reflectography was not being employed for the examination of early paintings by Rembrandt until the astonishing 1998 discovery of an extensive underdrawing below the paint layers of what was reckoned to be a cornerstone in Rembrandt's early works: the *Young Self-Portrait* from ca. 1629 in the Mauritshuis. This discovery prompted the author to undertake a limited survey into a selection of early paintings by Rembrandt and his close colleagues revealing a wealth of hitherto unrecorded information from below the visible paint layers of the paintings.

In this paper it shall be demonstrated how infrared reflectography is an underestimated examination technique in the discovering of not only underdrawings, of which Rembrandt may have a few (?), but also how underpaintings and sketches can be visualised by this technique. Instigating a comprehensive search for Rembrandt's underdrawing (in the widest sense of the word) in his early works may well be able to add significant information to the corpus of the artist and his contemporaries.

Four National Gallery Rembrandts examined using infrared reflectography

Rachel Billinge

The National Gallery, London

The paintings by Rembrandt in the National Gallery have been extensively studied over many years but infrared reflectography, a form of technical examination regularly used at the Gallery as part of studies of other works, from early Italian to nineteenth-century French, had never been carried out on the Rembrandts. Infrared photographs had been taken of some of the paintings and these are interesting, but rather limited in what they can show. It was therefore decided to see whether infrared reflectography would reveal more.

Four small panel paintings were chosen: *A Woman Bathing in a Stream* (NG54) of 1654 and three earlier pictures, *The Woman taken in Adultery* (NG45), *The Lamentation over the Dead Christ* (NG43) and *Anna and the Blind Tobit* (NG4189). In this paper the infrared reflectography studies will be presented, the results of which were mixed, but each interesting in its own way.

The *Self-Portrait* at the Norton Simon Museum: new findings

Yvonne Szafran

J. Paul Getty Museum, Los Angeles

With a secure provenance dating back to 1735, the uncontested attribution to Rembrandt of the *Self-Portrait* in the Norton Simon Museum was challenged in 1989 when the Rembrandt Research Project published it as 'A well preserved work that certainly portrays Rembrandt. It may be attributed to Carel Fabritius (1622-1654) and dated ca. 1641.'¹ This opinion was not widely accepted and Ernst van de Wetering reconsidered this view in recent years after a much closer examination of the painting. Subsequently, the painting was included in the *Corpus of Rembrandt paintings IV, Self Portraits*, as an autograph work by Rembrandt.² However, along with the revised assessment of the attribution came a revised assessment of the condition: the painting was now considered to be seriously damaged by prior restoration campaigns. Not treated since its acquisition by the Norton Simon, and covered with many layers of old discoloured varnish, the painting's recent conservation, restoration and analysis gives us a new look at these issues.

¹ J. Bruyn, B. Haak, S.H. Levie, P.J.J. van Theil and E. van de Wetering, *A Corpus of Rembrandt Paintings*, 3 Vols, 1982–1989, vol. 3, pp. 619–624, C97.

² E. Van de Wetering (ed.), *A Corpus of Rembrandt Paintings IV, Self Portraits*, Rembrandt Research Project Foundation, vol. 4, 2005, pp. 96, 242f., 249, 357f., 605–08.

An overview of Rembrandt in The Royal Collection, focussing on the *Portrait of Agatha Bas*

Rosanna de Sancha

The Royal Collection, UK

Within The Royal Collection, Rembrandt's name features more often than the number of paintings by him. In examining and comparing paintings by Rembrandt with those now known not to be by him, distinguishing features of his technique and that of his pupils and followers become clearer.

The *Portrait of Nicolaes van Bambeeck*: a rediscovery

Hélène Dubois, Françoise Rosier, Jana Sanyova

Royal Institute for Cultural Heritage (KIK-IRPA), Brussels

The high pictorial quality and exceptional material condition of Rembrandt's *Portrait of Nicolaes van Bambeeck* (Royal Museums of Fine arts of Belgium, Brussels) were revealed by a meticulous conservation treatment and its associated research, carried out at the Royal Institute for Cultural Heritage in Brussels between 2007 and 2009.

Covered with dull, obscuring varnishes, the sober portrait of this wealthy Amsterdam merchant, signed and dated 1640, compared poorly with its extraordinary pendant, the portrait of his younger wife Agatha Bas (The Royal Collection), celebrated for its striking composition in trompe l'oeil, luminous tonal contrasts and rich texture.

However, the canvas support of the Brussels portrait has remained unlined and its format barely altered, a rare condition for a painting of this period. The traces left by the different phase of its elaboration, from the initial stretching of the canvas to the last finishing touches, are still intact.

Every step of the conservation treatment took care to preserve these traces while revealing the quality of the portrait and ensuring its long term conservation. The careful study of material features and of historical photographs permitted the reconstruction of the making process and of the material history of the painting. Laboratory analyses have led to surprising discoveries, such as the unusual addition of wheat flour in the grey upper ground.

The cleaning of the picture revealed a stark, intense portrayal with exceptionally well-preserved surface nuances and textures.

The *Supper at Emmaus* of 1648: technical observations made after restoration

Bruno Mottin

Centre de Recherche et de Restauration des Musées de France (C2RMF), Paris

The *Supper at Emmaus*, dated 1648 (Louvre, Paris) was carefully restored in 2010–2011 by the restorer Isabelle Leegenhoek. This restoration allows us to reconsider some technical aspects of this painting concerning its original format, the handling of its paint layers and its chromatism, as well as what are often considered as abrasions and losses and could be a part of the original process.

Bathsheba: re-establishing the lines of composition

Blaise Ducos

Musée du Louvre, Paris

It is generally taken as matter of fact that the surprising format of Rembrandt's *Bathsheba* – a perfect square – is due to a major alteration, most probably having taken place in the nineteenth century. Recent research tends to contradict the idea, and conveys the image of a painting the dimensions of which were not radically different from what one can see today. Moreover, the tilting of the canvas – although not pronounced – is likely to be the result of a misunderstanding of the original orientation of the seam. All in all, the painting, after its recent conservation, remains laden with riddles: where is Bathsheba? What sort of architectural context may thus be alluded to? Can any relationship with seventeenth-century Dutch 'pre-archeological' pursuits be made?

The hat in *The Jewish Bride*, and other problems in late Rembrandt

Petria Noble,¹ Annelies van Loon,² Ige Verslype,¹ Anna Krekeler,¹ Jonathan Bikker¹

¹ Rijksmuseum, Amsterdam

² Delft University of Technology

The problem of the hat in Rembrandt's *The Jewish Bride* (Rijksmuseum, Amsterdam), and the format changes in the *Saul and David* (Mauritshuis, The Hague) are prime examples of the kind of alterations often encountered in late Rembrandt paintings. In the past decade we have also come to realise that colour changes have also compromised the appearance of many paintings. Complex changes made by Rembrandt himself, such as we see in the composition of *The Syndics* (Rijksmuseum, Amsterdam), where the servant in the background was repositioned some five times, are also encountered. These aspects in combination with Rembrandt's informal and experimental painting technique pose many challenges for conservators and art historians alike. The recent development of new imaging techniques, macro XRF scanning and hyperspectral infrared imaging, now makes it possible to answer these and many other burning questions associated with the late Rembrandt, as well as to forge new questions.

Rembrandt's *Aristotle with a Bust of Homer* revisited: technical examination and new insights

Dorothy Mahon,¹ Silvia Centeno,¹ Geert Van der Snickt,² Joris Dik,³ Matthias Alfeld,² Koen Janssens²

¹ The Metropolitan Museum of Art, New York

² Department of Chemistry, University of Antwerp

³ The Laboratory of Materials Science, Delft University of Technology

Since entering the collection of the Metropolitan Museum of Art in 1961, Rembrandt's *Aristotle with a Bust of Homer* has been cleaned and restored twice, included in the 1982 autoradiography study, and, on several additional occasions, investigated by curators, conservators and scientists from both within and outside the museum. The present investigation was initiated to gain a better understanding of visual changes taking place on the surface of the painting which were first observed in the late 1990s. The paper will revisit the history of the painting's conservation and technical analysis and present new findings, including insights gained from recent XRF imaging carried out in collaboration with scientists at Delft University of Technology and the University of Antwerp.

Rembrandt is late Rembrandt: the master's technique described by his earliest critics

Jonathan Bikker, Anna Krekeler

Rijksmuseum, Amsterdam

Significantly, the first time Rembrandt's late period was mentioned as such in the literature, it was in the context of his handling of the brush rather than, for example, his approach to subject matter or his pictorial influences. In his biography of the artist published in 1718, Arnold Houbraken pointed out, rather derisively, that when Rembrandt's late pictures were viewed up close it looked like the paint had been smeared on with a bricklayer's trowel. Already before Houbraken, however, a number of critics discussed aspects of Rembrandt's technique and from their descriptions it can be assumed that they had the late work in mind. This paper will explore their remarks as a guide to the master's late technique.

