

# Random Coding Bound for $E$ -capacity Region of Asymmetric Broadcast Channel With Stochastic Encoding

Nasrin Afshar

Institute for Informatics and Automation Problems of NAS of RA

## Abstract

$E$ -capacity (rate-reliability) region of the asymmetric broadcast channel with stochastic encoding is studied. The asymmetric broadcast channel involves two discrete memoryless channels with a common input. A common message is transmitted to both receivers and one private message to the intended receiver. We derive an inner bound for rate-reliability region.

Key words: Asymmetric broadcast channel, E-capacity, error exponent, random coding bound, rate-reliability region, stochastic encoding.

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**Լայնասփյուռ անհամաչափ ստոխաստիկ կոդավորմամբ կապուղու  
 $E$ -ունակության տիրույթի պատահահան կոդավորման գնահատականը**

**Ն. Ավչար**

**Անփոփում**

Հոդվածում ուսումնասրվում է լայնասփյուռ անհամաչափ ստոխաստիկ կոդավորմամբ կապուղին: Կառուցված է  $E$ -ունակության (արագություն-հուսալիություն) տիրույթի պատահական կոդավորման գնահատականը: