

2023-09-03 1/14 TANGLERS BRIGHT EARLY BOARD BOOKS

AND ABSTRACT INTERPRETATION VMCAI 2013 HELD IN ROME ITALY IN JANUARY 2013 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2013 THE 27 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 72 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION AND ABSTRACT DOMAINS PROGRAM SYNTHESIS STATIC ANALYSIS TYPE SYSTEM DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES PROGRAM TRANSFORMATION OPTIMIZATION HYBRID AND CYBER PHYSICAL SYSTEMS THIS Festschrift DEDICATED TO BENGT JONSSON ON THE OCCASION OF HIS 60TH BIRTHDAY CONTAINS PAPERS WRITTEN BY MANY OF HIS FRIENDS AND COLLABORATORS BENGT HAS MADE MAJOR CONTRIBUTIONS COVERING A WIDE RANGE OF TOPICS INCLUDING VERIFICATION AND LEARNING HIS WORKS ON VERIFICATION IN FINITE STATE SYSTEMS LEARNING TESTING PROBABILISTIC SYSTEMS TIMED SYSTEMS AND DISTRIBUTED SYSTEMS REFLECT BOTH THE DIVERSITY AND THE DEPTH OF HIS RESEARCH BESIDES BEING AN EXCELLENT SCIENTIST BENGT IS ALSO A LEADER WHO HAS GREATLY INFLUENCED THE CAREERS OF BOTH HIS STUDENTS AND HIS COLLEAGUES HIS MAIN FOCUS THROUGHOUT HIS CAREER HAS BEEN IN THE AREA OF FORMAL METHODS AND THE RESEARCH PAPERS DEDICATED TO HIM IN THIS VOLUME ADDRESS RELATED TOPICS PARTICULARLY RELATED TO MODEL CHECKING TEMPORAL LOGIC AND AUTOMATA LEARNING THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2012 HELD IN PHILADELPHIA PA USA IN JANUARY 2012 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2012 THE 26 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 70 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION STATIC ANALYSIS DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES ABSTRACT DOMAINS TYPE SYSTEMS AND OPTIMIZATION THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 8TH INTERNATIONAL SPIN WORKSHOP HELD IN TORONTO CANADA IN MAY 2001 THE SPIN MODEL CHECKER IS ONE OF THE MOST POWERFUL AND POPULAR SYSTEMS FOR THE ANALYSIS AND VERIFICATION OF DISTRIBUTED AND CONCURRENT SYSTEMS THE 13 REVISED FULL PAPERS PRESENTED TOGETHER WITH ONE INVITED SURVEY PAPER AND THREE INVITED INDUSTRIAL EXPERIENCE REPORTS WERE CAREFULLY REVIEWED AND SELECTED FROM 26 SUBMISSIONS BESIDES FOUNDATIONAL ISSUES OF PROGRAM ANALYSIS AND FORMAL VERIFICATION THE PAPERS FOCUS ON TOOLS FOR MODEL CHECKING AND PRACTICAL APPLICATIONS IN A VARIETY OF FIELDS THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED PROCEEDINGS OF THE 19TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2012 HELD IN OXFORD UK IN JULY 2012 THE 11 REVISED FULL PAPERS PRESENTED TOGETHER WITH 5 TOOL PAPERS AND 4 INVITED TALKS WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE PAPERS ARE GROUPED IN TOPICAL SECTIONS ON MODEL CHECKING TECHNIQUES PARALLEL MODEL CHECKING CASE STUDIES MODEL CHECKING FOR CONCURRENCY AND TOOL DEMONSTRATIONS THE BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2009 HELD IN SAVANNAH GA USA IN JANUARY 2009 CO LOCATED WITH POPL 2009 THE 36TH ANNUAL SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES THE 24 REVISED FULL PAPERS PRESENTED TOGETHER WITH 3 INVITED TALKS AND 2 INVITED TUTORIALS WERE CAREFULLY REVIEWED AND SELECTED FROM 72 SUBMISSIONS THE PAPERS ADDRESS ALL CURRENT ISSUES FROM THE COMMUNITIES OF VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION FACILITATING INTERACTION CROSS FERTILIZATION AND ADVANCEMENT OF HYBRID METHODS THAT COMBINE THE THREE AREAS THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 18TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2011 HELD IN SNOWBIRD UT USA IN JULY 2011 THE 10 REVISED FULL PAPERS PRESENTED TOGETHER WITH 2 TOOL DEMONSTRATION PAPERS AND 1 INVITED CONTRIBUTION WERE CAREFULLY REVIEWED AND SELECTED FROM 29 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS ON ABSTRACTIONS AND STATE SPACE REDUCTIONS SEARCH STRATEGIES PROMELA ENCODINGS AND EXTENSIONS AND APPLICATIONS OF MODEL CHECKING THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 11TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2004 HELD IN BARCELONA SPAIN IN APRIL 2004 THE 19 REVISED FULL PAPERS PRESENTED TOGETHER WITH THE ABSTRACTS OF AN INVITED TALK AND 2 TUTORIALS WERE CAREFULLY REVIEWED AND SELECTED FROM 48 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS ON HEURISTICS AND PROBABILITIES IMPROVEMENTS OF SPIN VALIDATION OF TIMED SYSTEMS TOOL PRESENTATIONS ABSTRACTION AND SYMBOLIC METHODS AND APPLICATIONS THE SPIN WORKSHOP SERIES BRINGS TOGETHER RESEARCHERS AND PRACTITIONERS INTERESTED IN EXPLICIT STATE MODEL CHECKING TECHNOLOGY AS IT IS APPLIED TO THE VERIFICATION OF SOFTWARE SYSTEMS SINCE 1995 WHEN THE SPIN WORKSHOP SERIES WAS INSTIGATED SPIN WORKSHOPS HAVE BEEN HELD ON AN ANNUAL BASIS AT MONTREAL 1995 NEW BRUNSWICK 1996 ENSCHEDE 1997 PARIS 1998 TRENTO 1999 TOULOUSE 1999 STANFORD 2000 AND TORONTO 2001 WHILE THE SPIN WORKSHOP WAS A STAND ALONE EVENT LATER WORKSHOPS HAVE BEEN ORGANIZED AS MORE OR LESS CLOSELY RELATED EVENTS WITH LARGER CONFERENCES IN PARTICULAR WITH CAV 1996 TACAS 1997 FORTE PSTV 1998 FLOC 1999 WORLD CONGRESS ON FORMAL METHODS 1999 FMOODS 2000 AND ICSE 2001 THIS YEAR SPIN 2002 WAS HELD AS A SATELLITE EVENT OF ETAPS 2002 THE EUROPEAN JOINT CONFERENCES ON THEORY AND PRACTICE OF SOFTWARE THE CO LOCATION OF SPIN WORKSHOPS WITH CONFERENCES HAS PROVEN TO BE VERY SUCCESSFUL AND HAS HELPED TO DISSEMINATE SPIN MODEL CHECKING TECHNOLOGY TO WIDER AUDIENCES SINCE 1999 THE PROCEEDINGS OF THE SPIN WORKSHOPS HAVE APPEARED IN SPRINGER VERLAG'S LECTURE NOTES IN COMPUTER SCIENCE SERIES THE HISTORY OF SUCCESSFUL SPIN WORKSHOPS IS EVIDENCE FOR THE MATURING OF MODEL CHECKING TECHNOLOGY NOT ONLY IN THE HARDWARE DOMAIN BUT INCREASINGLY ALSO IN THE SOFTWARE AREA WHILE IN EARLIER YEARS ALGORITHMS AND TOOL DEVELOPMENT AROUND THE SPIN MODEL CHECKER WERE THE FOCUS OF THIS WORKSHOP SERIES THE SCOPE HAS RECENTLY WIDENED TO INCLUDE MORE GENERAL APPROACHES TO SOFTWARE MODEL CHECKING CURRENT RESEARCH IN THIS AREA CONCENTRATES NOT SO MUCH ON COMPLETELY VERIFYING SYSTEM MODELS BUT RATHER ON ANALYZING SOURCE CODE IN ORDER TO DISCOVER SOFTWARE FAULTS INCREASING THE DESIGNER'S CONFIDENCE THAT A PIECE OF SOFTWARE OR HARDWARE IS COMPLIANT WITH ITS SPECIFICATION HAS BECOME A KEY OBJECTIVE IN THE DESIGN PROCESS FOR SOFTWARE AND HARDWARE SYSTEMS MANY APPROACHES TO REACHING THIS GOAL HAVE BEEN DEVELOPED INCLUDING RIGOROUS SPECIFICATION FORMAL VERIFICATION AUTOMATED VALIDATION AND TESTING FINITE