An old and a new method for recording elemental maps of paintings – application to works by Rembrandt

Koen Janssens,¹ Matthias Alfeld,¹ Claudia Laurenze-Landsberg,² Petria Noble,³
Geert Van der Snickt¹

¹ Department of Chemistry, University of Antwerp

² Gemäldegalerie, Berlin

³ Rijksmuseum, Amsterdam

Sub-surface paint layers in historical paintings are of great interest in art-historical studies as they can provide insight into the painting's creation process and the *modus operandi* of the artist. A standard technique for the investigation of historical paintings is X-ray Radiography (XRR), but in many cases this method only provides information on the distribution of lead white. Images offering elemental contrast allow for a much clearer visualisation of visible and covered paint layers.

For a long time the only method available for doing so was Neutron Activation Auto-Radiography (NAAR), which involves neutron irradiation of the painting and recording of the transient radioactivity that is induced. Recently, macroscopic X-ray fluorescence (MA-XRF) has been introduced as a promising alternative method. This method makes use of a mobile scanner that can be employed in the gallery or museum itself and allows the distribution of a larger series of chemical elements to be visualised.

In this contribution, NAAR and MA-XRF images of several works by Rembrandt will be discussed and compared.

The turbulent history of Rembrandt's *Homer* (1663)

Annelies van Loon,¹ Petria Noble²

¹ Royal Picture Gallery Mauritshuis, The Hague; Delft University of Technology and University of Amsterdam

² Rijksmuseum, Amsterdam

Rembrandt's painting depicting the blind Homer dictating his verses was commissioned by the Sicilian collector, Don Antonio Ruffo. Originally the painting was much larger, approximately 180 × 140 cm, and included two scribes in the lower right corner. Part of the composition was lost, most likely as a result of a fire associated with an earthquake in Sicily in 1783. The remaining fragment, which measures 107 × 82 cm, is in poor condition. The recent treatment revealed many paint losses, deformed paint and a surface crust that covers most of the dark areas: Homer's garment, his cap and the background. In addition to discoloration of smalt and lake pigments, this has severely compromised the appearance of the painting. This paper will discuss the treatment and changes in appearance related to the painting technique and the painting's turbulent history.

Rembrandt refurbished by Reynolds: new insights into the genesis of *Susanna and the Elders*

Claudia Laurenze-Landsberg, Katja Kleinert

Gemäldegalerie, Berlin

Due to the recent technological analysis, mainly the examination with neutron-
autoradiography, alongside art historical studies of the painting *Susanna and the Elders*
from 1647 in the Gemäldegalerie Berlin, it may be said that three different versions by
Rembrandt's hand are not only evident, but there is now more definitive information
about each version. Moreover, there are previously unrecognised and extensive revisions
to the painting which had been carried out by Sir Joshua Reynolds in the eighteenth
century, between 1769 and 1792 while the painting had been in his possession. Reynolds
had not merely changed and eliminated details of the original image, but in fact had
extensively reworked its overall appearance by erasing entire sections or thinning the
paint only to subsequently re-apply it. He was particularly interested in the works of Old
Masters and regularly 'restored' paintings. He was also notorious for experimentation
with painting materials and techniques during his lifetime. In the case of the *Susanna*
painting, restoration or revisions were certainly not necessary. Thus, it might be assumed
that Reynolds saw his work on the painting as a kind of 'improvement'.

Frederick Rihel on Horseback: a restoration in context

Larry Keith

The National Gallery, London

The 2008 discovery of an abandoned composition beneath the present image of Frederick Rihel was of considerable significance; its implications for our knowledge of Rembrandt's working practices and his relationship with the sitter have been discussed in detail by Betsy Wieseman in the *National Gallery Technical Bulletin* in 2010. It was also an important element in the interpretation of the painting's subsequent unfortunate restoration history and its present physical condition. The recent restoration – informed by both that new understanding and further collaborative scientific research – was therefore concerned primarily with enhancing the legibility of the painting in the context of considerable historic damage and inherent changes in the artist's materials.

The use and identification of brazilwood lake pigments in Rembrandt and other Dutch seventeenth-century works

David Peggie,¹ Jo Kirby,¹ Wim Genuit,² Julija Romanuka ²

¹ The National Gallery, London

² Shell Global Solutions International, Amsterdam

Rembrandt commonly used lake pigments within mixtures to add warmth and colour to darker passages of paint. Analysis has shown that he used red lakes derived from several sources, most often cochineal and madder, but also brazilwood, as discovered in the *Portrait of Frederick Rihel on Horseback*. Brazilwood lakes are initially strongly coloured, with hues ranging from pink to purple, but eventually degrade to dull yellowish-brown. Often their presence is only confirmed via detection of a 'marker' component, the exact identity of which is not known, but is currently being investigated in collaboration with Shell, Amsterdam. Another aspect of interest is that experiments have indicated that light is not the sole factor in their deterioration and an alkaline environment, from pigment manufacture or within the paint film, increases the degradation rate. Greater understanding of these issues can improve our ability to recognise this highly fugitive pigment, and inform discussions on the extent of any changes in the appearance of a particular work upon ageing.

