

Workshop Program

March 29 (Thursday), 2001

BREAKFAST [8:30am]

WELCOME REMARKS AND INTRODUCTION TO SF1 [9am]

Session I: Empirical Scaling Phenomena [9:30am-11:45am]

"Scaling Phenomena in the Internet: When Criticality is not Critical"

Walter Willinger (AT&T Research)

"Growth and Evolution of Internet Topology"

Craig Labovitch (Microsoft)

"Topology Discovery and the Impact of Policy on Internet Paths"

Ramesh Govindan (ISI/USC)

LUNCH [11:45am-1pm]

Session II: Fault-Tolerance and Statistical Mechanics [1pm-3:15pm]

"The Role of Protection Systems in Power System Blackouts"

James Thorp (Cornell Univ.)

"Combinatorial Renormalization"

Peter Gacs (Boston Univ.)

"Complexity and Robustness"

Jean Carlson (Univ. of California, Santa Barbara)

BREAK [3:15pm-3:45pm]

Session III: Scalable Traffic Control [3:45pm-6pm]

"Aggregate-based Congestion Control: Addressing Congestion from Large-scale Traffic Patterns"

Sally Floyd (ACIRI)

"Robust Control, Coding, and TCP"

John Doyle (Caltech)

" Statistical Multiplexing Gain of Regulated Adversarial Traffic "

Jorg Liebeherr (Univ. of Virginia)

RECEPTION [6pm-9pm]

March 30 (Friday), 2001

BREAKFAST [8:30am]

Session IV: WWW Scaling and Internet Measurement [9am-10:30am]

" The World Wide Web as a Graph "

Andrei Broder (AltaVista)

" Internet Traffic Measurement: Inference vs. Direct Observation "

Matt Grossglauser (AT&T Research) Craig Labovitch (Microsoft)

BREAK [10:30am-11am]

Session V: Biology and Self-Organization [11am-12:15pm]

" Computer Immunology "

Stephanie Forrest (Univ. of New Mexico/SFI)

" The Bio-Networking Architecture: A Scalable and Self-Organizing Network Architecture based on Biological Concepts "

Tatsuya Suda (Univ. of California, Irvine)

LUNCH [12:15pm-2pm]

Session VI: Architectural Challenges and Paradigms [2pm-4:15pm]

" Scaling Networks via Contents "

H.T. Kung (Harvard Univ.)

" Can the Virtual be Harnessed Physically? "

Yechiam Yemini (Columbia Univ.)

" Fluid Simulation of Large Scale Networks: Issues and Tradeoffs "

Jim Kurose (Univ. of Massachusetts)

BREAK [3:45pm-4:15pm]

Session VII: Panel Discussion and Open Forum [4:15pm-5:30pm]

Panelists: F. Baker, F. Kelly, H.T. Kung, C. Papadimitriou, K. Sollins

Moderator: K. Park

DINNER [7pm-9:30pm]

March 31 (Saturday), 2001

BREAKFAST [8:30am]

Session VIII: Network Games and Traffic Control [9am-11:15am]

" End-to-end Congestion Control and Differentiated Services "

Frank Kelly (Univ. of Cambridge)

" Algorithmic Problems Related to the Internet "

Christos Papadimitriou (Univ. of California, Berkeley)

" Noncooperative Network Games with Externalities "

Kihong Park (Purdue Univ.)

BREAK [11:15am-noon]

LUNCH [noon-1:30pm]

WORKSHOP ENDS