STATE MODEL CHECKING AS IT IS SUPPORTED BY THE EXPLICIT STATE MODEL CHECKERSPIN IS ENJOYING A CONSTANTLY INCREASINGPOPULARITY IN AUTOMATED PROPERTY VALIDATION OF CONCURRENT MESSAGE BASED SYSTEMS SPIN HAS BEEN IN LARGE PARTS IMPLEMENTED AND IS BEING MAINTAINED BY GERARD HO MANN AND IS FREELY AVAILABLE VIA FTP FROMNETLIB BELL LABS COMOR FROM URL CM BELL LABS COM CM CS WHAT SPIN MAN README HTML THE BEAUTY OF NITE STATE MODEL CHECKING LIES IN THE POSSIBILITY OF BUILDING PUSH BUTTON VALIDATION TOOLS WHEN THE STATE SPACE IS NITE THE STATE SPACE TRAVERSAL WILL EVENTUALLY TERMINATE WITH A DE NITE VERDICT ON THE PROPERTY THAT IS BEING VALIDATED EQUALLY HELPFUL IS THE FACT THAT IN CASE THE PROPERTY IS INV IDATED THE MODEL CHECKER WILL RETURN A COUNTEREXAMPLE A FEATURE THAT GREATLY FACILITATES FAULT IDENTI CATION ON THE DOWNSIDE THE TIME IT TAKES TO OBTAIN A VERDICT MAY BE VERY LONG IF THE STATE SPACE IS LARGE AND THE TYPE OF PROPERTIES THAT CAN BE VALIDATED IS RESTRICTED TO A LOGIC OF RATHER LIMITED EXPRESSIVENESS THE REFEREED POST PROCEEDINGS OF THE 4TH WORKSHOP ON MODEL CHECKING AND ARTIFICIAL INTELLIGENCE ARE PRESENTED IN THIS VOLUME EIGHT FULL WORKSHOP PAPERS ARE PRESENTED ALONG WITH THREE POST PROCEEDINGS PAPERS PAPERS ARE ORGANIZED INTO TOPICAL SECTIONS COVERING PLANNING AND MODEL CHECKING HEURISTICS FOR REAL TIME MODEL CHECKING VERIFICATION OF MULTI AGENT SYSTEMS AND LOGICS FOR MODEL CHECKING AND ARTIFICIAL INTELLIGENCE THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 23RD INTERNATIONAL SYMPOSIUM ON MODEL CHECKING SOFTWARE SPIN 2016 HELD IN EINDHOVEN THE NETHERLANDS IN APRIL 2016 THE 16 PAPERS PRESENTED CONSISTING OF 11 REGULAR PAPERS 1 IDEA PAPER AND 4 TOOL DEMONSTRATIONS WERE CAREFULLY REVIEWED AND SELECTED FROM 27 SUBMISSIONS TOPICS COVERED INCLUDE MODEL CHECKING TECHNIQUES MODEL CHECKING TOOLS CONCURRENT SYSTEM SEMANTICS EQUIVALENCE CHECKING TEMPORAL LOGICS PROBABILISTIC SYSTEMS SCHEDULE AND STRATEGY SYNTHESIS USING MODEL CHECKING AND VERIFICATION CASE STUDIES THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2006 HELD IN VIENNA AUSTRIA IN MARCH APRIL 2006 AS SATELLITE EVENT OF ETAPS 2006 THE 16 REVISED FULL PAPERS PRESENTED TOGETHER WITH THREE TOOL PRESENTATION PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 44 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING OF SOFTWARE SPIN 2003 HELD IN PORTLAND OR USA IN MAY 2003 AS AN ICSE 2003 SATELLITE WORKSHOP THE 14 REVISED FULL PAPERS AND 3 REVISED TOOL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE BOOK PRESENTS STATE OF THE ART RESULTS ON THE ANALYSIS AND VERIFICATION OF DISTRIBUTED SOFTWARE SYSTEMS USING THE SPIN MODEL CHECKER AS ONE OF THE MOST POWERFUL AND WIDELY APPLIED SYSTEMS IT WAS OUR GREAT PLEASURE TO HOLD THE 2ND INTERNATIONAL SYMPOSIUM ONAUTOMATED TE NOLOGY ON VERI CATION AND ANALYSIS ATVA IN TAIPEI TAIWAN ROC OCTOBER 31 NOVEMBER3 2004 THESERIESOFATVAMEETINGSISINTENDEDFORTHEPROMOTIONOFRELATED RESEARCH IN EASTERN ASIA IN THE LAST DECADE AUTOMATED TECHNOLOGY ON VERI CATION HAS BECOME THE NEW STRENGTH IN INDUSTRY AND BROUGHT FORWARD VARIOUS HOT RESEARCH ACTIVITIES IN BOTH EUROPE