Pale grey or deep blue? Evaluating smalt in Rembrandt's paintings

Marika Spring

The National Gallery, London

The pigment smalt, a potash glass coloured blue with cobalt and crushed to a powder, was available in a range of qualities graded according to intensity of colour. This was determined by the concentration of cobalt in the glass melt and also influenced by the particle size, more coarsely ground varieties having a stronger hue. Rembrandt employed smalt very widely in several ways; for its blue colour (on its own or mixed with other pigments), to add body to thickly applied textured dark translucent paints, and as a drier in blacks or dark browns. These interpretations of the purpose of smalt in any particular passage of a painting have most often been based on the appearance of the pigment particles under the microscope – greyish or even almost colourless particles signifying a lower grade used where colour was of secondary importance. Smalt often degrades, however, and the distinctions between pigment that was originally pale and that which has lost its colour, or between different qualities, are often difficult to make. Quantitative analysis of the elemental composition of smalt can be a useful tool in this respect, as demonstrated by its recent application to works by Rembrandt at the National Gallery. The information gained can allow us to speculate with more confidence on what Rembrandt intended in terms of colour and painterly effect, or whether the appearance has changed over time, providing a firmer basis for answering the question: how blue was Rembrandt's smalt?

Karin Groen, Rembrandt scholar: a tribute

Ian McClure,¹ Ella Hendriks²

¹ Yale University Art Gallery, New Haven

² Van Gogh Museum, Amsterdam & University of Amsterdam

Spanning a career of over forty years, Karin Groen was a conservation scientist and pioneer in the field of technical art history before the term became current, as well as an inspiring teacher, colleague and friend. She was passionately involved with the artworks she studied, taking an interdisciplinary focus in order to understand and solve questions relating to their creation and to the impact of past interventions on the condition of paint layers. Although her main area of research was Dutch painting of the Golden Age, her interests ranged widely. Generations of student conservators and many young art historians benefited from her mentoring and as their careers advanced, sought her collaboration. Most significant was her contribution to Rembrandt research, before and after she joined the Rembrandt Research Project in 1973, contributing both to the study of individual works and to knowledge of the artist's studio practice. Karin died after a short illness in 2013, bringing to an end a distinguished career that had seemed set to continue to illuminate artists' practice in seventeenth-century Holland.

Should prints be re-dated because of watermark evidence? Some examples and considerations

Erik Hinterding

Rijksmuseum, Amsterdam

Watermarks are useful for dating individual impressions, but can they also be used for re-dating an etching or engraving altogether? When re-dating prints based on watermark evidence, there is the imminent danger of a circular argument: if you use the prints and impressions to date a watermark, can you then use the same watermark to change the date of a print? This presentation will discuss a few examples of recently re-dated prints, and address methodological questions and observations that come with the subject.

Rembrandt and the Rembrandtesque: the experience of artistic process and its imitation

Melanie Gifford

National Gallery of Art, Washington

Rembrandt's painting practices were integral to the visual qualities of his finished paintings. Certain aspects of his technique evolved into 'Rembrandtesque' artistic conventions used within his circle. Such appropriations offer telling evidence that seventeenth-century viewers saw Rembrandt's painting process as essential to his style, and they underscore what contemporaries saw as essential markers of Rembrandt's style. However, when artists referenced visual qualities associated with Rembrandt's painting practices, they did not always reproduce Rembrandt's exact techniques. Even when visual qualities seem very close, other artists' experience of the painting process seems different from Rembrandt's creative process.

This paper will explore several responses to Rembrandt's painting technique by artists within his circle. The discussion focuses on the practice of scratching into wet paint, contrasting the function of this practice in Rembrandt's own creative process with its role as a recognisably Rembrandtesque artistic convention.

Reflections on Samuel van Hoogstraeten, Rembrandt and the 'Introduction to the School of the High Art of Painting'

Erma Hermens, Peter Black

University of Glasgow

Samuel van Hoogstraeten's *Christ and the Women of Jerusalem* (oil on canvas, 81.3 × 64.7 cm, signed, Hunterian Art Gallery, University of Glasgow) represents an unusual composition. It combines a historical scene with an exercise in drapery painting, which seems to forebode Van Hoogstraeten's explorations of many different genres in his later career. Based on new technical evidence, it is plausible to assume the painting was made during Van Hoogstraeten's apprenticeship in Rembrandt's studio in the early 1640s, making it one of his earliest known works and providing evidence of materials and techniques used in the master's workshop. Through a technical art historical analysis of *Christ and the Women of Jerusalem*, set against contemporary practice, as well as Rembrandt's, this paper will reflect on Rembrandt's influence on Van Hoogstraeten, both in his work as well as his writings, which are often said to reflect Rembrandt's practice and theories.

The Rembrandt Database: current status and future plans

Wietske Donkersloot, Michiel Franken, Sytske Weidema

Netherlands Institute for Art History (RKD), The Hague

The Rembrandt Database (www.rembrandtdatabase.org) is a freely accessible website containing research material – texts, images and other research data – on paintings by Rembrandt or attributed to him. The Rembrandt Database is an international collaboration between museums, research institutions and scholars, coordinated by the RKD – Netherlands Institute for Art History in The Hague – and generously supported by The Andrew W. Mellon Foundation in New York. The database focuses on making available the body of visual and textual material that has emerged from the technical analysis and treatments of the paintings. The database is intended to give conservators, curators, researchers, students and other professionals an overview of the existing information and documentation, thus making it available for further study. In the past years, 170 paintings and 6,500 photos, X-ray images, paint samples, reports and other documents from 20 different institutions have been published on the website. A new project phase runs from October 1st, 2014 through December 31st, 2017, during which the website will be improved, new collaborations will be established and more material will be published.

Biographies

Jonathan BIKKER

Jonathan Bikker studied art history in his native Canada, and received a PhD from Utrecht University in the Netherlands in 2001 for his dissertation on the Rembrandt pupil Willem Drost. He is Research Curator of Seventeenth-Century Dutch Painting at the Rijksmuseum and one of the authors of *Rembrandt: The Late Works*.

Rachel BILLINGE

Rachel obtained an MA in the conservation of easel paintings at Newcastle-upon-Tyne Polytechnic in 1990. She joined the conservation department of the National Gallery, London in 1991 as Leverhulme Research Fellow in Infrared Reflectography and worked closely with Dr Lorne Campbell on the technical examination of the paintings studied for his catalogues of paintings by artists of the fifteenth- and sixteenth-century Netherlandish Schools. She is now employed at the National Gallery as a research associate, specialising in infrared reflectography and studying European paintings from the thirteenth to late nineteenth centuries.

Peter BLACK

Peter Black studied Classics at Oxford University and then worked as an art dealer specialising in twentieth-century prints. In 1998 he was appointed curator of prints at the Hunterian Art Gallery at the University of Glasgow, where he is also responsible for old master paintings. In 2012, with Erma Hermens, he organised 'Rembrandt and the Passion', about the Rembrandt oil sketch of the Entombment of Christ which is from the collection of the founder, Dr William Hunter.

Silvia CENTENO

Silvia Centeno is currently a research scientist in the Department of Scientific Research at The Metropolitan Museum of Art in New York where her main responsibilities include the investigation of the material aspects of works of art, with a focus on paintings, works of art on paper, and photographs. She has published on a number of topics ranging from medieval illuminated manuscripts and old master paintings to nineteenth-century drawings, early lithographic inks, photographic materials, and modern paints.

Pierre CURIE

Pierre Curie is chief curator and head of the painting conservation department at the Centre de Recherche et de Restauration des Musées de France (C2RMF). He started as a curator in the French National Heritage administration, then in the Musée du Petit Palais, Paris, where he was in charge of nineteenth century paintings. In the Ministère de la Culture from 1995, he was responsible for research on painting in the 'Inventaire Général' Office where he co-wrote an important vocabulary of painting and drawing (*Peinture & Dessin: Vocabulaire Typologique et Technique*, 2 vols, Editions du Patrimoine, 2009). Pierre Curie teaches art history and technique in several institutions such as École du Louvre and Institut National du Patrimoine.

Wietske DONKERSLOOT

Wietske Donkersloot was trained as a historian and art historian at Leiden University. She has worked for the Dutch Museums Association, the Rijksmuseum, and CODART, the international council for curators of Dutch and Flemish art. She has worked for the Netherlands Institute for Art History (RKD) since 2008, as project associate and then project manager of The Rembrandt Database, coordinator of the Technical Documentation department (2009–2013), and manager of the Mondrian Edition Project.

Hélène DUBOIS

Hélène Dubois is a conservator-restorer and art historian. She has worked at the Doerner-Institut, the J. Paul Getty Museum and the Royal Museums of Fine Arts of Belgium in Brussels and taught at the postgraduate training programme at the SRAL in Maastricht. She has published several papers on the technique and restoration of European Old Masters such as Titian, Rubens, Jordaens, Van Loon, Rembrandt, Reynolds and Van Eyck. Attached to the Royal Institute for Cultural Heritage (KIK-IRPA) in Brussels since 2008, she is the research coordinator for the conservation project of the brothers Van Eyck's *Altarpiece of the Adoration of the Mystic Lamb*, led by KIK-IRPA.

Blaise DUCOS

Blaise Ducos is the curator of Dutch and Flemish painting at the Musée du Louvre. An alumnus of the Sorbonne and the École du Louvre, he received his PhD from Amiens University. His monograph on F. Pourbus the Younger was published in 2011. He was the Focillon Fellow at Yale University in 2005. He specialises in court portraiture, with an interest in the Spanish 'Erblande'. In 2011, he was co-curator of 'Rembrandt et la figure du Christ' (Paris, Philadelphia, Detroit). He is now working on the catalogue raisonné of Van Dyck pictures at the Louvre, as well as preparing an exhibition on Dutch genre painting (Paris, Dublin, Washington) for 2017.

Michiel FRANKEN

Michiel Franken studied art history at Groningen University. He has worked for the Central Research Laboratory for Objects of Art and Science in Amsterdam (nowadays part of the Cultural Heritage Agency), Museum Boijmans Van Beuningen (Rotterdam), the private painting conservation workshop SKRA (Amsterdam), and the Rembrandt Research Project. He has worked for the Netherlands Institute for Art History (RKD) since 1999, as project manager of the archive of the Rembrandt Research Project, and since 2008 as curator of technical documentation and Rembrandt and the Rembrandt School.

Melanie GIFFORD

Melanie Gifford's research considers the artistic decision-making process of Dutch and Flemish painters. Melanie has worked at the National Gallery of Art as Research Conservator for Painting Technology in the scientific research department since 1992, after 15 years as a painting conservator at the Walters Art Museum in Baltimore. Recent publications include technical studies of Jan Lievens, Gabriel Metsu and Rembrandt's landscapes. Her current research documents seventeenth-century evaluations of artistic style through technical study of artistic interactions among Dutch genre painters working 1650–1675.

Erma HERMENS

Erma Hermens is Senior Lecturer in Technical Art History at the University of Glasgow, where she heads the Technical Art History Group and convenes the Masters Programme 'Technical Art History: Making and Meaning'. Erma is also Editor in Chief of *ArtMatters: International Journal for Technical Art History* (www.artmattersjournal.org). She worked with Peter Black on the exhibition 'Rembrandt and the Passion', and has just finished a sabbatical supported by a British Academy fellowship, working on Books of Secrets and artisanal workshop practice in late sixteenth-century Italy.

Ella HENDRIKS

Dr Ella Hendriks gained a B.A. in Art History at the University of Manchester, going on to be trained as a conservator of easel paintings at the Hamilton Kerr Institute, University of Cambridge. In 1986 she moved to The Netherlands, and in 1987 took up the post of Chief Conservator at the Frans Hals Museum in Haarlem. In 1999 she moved on to her current position as Senior Conservator at the Van Gogh Museum in Amsterdam and since January 2014 is seconded half-time as Associate Professor at the University of Amsterdam training programme for Conservation and Restoration of Cultural Heritage Objects.

Erik HINTERDING

Erik Hinterding studied Art History at Utrecht University. After an internship at the Rijksprentenkabinet, he worked in the Department of Paper History in the Royal Library in The Hague, and subsequently continued work in the print room of the Pinacoteca Nazionale in Bologna. He developed a strong interest in prints in general, and Rembrandt's in particular, which extended also to paper and watermarks. This led to his PhD thesis: 'Rembrandt as an etcher: the practice of production and distribution' (2001).

He has contributed to exhibitions and publications for, among others, the Rijksmuseum and the Rembrandt House Museum in Amsterdam, but also for institutions and museum in Paris, Rome, Weimar, Hämeenlinna (Finland) and Tokyo. In 2013, he and Jaco Rutgers published a new seven-volume catalogue raisonné of Rembrandt's etchings for the renowned New Hollstein series. Since 2012, he has been curator at the Rijksmuseum, responsible for the 'old' prints, which include those of Rembrandt. He is participating in the preparation for a couple of exhibitions about Rembrandt's later paintings, prints and drawings, and about the experimental oeuvre of work Hercules Segers, to be seen in the Rijksmuseum in 2015 and 2016.

Koen JANSSENS

Koen Janssens studied Chemistry at the University of Antwerp from 1981–1985 and obtained his PhD in Analytical Chemistry from the same institution in 1989. He is currently full professor of General and Analytical Chemistry. His research expertise is situated in the area of non-destructive and non-invasive analysis of materials by means of X-ray beams and related methods. As well as employing very intense X-ray micro- and nano-beams for spectroscopic investigation of, for example, degradation phenomena of artists' pigments, he uses X-ray millibeam for chemical imaging of painted works of art.

Larry KEITH

Larry Keith joined the National Gallery Conservation Department in 1991, and has headed the Conservation Department since 2010. He has published extensively on painting conservation and technique in the *National Gallery Technical Bulletin* and elsewhere, and has made major contributions to the catalogues of the Gallery's exhibitions on Velazquez and Leonardo. He is an external examiner for the post-graduate painting conservation courses at both the Hamilton Kerr Institute and the Courtauld Institute.

Katja KLEINERT

Katja Kleinert studied art history and Dutch philology in Berlin, Brussels and Amsterdam. In her doctoral thesis she dealt intensively with the work, equipment and practice of painting studios in the Netherlands in the seventeenth-century. Since October 2011 she has partnered Claudia Laurenze-Landsberg in the interdisciplinary research project 'Rembrandt Autoradiography'. The results of the project will be made accessible to the broader public in digital format as part of The Rembrandt Database.

Claudia LAURENZE-LANDSBERG

Claudia Laurenze-Landsberg was trained in painting conservation by Thomas Brachert after having studied Biology and Chemistry in Berlin. Since 1984, she has conducted the neutron autoradiography examinations for the Gemäldegalerie, Berlin, in collaboration with experts at the Helmholtz-Zentrum, Berlin. Together with Katja Kleinert, she is currently working on the research project 'Rembrandt Autoradiography' which began in October 2011. The results will be made accessible in digital format within the context of The Rembrandt Database.

Annelies van LOON

Annelies van Loon, Paintings Research Scientist at the Mauritshuis/Delft University of Technology and the University of Amsterdam, trained both as a chemist and as a paintings conservator. In 2008, she finished her PhD thesis 'Color changes and chemical reactivity in seventeenth-century oil paintings' at FOM Institute AMOLF Amsterdam. She is currently researcher in two projects funded by the NWO Science4Arts Programme: 'PAinT' and 'Revisualising late Rembrandt'.

Dorothy MAHON

Dorothy Mahon, Conservator, Department of Paintings Conservation, The Metropolitan Museum of Art, New York, received her Master degree in the History of Art and a Certificate of Advance Study in Conservation from New York University, The Institute of Fine Arts. Since joining the staff at the Metropolitan Museum in 1981, she has worked on paintings spanning the collection, with particular emphasis on the technical examination and treatment of European paintings of the fifteenth to nineteenth centuries and American paintings.

Ian McCLURE

Ian McClure was appointed the Susan Morse Hilles Chief Conservator at Yale University Art Gallery and Conservation Advisor for the Yale Center for British Art in 2008. He is currently head of Yale's shared Conservation Center, an initiative developed with the Institute for the Preservation of Cultural Heritage on Yale's West Campus. Construction of the new centre is scheduled to be completed in early 2015. In 1983 he was appointed Director of the Hamilton Kerr Institute, a department of the Fitzwilliam Museum, University of Cambridge, and Deputy Director (Conservation) in 2005. A graduate of Bristol and Edinburgh Universities, he trained as a painting conservator at Glasgow Art Gallery and Museums, and was appointed Head of Paintings Conservation there in 1978.

Bruno MOTTIN

Bruno Mottin is Head Curator at the Centre de Recherche et de Restauration des Musées de France (C2RMF), Paris, where he is in charge of the technical studies of paintings. He has published several texts on Rembrandt's paintings, notably on the *Self-Portrait at an Easel* and the *Supper at Emmaus* (Louvre, Paris). He coordinated a special issue of the bulletin *Technè*, entitled *Rembrandt, approches scientifiques et restauration* (*Technè*, no. 35, 2012).

Petria NOBLE

After 18 years at the Mauritshuis in The Hague, Petria Noble recently took up the position of Head of Paintings Conservation at the Rijksmuseum in Amsterdam. Her interests centre on the investigation of the material aspects of sixteenth- and seventeenth-century paintings with particular focus on Rembrandt paintings. As part of the Science4Arts, 'ReVisRembrandt' project, co-funded by the Netherlands Organization for Scientific Research and the American National Science Foundation, she is currently researching the application of new imaging techniques to the study of late Rembrandt paintings.

David PEGGIE

David is an analytical chemist working at the National Gallery in London. With over 8 years experience at the National Gallery, he works closely with the conservators and curators, applying a variety of scientific techniques to the characterisation of materials in support of conservation treatments and for the understanding of painting technique. His main research interests include the analysis of natural products (such as oils, varnishes and dyestuffs) and the investigation of their deterioration products.

