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Sommario/riassunto

The papers in this volume were presented at ICLSSC 2001, the Third Inter- tionalConferenceonLarge-ScaleScienti'cComputing. ICLSSC2001washeldin Sozopol,Bulgaria,June6-10,2001. Theconferencewasorganizedandsponsored bytheCentralLaboratoryonParallelProcessingoftheBulgarianAcademyof Sciences,andtheDepartmentofNumericalAnalysisandStatisticsoftheUniv-sityofRouse,Bulgaria. SupportwasalsoreceivedfromtheCenterofExcellence "BIS21" (fundedbytheEuropeanCommission),SIAM(SocietyforIndustrial andAppliedMathematics)anditsActivityGrouponSupercomputing. Weare indebtedtoourcolleagueswhohelpedusintheorganizationofthisconferenc e. Wethanktheorganizersofthespecialsessions:O. Axelsson,I. Dimov,A. Ebel, K. Georgiev, V. Getov, S. Heinrich, O. Iliev, A. Karaivanova, S. Margenov, P. Minev, M. Sch¨ afer, and Z. Zlatev. We also thank I. Lirkov for the help in puttingtogetherthisbook. Thepurposeoftheconferencewastobringtogetherscientistsworkingwith largecomputationalproblemsinindustry,andspecialistsinthe'eldofnume-calanalysis''methodsande'cientexploitationofmodernhigh-speedcomputers. Someclassesofmethodsappearagainandagaininthenumericaltreatmentof problemsfromdi'erent'eldsofscienceandengineering. Theaimofthisconf-encewastoselectsomeofthesenumericalmethodsandplanfurtherexperime nts onseveraltypesofparallelcomputers. Thekeylecturesreviewedthemostimp-tantnumericalalgorithmsandscienti'capplicationsonparallelcomputers. The invited speakers included university and practical engineers from industry, as wellasappliedmathematicians,numericalanalysts, andcomputerexperts. The generalthemeforICLSSC2001wasLarge-ScaleScienti'cComputing,focusing on: - Robustpreconditioningalgorithms, - MonteCarlomethods, - Advancedprogrammingenvironmentsforscienti'ccomputing, - Large-scalecomputationsinairpollutionmodeling, - Large-scalecomputationsformechanicalengineeringproblems,and - Numericalmethodsforincompressible'ow. The workshop itself attracted about 80 participants from around the world. Authors from over 15 countries submitted 52 papers, of which 7 were invited, and 45 were contributed. The Fourth International Conference (ICLSSC 2003) willtakeplacein2003. SvetozarMargenov October 2001 JerzyWa´ sniewski PlamenYalamov

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