

REFRESHER COURSE IN MATHEMATICS

(Coding Theory, Cryptography and Discrete Mathematics)

2–14 December 2002

sponsored by

INDIAN ACADEMY OF SCIENCES, BANGALORE

organized by

PANJAB UNIVERSITY, CHANDIGARH

at

Department of Mathematics, Panjab University, Chandigarh 160 014

Applications are invited from University/College teachers and Research Fellows for participation in the Refresher Course on Coding Theory, Cryptography and Discrete Mathematics to be held at Department of Mathematics, Panjab University, Chandigarh from 2 to 14 December 2002. About 30 persons will be selected to attend.

Outline of the Course:

1. Error-correcting codes, linear codes, generator matrix, parity check matrix, dual codes, syndrome decoding, Hamming codes, perfect codes, BCH codes, cyclic codes, idempotents of cyclic codes, quadratic residue codes, Golay codes.
2. Simple cryptosystems, block ciphers, enciphering matrices, elementary cryptoanalysis, public key cryptography, RSA, discrete log and knapsack cryptosystems, primality testing and factoring, introduction to elliptic curve cryptography.
3. Pigeon-hole principle, basic counting arguments, inclusion–exclusion principle, recurrence relations, generating functions, elementary graph theory, Eulerian paths and cycles, trees, planar graphs, chromatic number.

There will be formal lectures, general talks, problem sessions and discussions. *Pre-requisites:* Knowledge of elementary Number Theory and first course in Algebra.

Selected participants will be provided local hospitality and round-trip train fare (first class or three-tier A/C) to and fro by the shortest route between their place of stay and Chandigarh.

Those who wish to participate may send their brief curriculum vitae containing name, date of birth, postal and e-mail address, qualifications, teaching experience, courses taught, positions held, etc. to:

Professor Madhu Raka
Convener, Organizing Committee
Refresher Course in Mathematics
Centre for Advanced Study in Mathematics
Panjab University
Chandigarh 160 014

Research Fellows who wish to participate should also submit a letter of recommendation from their supervisors.

Last date for receipt of applications: 7 September 2002.



**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
(TECHNOLOGY TRANSFER DIVISION)**

Call for Proposals Under Drugs and Pharmaceuticals Research Programme

Introduction: The emerging economic, trade and intellectual property scenario, nationally and internationally, necessitates Indian Pharmaceutical Industry to innovate new molecules/new processes. The accumulated knowledge of traditional medicinal system and large bio-diversity of our country offer a great advantage to our industry. At the same time several Indian academic institutions and national laboratories have established impressive infrastructure and developed excellent expertise in selected areas of drug development. Drug research is investment and knowledge-intensive. The Indian drug industry due to their small size compared to international operators is not in a position to invest in a viable new drug development programme.

The Programme: Department of Science and Technology (DST), Government of India has mounted a programme on drug development for promoting collaborative R&D in drugs and pharmaceuticals sector with the specific objectives to synergise the strengths of publicly-funded R&D institutions and Indian Pharmaceutical Industry in all systems of medicines and to create an enabling infrastructure mechanisms and linkages to facilitate new drug development.

Approach: The programme supports selectively collaborative projects between industry and publicly-funded research institute/university.

Coverage: The programme supports drug development for all types of medicinal systems covering all stages of the innovative chain of new drug development including veterinary drugs.

Who can apply: Any Indian company/firm engaged in drug development/manufacturing jointly with publicly-funded R&D laboratories of CSIR, ICMR, etc. and universities/colleges.

Information/Assistance: For submission of the proposals/any information/assistance on the programme, please contact:

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