Françoise ROSIER

Françoise Rosier is a conservator-restorer of easel paintings. Since 1995, she has been regularly involved in conservation and research projects at the Royal Institute for Cultural Heritage in Brussels (KIK-IRPA) and in diverse public and private collections. She lectures on the theory of conservation at the École Nationale Supérieure des Arts Visuels de La Cambre, at the Université Libre de Bruxelles and the Université de Genève. Since 2012, she has been involved in the conservation project of the brothers Van Eyck's *Altarpiece of the Adoration of the Mystic Lamb*, led by KIK-IRPA.

Rosanna de SANCHA

A Joint MA Honours Degree in History of Art and Russian from the University of Edinburgh was followed by a Postgraduate Diploma in the Conservation of Easel Paintings from the Hamilton Kerr Institute, Cambridge. A year spent working for Herbert Lank was followed by an eighteen-month Getty and British Council funded internship in the former Soviet Union, working in the Hermitage Museum (Saint Petersburg), Russian Museum (Saint Petersburg) and Grabar Institute (Moscow). This was followed by a two-year internship in the conservation department at the Tate Gallery and twenty-one years as a paintings conservator in The Royal Collection, the last two of which have been spent compiling the 306 entries on condition and technique for the soon to be republished *Catalogue of Dutch Paintings in The Royal Collection* by Professor Sir Christopher White.

Jana SANYOVA

Jana Sanyova, PhD, is a senior scientist at the Royal Institute for Cultural Heritage in Brussels (KIK-IRPA). Her research concerns the technology and degradation of pigments, dyes, lakes and polymer materials, particularly in Northern European paintings and polychromy. She has been involved in many European and national research projects such as ENVIART, POLICROMIA, CHARISMA and Pre-Eyckian Paintings. She currently coordinates two projects: the study of the brothers Van Eyck's *Altarpiece of the Adoration of the Mystic Lamb* and the degradation of semiconductor metal sulphide pigments.

Marika SPRING

Marika Spring joined the National Gallery Scientific Department in 1992, following a first degree in Natural Sciences and a postgraduate diploma in paintings conservation, and has been Head of Science since 2013. She works closely with the curators and conservators in the National Gallery, applying a variety of techniques to the analysis of materials (particularly pigments) in support of conservation treatment, understanding of condition and degradation, as well as painting technique. She has published extensively in the *National Gallery Technical Bulletin* and elsewhere on subjects ranging from technical studies of specific schools of painting (particularly the sixteenth-century period) to the deterioration of historic pigments, and new emerging instrumental methods for analysis or examination.

Yvonne SZAFRAN

Yvonne Szafran is Senior Conservator and Head of Paintings Conservation at the J. Paul Getty Museum, where she has worked since 1978. Over the years she has presented and published a number of comprehensive technical studies of paintings, and in 2013 she served on the international scientific committee for the conference 'Painting Techniques: History, Materials and Studio Practice' at the Rijksmuseum in Amsterdam. Her interest in painting technique is wide-ranging and her most recent publications include the books *Jackson Pollock's Mural: The Transitional Moment* (with Laura Rivers, Alan Phenix, Tom Learner, Ellen Landau and Steve Martin) and *Drama and Devotion: Heemskerck's Ecce Homo Altarpiece from Warsaw* (with Alan Phenix and Anne Woollett). She is presently working on a technical study of the J. Paul Getty Museum's Rembrandt paintings.

Jørgen WADUM

Professor Dr Jørgen Wadum is Director of Conservation at Statens Museum for Kunst (SMK) and Director of the Centre for Art Technological Studies and Conservation (CATS), a strategic research consortium between SMK, The National Museum of Denmark and the School of Conservation, Copenhagen. He additionally holds the position of full Professor in Conservation and Restoration at the Faculty of Humanities, University of Amsterdam. He trained as a flower painter, art historian and paintings conservator. From 1990 until 2004 he was Chief Conservator at the Mauritshuis, The Hague. He has published and lectured extensively internationally on a multitude of subjects related to technical art history and other issues of importance for the understanding and preservation of our cultural heritage.

Sytske WEIDEMA

Sytske Weidema studied art history at Groningen University. She has worked at the Groeningemuseum (Bruges), the European Paintings Department at the Metropolitan Museum of Art (New York), the Cantor Art Museum (Stanford) and as a private researcher. She has worked for the Netherlands Institute for Art History (RKD) since 2002 on several projects concerning technical documentation, including The Rembrandt Database.