ΟΙΚΟΝΟΜΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS ENISTHMON & FILSTHMON & TEXNOAOFIAS THS INHPOФOPIAS SCHOOL OF INFORMATION SCIENCES & TECHNOL OGY

TMHMA ΣΤΑΤΙΣΤΙΚΗΣ DEPARTMENT OF STATISTICS

ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ ΣΤΑΤΙΣΤΙΚΗΣ – ΑΠΡΙΛΙΟΣ 2016

Μιχαήλ Λουλάκης

National Technical University of Athens

A large deviations theorem for subexponential r.v.'s with an application to Interacting Particle Systems

TETAPTH 20/4/2016 13:00

ΑΙΘΟΥΣΑ 607, 6^{ος} ΟΡΟΦΟΣ, ΚΤΙΡΙΟ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ (ΕΥΕΛΠΙΔΩΝ & ΛΕΥΚΑΔΟΣ)

ΠΕΡΙΛΗΨΗ

We investigate the conditional distribution of a sample of subexponential random variables subject to a large deviation of their sum. In contrast to Gibbs's conditioning theorem for variables satisfying Cramer's condition, it turns out that the deviation is realised by a single variable, while the rest of the sample asymptotically retains the prior distribution. As an application we investigate the equilibrium fluctuations of the size of the largest cluster in a condensing Zero Range Process. ΟΙΚΟΝΟΜΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

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TMHMA ΣΤΑΤΙΣΤΙΚΗΣ DEPARTMENT OF STATISTICS

AUEB STATISTICS SEMINAR SERIES – APRIL 2016

Michail Loulakis

National Technical University of Athens

A large deviations theorem for subexponential r.v.'s with an application to Interacting Particle Systems

WEDNESDAY 20/4/2016 13:00

ROOM 607, 6th FLOOR, POSTGRADUATE STUDIES BUILDING (EVELPIDON & LEFKADOS)

ABSTRACT

We investigate the conditional distribution of a sample of subexponential random variables subject to a large deviation of their sum. In contrast to Gibbs's conditioning theorem for variables satisfying Cramer's condition, it turns out that the deviation is realised by a single variable, while the rest of the sample asymptotically retains the prior distribution. As an application we investigate the equilibrium fluctuations of the size of the largest cluster in a condensing Zero Range Process.