

# **Estratti delle note del fascicolo 163\_2-3 degli Atti della Classe di Scienze Fisiche Matematiche e Naturali pubblicate dall'Istituto Veneto di Scienze, Lettere ed Arti.**

## **ANTONIO LEPSCHY, ETTORE FORNASINI**

*La memoria della materia. La materia della memoria*

The first part of the paper is devoted to the analysis of dynamical systems performance. Specifically, in these systems the effects of past inputs on the present state of the system may be regarded as a form of memory (whereas an instantaneous system can be considered as memoryless).

The second part of the paper describes the standard storage devices adopted in the field of computer technology as well as other storing devices adopted for recording words, sounds and images.

## **GIULIO ANTONIO VENZO**

*Sintesi delle modalità delle cause geologiche, delle conseguenze e degli effetti della frana del 9 ottobre 1963 al Vaiont*

The damage done by the great landslide (slope failure) which slid into the artificial hydroelectric basin on 9 October 1963, its peculiarities, casual factors, consequences and effects are summarized.

The effect of the occurrence became enormous due to the coincidence of several phenomena, each in itself exceptional: the dimensions of the slide (300 million cubic metres), the largest occurred in Europe in historic age; the unusual compactness of the rock mass which remained homogeneous along its full extent throughout its fall; the extraordinary acceleration of its movement from a few millimetres per annum to 60 km per hour at least of its descent into the basin.

Hypotheses are also reported for the geomorphological evolution of the stretch of the Vaiont valley affected by the great landslide during the post-glacial period. Key Words: Vaiont landslide, slope failure), casual factors, consequences, geomorphological evolution. Province of Belluno, North-Eastern Ital.

## **ALBERTO GIOVANNI BIUSO**

*Decifrare il tempo: corpo e temporalità*

Deciphering time implies overcoming every dualism between the subjective and the objective, mind and nature, consciousness and matter. Indeed, time is inflected in different but convergent forms: cosmic, physical, conventional, psychological time; body time, anthropological time, mind time. The study of these forms allows us to comprehend that mind and body are two aspects of the same temporal reality: the body as bulwark of being for the death, the mind as self-knowledge of the clump of time given form in the human. Time is therefore not a res but the structure/function from which human consciousness germinates, a profound consciousness rooted in memory, intended both as physical engrams and mental memories. The mind, in other words, is the awareness the body has of being immersed in time.

## **PAOLO ALBERI AUBER**

*L'orologio solare orizzontale del Circo di Aquileia (II sec. d.C.). Il «Plintio di Euporus». Prima parte*

The scholars who studied the horizontal sundial after its discovery in Aquileia (Euporus) in 1878 immediately recognised a particular type of sundial nominated by Vitruvius (Book IX): 'plinthium sive lacunar, quod etiam in Circo Flaminio est positum, Scopinas Syracusius (dicitur invenisse)'. This

paper firstly looks more closely at all aspects of this recognition. Such studies are much simplified by the computerised design and calculation tools available today. A reconstruction of the apparatus for projecting the solar rays (gnomon) and the weather-vane is proposed.

**FRANCESCO ANGRILLI, GIAN ANDREA BIANCHINI, GIACOMO COLOMBATTI, FRANCESCA FERRI, PIER FRANCESCO LION STOPPATO, MARCELLO FULCHIGNONI E IL TEAM HASI**

*Missione Cassini-Huygens, arrivo a Titano: 14 gennaio 2005*

After a seven year journey, the space probe Huygens supplied by the European Space Agency and carrying instruments to measure the environment of Titan, successfully completed its descent and landing on Saturn's largest moon on 14 January 2005. HASI (Huygens Atmospheric Structure Instrument), one of the six instruments on board the probe, for studying the physical and electrical properties of Titan's atmosphere and soil, was built with the cooperation of 17 institutes from 11 countries.

HASI was financed by the Italian Space Agency (ASI) and other European institutions that supplied know-how and hardware. HASI's subsystems and components were designed, developed and built by different European institutes (in Italy, UK, Finland, Austria, France, Spain, ESA/ESTEC) MISSIONE CASSINI-HUYGENS, ARRIVO A TITANO 309

and by Galileo Avionica (formerly Officine Galileo), Florence. Padua university developed and supplied the STUB subsystem and was responsible for management of the project and coordination of the scientific team.

The readings taken by HASI from the time of the probe's entrance into the atmosphere, during its descent and after its landing have provided unique information for measuring Titan's atmosphere, and have revealed what lies beneath the thick orange haze that hides its surface from Earthbased observations and remote sensing.

**GIGI PENNACCHI, LUIGI BENEDETTI**

*Osservazioni eseguite nell'osservatorio meteorologico dell'Istituto Cavanis di Venezia nel 2003*

The average annual atmospheric pressure in 2003 was 1016.8 mb, higher than the average for the period 1959-2002, which was 1016.1 mb.

The lowest average daily temperature recorded was -0.5 °C on 12 January, while the highest average daily temperature was 29.8 °C on 5 August. The average annual humidity was 72.6 %, lower than the period 1959-2002, which was 72.7 %. Total precipitation for the year 2003 was 544 mm.

**GIGI PENNACCHI, LUIGI BENEDETTI**

*Osservazioni eseguite nell'osservatorio meteorologico dell'Istituto Cavanis di Venezia nel 2004*

In 2004 the minimum average daily temperature recorded was 0.5 °C on 26 January, while the maximum average daily temperature was 29.1 °C on 23 July.

There was an annual average humidity was 73.4%, higher than the average for the period 1959-2003 which was 72.7%. The annual precipitation for the year 2004 was 930,4 mm.