



**CIMPA - UNESCO - NEPAL RESEARCH SCHOOL
ON
NUMBER THEORY IN CRYPTOGRAPHY AND ITS APPLICATIONS
(A Satellite Conference of ICM 2010)**



July 19 - 31, 2010 (Srawan 3 - 15, 2067)
Kathmandu University, Dhulikhel, Kavre

CLOSING CEREMONY

Collaborations:

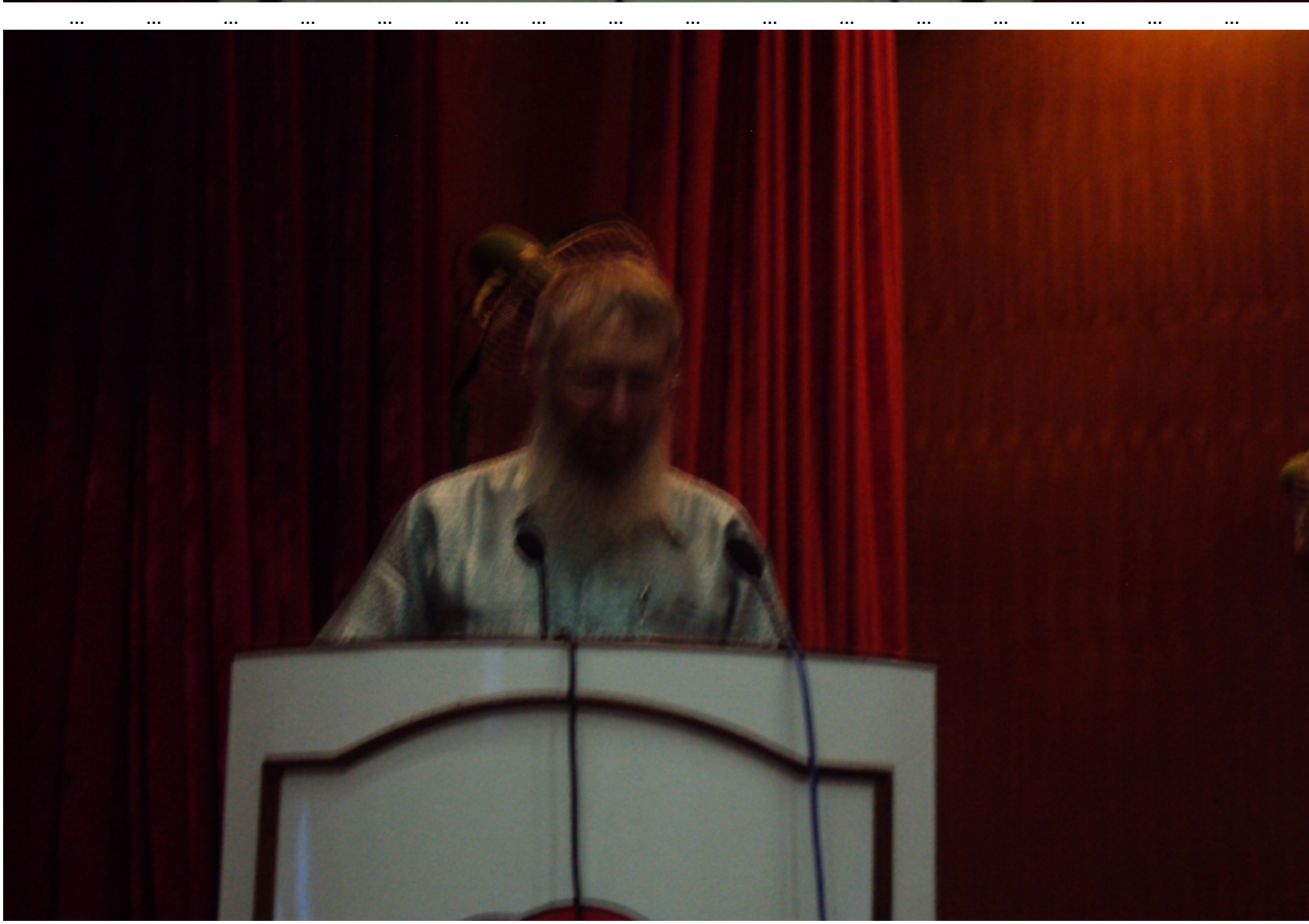
- International Center of Pure and Applied Mathematics (CIMPA), France
- United Nations Educational Scientific and Cultural Organization (UNESCO)
- Ministerio de Ciencia e Innovacion (MICINN), Spain
- Universita' Roma Tre, Italy
- Nepal Mathematical Society (NMS)
- International Centre of Theoretical Physics (ICTP), Trieste
- International Mathematical Union (IMU)
- Institut de Mathematiques de Luminy, Marseille, France
- National Board of Higher mathematics (NBHM), India
- The French Embassy in Nepal, Kathmandu

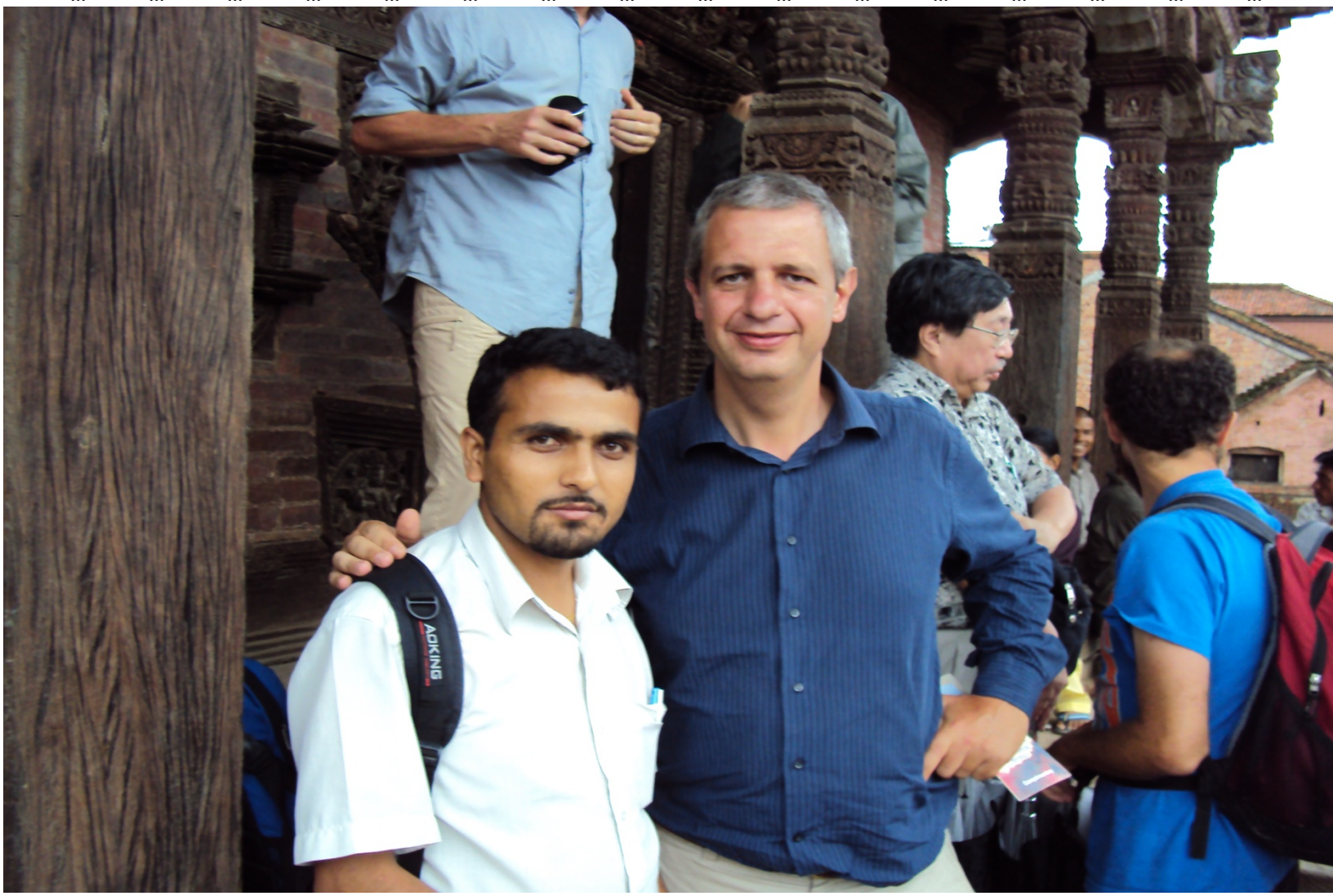
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- Mathematics Teachers Society, Kavre
- Chelsea International Academy, Kathmandu
- Popular Education Foundation, Nepal









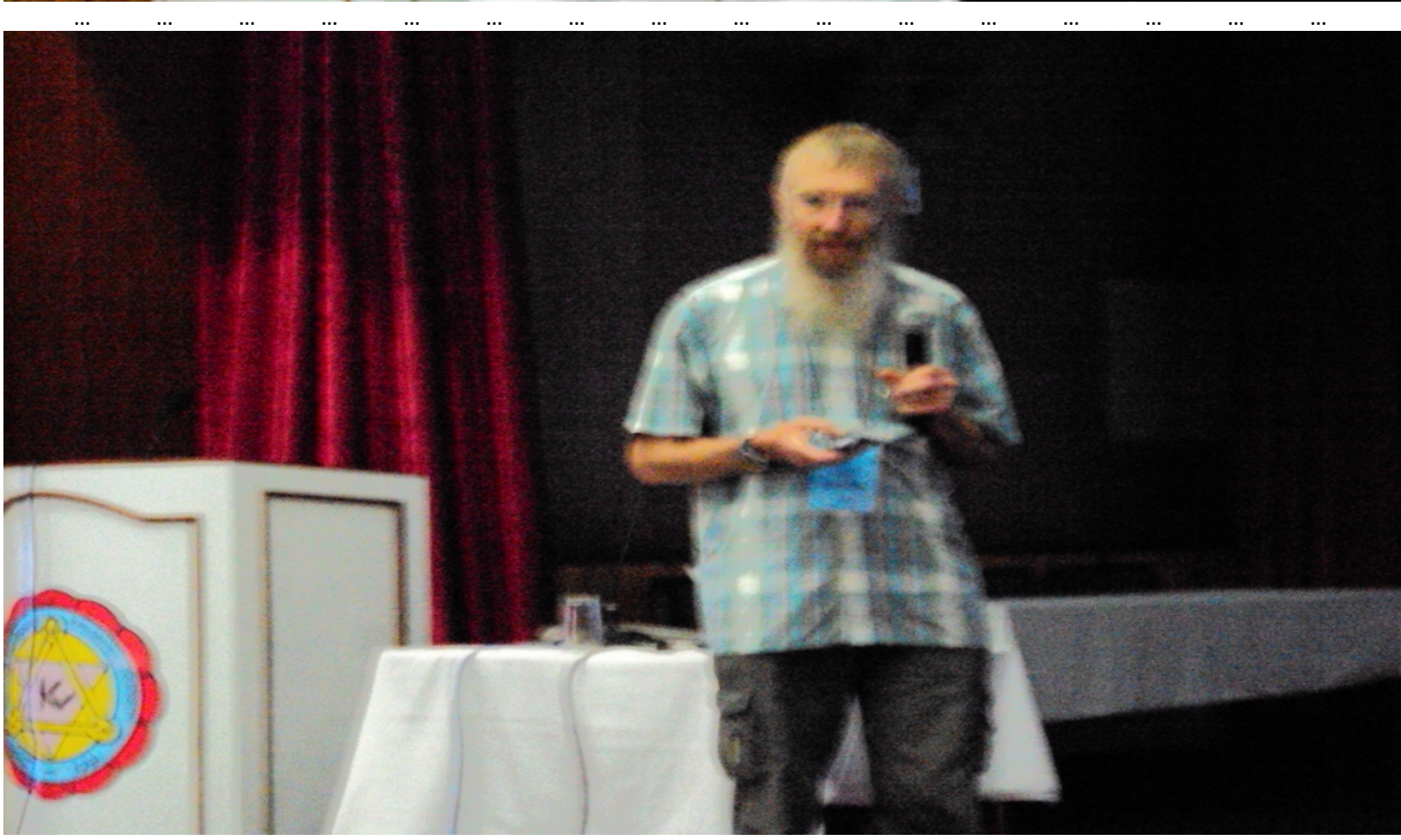
















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$$\zeta(s) = \prod_p (1 - p^{-s})^{-1} = \sum_{n=1}^{\infty} \frac{1}{n^s}, \quad \sigma > 1$$

$$(1 - 2^{-s})\zeta(s) = \sum_{n=1}^{\infty} \frac{(1)^n}{n^s} \rightarrow \sum_{n=1}^{\infty} \frac{z^n}{n^s} = \text{polylog}$$

$$(1 - 2^{-s})\zeta(s) = \sum_{2 \nmid n} \frac{1}{n^s}$$

$$(1 - 3^{-s})(1 - 5^{-s})\zeta(s) = \sum_{2 \nmid n, 3 \nmid n} \frac{1}{n^s}$$

$$\prod_P (1 - P^{-s})\zeta(s) = 1$$

$$\therefore \mathbb{Z} \in \{\text{Euclidean}\} \subset \{\text{PID}\} \subset \{\text{UFD}\}$$



linear complexity: $O(\log m)$

exponential complexity: $O(2^{\log m})$

$O(m)$

= 00

$$5 = 5^1$$

$$\text{GCD}(5, 36) = 1$$



