



NATIONAL  
MARITIME  
MUSEUM



Royal Institute of Navigation  
Science Technology Practice

## Symposium

### ***After Longitude – Modern navigation in context***

National Maritime Museum, Greenwich, London  
Thursday–Friday 22–23 March 2012

#### **Programme**

##### **Thursday 22 March**

Before the start of the conference some additional tours are available on a first come, first served basis (limited places available - please book via the booking form).  
Timings as follows:

10.30 & 11.30 for 45 minutes

Navigational instruments in the Royal Observatory Greenwich stores  
(led by Richard Dunn, Senior Curator of the History of Navigation, NMM)

10.30 & 11.30 for 45 minutes

Current chronometer research, in the Horology Conservation Workshop, Royal Observatory Greenwich  
(led by Jonathan Betts, Senior Specialist, Horology, NMM)

#### **Programme**

13.30 Registration and coffee (Lecture Theatre, National Maritime Museum)

14.00 Welcome and introduction – Richard Dunn

14.15 Richard Dunn

**North by Northwest? Trouble with compasses in the exploration of the Arctic**

Frank Reed

**Lunars and 19<sup>th</sup>-century American commerce in the Pacific**

Dr Wolfgang Koberer

**Position without calculation: Analogue instruments for position finding in astronomical navigation**

15.45 Tea Break

16.15 Yuto Ishibashi

**Accurate time for mariners: Time-keeping and signalling in mid-Victorian Liverpool'**

John Kemp

**The development and use of Astro Position Lines at sea**

17.15 Close / Drinks Reception

## **Friday 23 March**

09.30 Coffee

10.00 Terry Hayward  
**The early development of air navigation**

Norman Bonnor  
**Navigating at 50,000 and 500 feet during the Cold War of the 1950s and 60s**

Frank Reed  
**Lunars in the Space Age**

11.30 Coffee break

12.00 Pat Norris  
**The longitude challenge in Deep Space**

Nick Ward  
**From Lighthouses to e-Navigation**

13.00 Lunch

14.00 Richard Easton  
From Harrison to GPS

Paul Saunders  
**Automated position reporting – aspirations and their realisation, across domains**

15.00 Tea break

15.30 Dr S E Taylor  
**Electronic Navigation Systems on Fishing Vessels: Applications in Sub-Sea Hazard Avoidance**

Dr Heloise Finch-Boyer  
**What does digital do? Representing and acting on ‘safety’ and ‘accuracy’ as paper sea charts became digital charts 1977-2010**

16.30 General discussion and closing remarks – Terry Hayward