AND USA IN COMPARISON EASTERNASIA HAS BEEN QUIET IN THE FORUM WITH MORE AND MORE IC DESIGN HOUSES MOVING FROM SILICONVALLEY TO EASTERNASIA WE BELIEVE THIS IS A GOOD TIME TO START CULTIVATING RELATED RESEARCH ACTIVITIES IN THE REGION THEEMPHASISOFTHEATVAWORKSHOPSERIESISONVARIOUSMECHANICALANDINFORMATIVE TECHNIQUES WHICH CAN GIVE ENGINEERS VALUABLE FEEDBACK TO FAST CONVERGE THEIR DESIGNS ACCORDING TO THE SPECI CATIONS THE SCOPE OF INTEREST CONTAINS THE FOLLOWING RESEARCH EAS MODEL CHECKING THEORY THEOREM PROVING THEORY STATE SPACE REDUCTION TECHNIQUES LANGUAGES IN AUTOMATED VERI CATION PARAMETRIC ANALYSIS OPTIMIZATION FORMAL PERF MANCE ANALYSIS REAL TIME SYSTEMS EMBEDDED SYSTEMS IN NITE STATE SYSTEMS PETRI NETS UML SYNTHESIS TOOLS AND PRACTICE IN INDUSTRY THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 8TH INTERNATIONAL SPIN WORKSHOP HELD IN TORONTO CANADA IN MAY 2001 THE SPIN MODEL CHECKER IS ONE OF THE MOST POWERFUL AND POPULAR SYSTEMS FOR THE ANALYSIS AND VERIFICATION OF DISTRIBUTED AND CONCURRENT SYSTEMS THE 13 REVISED FULL PAPERS PRESENTED TOGETHER WITH ONE INVITED SURVEY PAPER AND THREE INVITED INDUSTRIAL EXPERIENCE REPORTS WERE CAREFULLY REVIEWED AND SELECTED FROM 26 SUBMISSIONS BESIDES FOUNDATIONAL ISSUES OF PROGRAM ANALYSIS AND FORMAL VERIFICATION THE PAPERS FOCUS ON TOOLS FOR MODEL CHECKING AND PRACTICAL APPLICATIONS IN A VARIETY OF FIELDS THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING OF SOFTWARE SPIN 2003 HELD IN PORTLAND OR USA IN MAY 2003 AS AN ICSE 2003 SATELLITE WORKSHOP THE 14 REVISED FULL PAPERS AND 3 REVISED TOOL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE BOOK PRESENTS STATE OF THE ART RESULTS ON THE ANALYSIS AND VERIFICATION OF DISTRIBUTED SOFTWARE SYSTEMS USING THE SPIN MODEL CHECKER AS ONE OF THE MOST POWERFUL AND WIDELY APPLIED SYSTEMS THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2012 HELD IN PHILADELPHIA PA USA IN JANUARY 2012 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2012 THE 26 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 70 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION STATIC ANALYSIS DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES ABSTRACT DOMAINS TYPE SYSTEMS AND OPTIMIZATION THE THIRD INTERNATIONAL CONFERENCE ON INFORMATION SYSTEMS DESIGN AND INTELLIGENT APPLICATIONS INDIA 2016 HELD IN VISAKHAPATNAM INDIA DURING JANUARY 8 9 2016 THE BOOK COVERS ALL ASPECTS OF INFORMATION SYSTEM DESIGN COMPUTER SCIENCE AND TECHNOLOGY GENERAL SCIENCES AND EDUCATIONAL RESEARCH UPON A DOUBLE BLIND REVIEW PROCESS A NUMBER OF HIGH QUALITY PAPERS ARE SELECTED AND COLLECTED IN THE BOOK WHICH IS COMPOSED OF THREE DIFFERENT VOLUMES AND COVERS A VARIETY OF TOPICS INCLUDING NATURAL LANGUAGE PROCESSING ARTIFICIAL INTELLIGENCE SECURITY AND PRIVACY COMMUNICATIONS WIRELESS AND SENSOR NETWORKS MICROELECTRONICS CIRCUIT AND SYSTEMS MACHINE LEARNING SOFT COMPUTING MOBILE COMPUTING AND APPLICATIONS CLOUD COMPUTING SOFTWARE ENGINEERING GRAPHICS AND IMAGE PROCESSING RURAL ENGINEERING E COMMERCE E GOVERNANCE BUSINESS COMPUTING MOLECULAR COMPUTING NANO COMPUTING CHEMICAL COMPUTING INTELLIGENT C

COMPUTER RESEARCHERS BUT ALSO INCLUDE MATHEMATICS CHEMISTRY BIOLOGY BIO CHEMISTRY ENGINEERING STATISTICS AND ALL OTHERS IN WHICH COMPUTER TECHNIQUES MAY ASSIST THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED POST CONFERENCE PROCEEDINGS OF THE 6TH INTERNATIONAL HAIFA VERIFICATION CONFERENCE HVC 2010 HELD IN HAIFA ISRAEL IN OCTOBER 2010 THE 10 REVISED FULL PAPERS PRESENTED TOGETHER WITH 7 INVITED PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE PAPERS ADDRESS ALL CURRENT ISSUES CHALLENGES AND FUTURE DIRECTIONS OF VERIFICATION FOR HARDWARE SOFTWARE AND HYBRID SYSTEMS AND HAVE A RESEARCH FOCUS ON HYBRID METHODS AND THE MIGRATION OF METHODS AND IDEAS BETWEEN HARDWARE AND SOFTWARE STATIC AND DYNAMIC ANALYSIS PRE AND POST SILICON

SAT-BASED SCALABLE FORMAL VERIFICATION SOLUTIONS

2007-05-26

THIS BOOK PROVIDES AN ENGINEERING INSIGHT INTO HOW TO PROVIDE A SCALABLE AND ROBUST VERIFICATION SOLUTION WITH EVER INCREASING DESIGN COMPLEXITY AND SIZES IT DESCRIBES SAT BASED MODEL CHECKING APPROACHES AND GIVES ENGINEERING DETAILS ON WHAT MAKES MODEL CHECKING PRACTICAL THE BOOK BRINGS TOGETHER THE VARIOUS SAT BASED SCALABLE EMERGING TECHNOLOGIES AND TECHNIQUES COVERED CAN BE SYNERGISTICALLY COMBINED INTO A SCALABLE SOLUTION

ABSTRACTION REFINEMENT FOR LARGE SCALE MODEL CHECKING

2006-09-15

THIS BOOK SUMMARIZES RECENT RESEARCH ON ABSTRACTION TECHNIQUES FOR MODEL CHECKING LARGE DIGITAL SYSTEM CONSIDERING THE SIZE OF TODAY S DIGITAL SYSTEMS AND THE CAPACITY OF STATE OF THE ART VERIFICATION ALGORITHMS ABSTRACTION IS THE ONLY VIABLE SOLUTION FOR THE SUCCESSFUL APPLICATION OF MODEL CHECKING TECHNIQUES TO INDUSTRIAL SCALE DESIGNS THE SUITE OF ALGORITHMS PRESENTED HERE REPRESENTS SIGNIFICANT IMPROVEMENT OVER PRIOR ART SOME HAVE ALREADY BEEN ADOPTED BY THE EDA COMPANIES IN THEIR COMMERCIAL IN HOUSE VERIFICATION TOOLS

SAT-BASED SCALABLE FORMAL VERIFICATION SOLUTIONS

2008-11-01

THIS BOOK PROVIDES AN ENGINEERING INSIGHT INTO HOW TO PROVIDE A SCALABLE AND ROBUST VERIFICATION SOLUTION WITH EVER INCREASING DESIGN COMPLEXITY AND SIZES IT DESCRIBES SAT BASED MODEL CHECKING APPROACHES AND GIVES ENGINEERING DETAILS ON WHAT MAKES MODEL CHECKING PRACTICAL THE BOOK BRINGS TOGETHER THE VARIOUS SAT BASED SCALABLE EMERGING TECHNOLOGIES AND TECHNIQUES COVERED CAN BE SYNERGISTICALLY COMBINED INTO A SCALABLE SOLUTION

SPIN MODEL CHECKING AND SOFTWARE VERIFICATION

2006-12-31

THE SPIN WORKSHOP IS A FORUM FOR RESEARCHERS INTERESTED IN THE SUBJECT OF AUTOMATA BASED EXPLICIT STATE MODEL CHECKING TECHNOLOGIES FOR THE ANALYSIS AND VERI CATION OF ASYNCHRONOUS CONCURRENT AND DISTRIBUTED SYSTEMS THE SPIN DEL CHECKER NETLIB BELL LABS COM NETLIB SPIN WHATISPIN HTML DEVELOPED BY GERARD HOLZMANN IS ONE OF THE BEST KNOWN SYSTEMS OF THIS KIND AND HAS ATTRACTED A LARGE USER COMMUNITY THIS CAN LIKELY BE ATTRIBUTED TO ITS E CIENT STATE EXPLORATION ALGORITHMS THE FACT THAT SPIN S MODELING LANGUAGE PROMELA RESEMBLES A PROGRAMMING LANGUAGE HAS PROBABLY ALSO CONTRIBUTED TO ITS SUCCESS TRADITIONALLY THE SPIN WORKSHOPS PRESENT PAPERS ON EXTENSIONS AND USES OF SPIN AS AN EXPERIMENT THIS YEAR S WORKSHOP WAS BROADENED TO HAVE A SLIGHTLY WIDER FOCUS THAN PREVIOUS WORKSHOPS IN THAT PAPERS ON SOFTWARE VERI CATION WERE ENCOURAGED CONSEQUENTLY A SMALL COLLECTION OF PAPERS DESCRIBE ATTEMPTS TO ANALYZE AND VERIFY PROGRAMS WRITTEN IN CONVENTIONAL PROGRAMMING LANGUAGES SOLUTIONS INCLUDE TRANSLATIONS FROM SOURCE CODE TO PROMELA AS WELL AS SPECIALLY DESIGNED MODEL CHECKERS THAT ACCEPT SOURCE CODE WE BELIEVE THAT THIS IS AN TERESTING RESEARCH DIRECTION FOR THE FORMAL METHODS COMMUNITY AND THAT IT WILL RESULT IN A NEW SET OF CHALLENGES AND SOLUTIONS OF COURSE ABSTRACTION BECOMES THE KEY SOLUTION TO DEAL WITH VERY LARGE STATE SPACES HOWEVER WE ALSO SEE TENTIAL FOR INTEGRATING MODEL CHECKING WITH TECHNIQUES SUCH AS STATIC PROGRAM ANALYSIS AND TESTING PAPERS ON THESE ISSUES HAVE THEREFORE BEEN INCLUDED IN THE PROCEEDINGS

MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

2007-08-28

THE REFEREED POST PROCEEDINGS OF THE 4TH WORKSHOP ON MODEL CHECKING AND ARTIFICIAL INTELLIGENCE ARE PRESENTED IN THIS VOLUME EIGHT FULL WORKSHOP PAPERS ARE PRESENTED ALONG WITH THREE POST PROCEEDINGS PAPERS PAPERS ARE ORGANIZED INTO TOPICAL SECTIONS COVERING PLANNING AND MODEL CHECKING HEURISTICS FOR REAL TIME MODEL CHECKING VERIFICATION OF MULTI AGENT SYSTEMS AND LOGICS FOR MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

MODEL CHECKING SOFTWARE

2018-06-15

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 25TH INTERNATIONAL SYMPOSIUM ON MODEL CHECKING SOFTWARE SPIN 2018 HELD IN MALAGA SPAIN IN JUNE 2018 THE 14 PAPERS PRESENTED 1 SHORT PAPER AND 1 DEMO TOOL PAPER WERE CAREFULLY REVIEWED AND SELECTED FROM 28 SUBMISSIONS TOPICS COVERED INCLUDE FORMAL VERIFICATION TECHNIQUES FOR AUTOMATED ANALYSIS OF SOFTWARE FORMAL ANALYSIS FOR MODELING LANGUAGES SUCH AS UML STATE CHARTS FORMAL SPECIFICATION LANGUAGES TEMPORAL LOGIC DESIGN BY CONTRACT MODEL CHECKING AUTOMATED THEOREM PROVING INCLUDING SAT AND SMT VERIFYING COMPILERS ABSTRACTION AND SYMBOLIC EXECUTION TECHNIQUES AND MUCH MORE

MODEL CHECKING SOFTWARE

2013-05-30

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 20TH INTERNATIONAL SYMPOSIUM ON MODEL CHECKING SOFTWARE SPIN 2013 HELD IN STONY BROOK NY USA IN JULY 2013 THE 18 REGULAR PAPERS 2 TOOL DEMONSTRATION PAPERS AND 2 INVITED PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 40 SUBMISSIONS THE TRADITIONAL FOCUS OF SPIN HAS BEEN ON EXPLICIT STATE MODEL CHECKING TECHNIQUES AS IMPLEMENTED IN SPIN AND OTHER RELATED TOOLS WHILE SUCH TECHNIQUES ARE STILL OF KEY INTEREST TO THE WORKSHOP ITS SCOPE HAS BROADENED OVER RECENT YEARS TO INCLUDE TECHNIQUES FOR THE VERIFICATION AND FORMAL TESTING OF SOFTWARE SYSTEMS IN GENERAL

STOCHASTIC MODEL CHECKING

2014-11-03

THE USE OF STOCHASTIC MODELS IN COMPUTER SCIENCE IS WIDE SPREAD FOR INSTANCE IN PERFORMANCE MODELING ANALYSIS OF RANDOMIZED ALGORITHMS AND COMMUNICATION PROTOCOLS WHICH FORM THE STRUCTURE OF THE INTERNET STOCHASTIC MODEL CHECKING IS AN IMPORTANT FIELD IN STOCHASTIC ANALYSIS IT HAS RAPIDLY GAINED POPULARITY DUE TO ITS POWERFUL AND SYSTEMATIC METHODS TO MODEL AND ANALYZE STOCHASTIC SYSTEMS THIS BOOK PRESENTS 7 TUTORIAL LECTURES GIVEN BY LEADING SCIENTISTS AT THE ROCKS AUTUMN SCHOOL ON STOCHASTIC MODEL CHECKING HELD IN VAHRN ITALY IN OCTOBER 2012 THE 7 CHAPTERS OF THIS TUTORIAL WENT THROUGH TWO ROUNDS OF REVIEWING AND IMPROVEMENT AND ARE SUMMARIZING THE STATE OF THE ART IN THE FIELD CENTERED AROUND THE TREE AREAS OF STOCHASTIC MODELS ABSTRACTION TECHNIQUES AND STOCHASTIC MODEL CHECKING

SPIN MODEL CHECKING AND SOFTWARE VERIFICATION

2000-08-21

THE SPIN WORKSHOP IS A FORUM FOR RESEARCHERS INTERESTED IN THE SUBJECT OF AUTOMATA BASED EXPLICIT STATE MODEL CHECKING TECHNOLOGIES FOR THE ANALYSIS AND VERIFICATION OF ASYNCHRONOUS CONCURRENT AND DISTRIBUTED SYSTEMS THE SPIN DEL CHECKER NETLIB BELL LABS COM NETLIB SPIN WHATISPIN HTML DEVELOPED BY GERARD HOLZMANN IS ONE OF THE BEST KNOWN SYSTEMS OF THIS KIND AND HAS ATTRACTED A LARGE USER COMMUNITY THIS CAN LIKELY BE ATTRIBUTED TO ITS EFFICIENT STATE EXPLORATION ALGORITHMS THE FACT THAT SPIN S MODELING LANGUAGE PROMELA RESEMBLES A PROGRAMMING LANGUAGE HAS PROBABLY ALSO CONTRIBUTED TO ITS SUCCESS TRADITIONALLY THE SPIN WORKSHOPS PRESENT PAPERS ON EXTENSIONS AND USES OF SPIN AS AN EXPERIMENT THIS YEAR S WORKSHOP WAS BROADENED TO HAVE A SLIGHTLY WIDER FOCUS THAN PREVIOUS WORKSHOPS IN THAT PAPERS ON SOFTWARE VERIFICATION WERE ENCOURAGED CONSEQUENTLY A SMALL COLLECTION OF PAPERS DESCRIBE ATTEMPTS TO ANALYZE AND VERIFY PROGRAMS WRITTEN IN CONVENTIONAL PROGRAMMING LANGUAGES SOLUTIONS INCLUDE TRANSLATIONS FROM SOURCE CODE TO PROMELA AS WELL AS SPECIALLY DESIGNED MODEL CHECKERS THAT ACCEPT SOURCE CODE WE BELIEVE THAT THIS IS AN INTERESTING RESEARCH DIRECTION FOR THE FORMAL METHODS COMMUNITY AND THAT IT WILL RESULT IN A NEW SET OF CHALLENGES AND SOLUTIONS OF COURSE ABSTRACTION BECOMES THE KEY SOLUTION TO DEAL WITH VERY LARGE STATE SPACES HOWEVER WE ALSO SEE POTENTIAL FOR INTEGRATING MODEL CHECKING WITH TECHNIQUES SUCH AS STATIC PROGRAM ANALYSIS AND TESTING PAPERS ON THESE ISSUES HAVE THEREFORE BEEN INCLUDED IN THE PROCEEDINGS

PRINCIPLES OF MODEL CHECKING

2008-04-25

A COMPREHENSIVE INTRODUCTION TO THE FOUNDATIONS OF MODEL CHECKING A FULLY AUTOMATED TECHNIQUE FOR FINDING FLAWS IN HARDWARE AND SOFTWARE WITH EXTENSIVE EXAMPLES AND BOTH PRACTICAL AND THEORETICAL EXERCISES OUR GROWING DEPENDENCE ON INCREASINGLY COMPLEX COMPUTER AND SOFTWARE SYSTEMS NECESSITATES THE DEVELOPMENT OF FORMALISMS TECHNIQUES AND TOOLS FOR ASSESSING FUNCTIONAL PROPERTIES OF THESE SYSTEMS

2023-09-03

7/14

ONE SUCH TECHNIQUE THAT HAS EMERGED IN THE LAST TWENTY YEARS IS MODEL CHECKING WHICH SYSTEMATICALLY AND AUTOMATICALLY CHECKS WHETHER A MODEL OF A GIVEN SYSTEM SATISFIES A DESIRED PROPERTY SUCH AS DEADLOCK FREEDOM INVARIANTS AND REQUEST RESPONSE PROPERTIES THIS AUTOMATED TECHNIQUE FOR VERIFICATION AND DEBUGGING HAS DEVELOPED INTO A MATURE AND WIDELY USED APPROACH WITH MANY APPLICATIONS PRINCIPLES OF MODEL CHECKING OFFERS A COMPREHENSIVE INTRODUCTION TO MODEL CHECKING THAT IS NOT ONLY A TEXT SUITABLE FOR CLASSROOM USE BUT ALSO A VALUABLE REFERENCE FOR RESEARCHERS AND PRACTITIONERS IN THE FIELD THE BOOK BEGINS WITH THE BASIC PRINCIPLES FOR MODELING CONCURRENT AND COMMUNICATING SYSTEMS INTRODUCES DIFFERENT CLASSES OF PROPERTIES INCLUDING SAFETY AND LIVENESS PRESENTS THE NOTION OF FAIRNESS AND PROVIDES AUTOMATA BASED ALGORITHMS FOR THESE PROPERTIES IT INTRODUCES THE TEMPORAL LOGICS LTL AND CTL COMPARES THEM AND COVERS ALGORITHMS FOR VERIFYING THESE LOGICS DISCUSSING REAL TIME SYSTEMS AS WELL AS SYSTEMS SUBJECT TO RANDOM PHENOMENA SEPARATE CHAPTERS TREAT SUCH EFFICIENCY IMPROVING TECHNIQUES AS ABSTRACTION AND SYMBOLIC MANIPULATION THE BOOK INCLUDES AN EXTENSIVE SET OF EXAMPLES MOST OF WHICH RUN THROUGH SEVERAL CHAPTERS AND A COMPLETE SET OF BASIC RESULTS ACCOMPANIED BY DETAILED PROOFS EACH CHAPTER CONCLUDES WITH A SUMMARY BIBLIOGRAPHIC NOTES AND AN EXTENSIVE LIST OF EXERCISES OF BOTH PRACTICAL AND THEORETICAL NATURE

MODEL CHECKING SOFTWARE

2009-06-19

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 16TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2009 HELD IN GRENoble FRANCE IN JUNE 2009 THE 15 REVISED FULL PAPERS PRESENTED TOGETHER WITH 3 TOOL PAPERS AND 4 INVITED TALKS WERE CAREFULLY REVIEWED AND SELECTED FROM 41 SUBMISSIONS THE PAPERS COVER THEORETICAL AND ALGORITHMIC FOUNDATIONS AS WELL AS TOOLS FOR SOFTWARE MODEL CHECKING BY ADDRESSING THEORETICAL ADVANCES AND EMPIRICAL EVALUATIONS RELATED TO STATE SPACE AND PATH EXPLORATION TECHNIQUES AS IMPLEMENTED IN SOFTWARE VERIFICATION TOOLS

MODEL CHECKING SOFTWARE

2001-05-02

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 8TH INTERNATIONAL SPIN WORKSHOP HELD IN TORONTO CANADA IN MAY 2001 THE SPIN MODEL CHECKER IS ONE OF THE MOST POWERFUL AND POPULAR SYSTEMS FOR THE ANALYSIS AND VERIFICATION OF DISTRIBUTED AND CONCURRENT SYSTEMS THE 13 REVISED FULL PAPERS PRESENTED TOGETHER WITH ONE INVITED SURVEY PAPER AND THREE INVITED INDUSTRIAL EXPERIENCE REPORTS WERE CAREFULLY REVIEWED AND SELECTED FROM 26 SUBMISSIONS BESIDES FOUNDATIONAL ISSUES OF PROGRAM ANALYSIS AND FORMAL VERIFICATION THE PAPERS FOCUS ON TOOLS FOR MODEL CHECKING AND PRACTICAL APPLICATIONS IN A VARIETY OF FIELDS

MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

2009-02-27

THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED POST WORKSHOP PROCEEDINGS OF THE 5TH WORKSHOP ON MODEL CHECKING AND ARTIFICIAL INTELLIGENCE MOCHART 2008 HELD IN PATRAS GREECE IN JULY 2008 AS A SATELLITE EVENT OF ECAI 2008 THE 18TH BIANNUAL EUROPEAN CONFERENCE ON ARTIFICIAL INTELLIGENCE THE 9 REVISED FULL WORKSHOP PAPERS PRESENTED TOGETHER WITH 2 INVITED LECTURES HAVE GONE THROUGH TWO ROUNDS OF REVIEWING AND IMPROVEMENT AND WERE CAREFULLY SELECTED FOR INCLUSION IN THE BOOK THE WORKSHOP COVERS ALL IDEAS RESEARCH EXPERIMENTS AND TOOLS THAT RELATE TO BOTH MC AND AI FIELDS

MODEL CHECKING SOFTWARE

2003-04-28

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING OF SOFTWARE SPIN 2003 HELD IN PORTLAND OR USA IN MAY 2003 AS AN ICSE 2003 SATELLITE WORKSHOP THE 14 REVISED FULL PAPERS AND 3 REVISED TOOL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE BOOK PRESENTS STATE OF THE ART RESULTS ON THE ANALYSIS AND VERIFICATION OF DISTRIBUTED SOFTWARE SYSTEMS USING THE SPIN MODEL CHECKER AS ONE OF THE MOST POWERFUL AND WIDELY APPLIED SYSTEMS

MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

2009-02-25

THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED POST WORKSHOP PROCEEDINGS OF THE 6TH WORKSHOP ON MODEL
2023-09-03 8/14

CHECKING AND ARTIFICIAL INTELLIGENCE MOCHART 2008 HELD IN PATRAS GREECE IN JULY 2008 AS A SATELLITE EVENT OF ECAI 2008 THE 18TH BIANNUAL EUROPEAN CONFERENCE ON ARTIFICIAL INTELLIGENCE THE 9 REVISED FULL WORKSHOP PAPERS PRESENTED TOGETHER WITH 2 INVITED LECTURES HAVE GONE THROUGH TWO ROUNDS OF REVIEWING AND IMPROVEMENT AND WERE CAREFULLY SELECTED FOR INCLUSION IN THE BOOK THE WORKSHOP COVERS ALL IDEAS RESEARCH EXPERIMENTS AND TOOLS THAT RELATE TO BOTH MC AND AI FIELDS

MODEL CHECKING SOFTWARE

2008-08-17

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 15TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2008 HELD IN LOS ANGELES CA USA IN AUGUST 2008 THE 17 REVISED FULL PAPERS PRESENTED TOGETHER WITH 1 TOOL PAPER AND 4 INVITED TALKS WERE CAREFULLY REVIEWED AND SELECTED FROM 41 SUBMISSIONS THE MAIN FOCUS OF THE WORKSHOP SERIES IS SOFTWARE SYSTEMS INCLUDING MODELS AND PROGRAMS THE PAPERS COVER THEORETICAL AND ALGORITHMIC FOUNDATIONS AS WELL AS TOOLS FOR SOFTWARE MODEL CHECKING AND FOSTER INTERACTIONS AND EXCHANGES OF IDEAS WITH RELATED AREAS IN SOFTWARE ENGINEERING SUCH AS STATIC ANALYSIS DYNAMIC ANALYSIS AND TESTING

VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION

2005-12-13

THE 27 REVISED FULL PAPERS PRESENTED HERE TOGETHER WITH ONE INVITED PAPER WERE CAREFULLY REVIEWED AND SELECTED FROM 58 SUBMISSIONS THE PAPERS FEATURE CURRENT RESEARCH FROM THE COMMUNITIES OF VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION FACILITATING INTERACTION CROSS FERTILIZATION AND ADVANCEMENT OF HYBRID METHODS

MODEL CHECKING SOFTWARE

2006-03-29

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2006 HELD IN VIENNA AUSTRIA IN MARCH APRIL 2006 AS SATELLITE EVENT OF ETAPS 2006 THE 16 REVISED FULL PAPERS PRESENTED TOGETHER WITH THREE TOOL PRESENTATION PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 44 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS

VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION

2013-01-03

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 14TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2013 HELD IN ROME ITALY IN JANUARY 2013 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2013 THE 27 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 72 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION AND ABSTRACT DOMAINS PROGRAM SYNTHESIS STATIC ANALYSIS TYPE SYSTEM DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES PROGRAM TRANSFORMATION OPTIMIZATION HYBRID AND CYBER PHYSICAL SYSTEMS

MODEL CHECKING, SYNTHESIS, AND LEARNING

2021-12-02

THIS FESTSCHRIFT DEDICATED TO BENGT JONSSON ON THE OCCASION OF HIS 60TH BIRTHDAY CONTAINS PAPERS WRITTEN BY MANY OF HIS FRIENDS AND COLLABORATORS BENGT HAS MADE MAJOR CONTRIBUTIONS COVERING A WIDE RANGE OF TOPICS INCLUDING VERIFICATION AND LEARNING HIS WORKS ON VERIFICATION IN FINITE STATE SYSTEMS LEARNING TESTING PROBABILISTIC SYSTEMS TIMED SYSTEMS AND DISTRIBUTED SYSTEMS REFLECT BOTH THE DIVERSITY AND THE DEPTH OF HIS RESEARCH BESIDES BEING AN EXCELLENT SCIENTIST BENGT IS ALSO A LEADER WHO HAS GREATLY INFLUENCED THE CAREERS OF BOTH HIS STUDENTS AND HIS COLLEAGUES HIS MAIN FOCUS THROUGHOUT HIS CAREER HAS BEEN IN THE AREA OF FORMAL METHODS AND THE RESEARCH PAPERS DEDICATED TO HIM IN THIS VOLUME ADDRESS RELATED TOPICS PARTICULARLY RELATED TO MODEL CHECKING TEMPORAL LOGIC AND AUTOMATA LEARNING

VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION

2012-01-12

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2012 HELD IN PHILADELPHIA PA USA IN JANUARY 2012 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2012 THE 26 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 70 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION STATIC ANALYSIS DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES ABSTRACT DOMAINS TYPE SYSTEMS AND OPTIMIZATION

REGULAR MODEL CHECKING

2000

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 8TH INTERNATIONAL SPIN WORKSHOP HELD IN TORONTO CANADA IN MAY 2001 THE SPIN MODEL CHECKER IS ONE OF THE MOST POWERFUL AND POPULAR SYSTEMS FOR THE ANALYSIS AND VERIFICATION OF DISTRIBUTED AND CONCURRENT SYSTEMS THE 13 REVISED FULL PAPERS PRESENTED TOGETHER WITH ONE INVITED SURVEY PAPER AND THREE INVITED INDUSTRIAL EXPERIENCE REPORTS WERE CAREFULLY REVIEWED AND SELECTED FROM 26 SUBMISSIONS BESIDES FOUNDATIONAL ISSUES OF PROGRAM ANALYSIS AND FORMAL VERIFICATION THE PAPERS FOCUS ON TOOLS FOR MODEL CHECKING AND PRACTICAL APPLICATIONS IN A VARIETY OF FIELDS

MODEL CHECKING SOFTWARE

2003-06-29

THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED PROCEEDINGS OF THE 19TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2012 HELD IN OXFORD UK IN JULY 2012 THE 11 REVISED FULL PAPERS PRESENTED TOGETHER WITH 5 TOOL PAPERS AND 4 INVITED TALKS WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE PAPERS ARE GROUPED IN TOPICAL SECTIONS ON MODEL CHECKING TECHNIQUES PARALLEL MODEL CHECKING CASE STUDIES MODEL CHECKING FOR CONCURRENCY AND TOOL DEMONSTRATIONS

MODEL CHECKING SOFTWARE

2012-07-18

THE BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION VMCAI 2009 HELD IN SAVANNAH GA USA IN JANUARY 2009 CO LOCATED WITH POPL 2009 THE 36TH ANNUAL SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES THE 24 REVISED FULL PAPERS PRESENTED TOGETHER WITH 3 INVITED TALKS AND 2 INVITED TUTORIALS WERE CAREFULLY REVIEWED AND SELECTED FROM 72 SUBMISSIONS THE PAPERS ADDRESS ALL CURRENT ISSUES FROM THE COMMUNITIES OF VERIFICATION MODEL CHECKING AND ABSTRACT INTERPRETATION FACILITATING INTERACTION CROSS FERTILIZATION AND ADVANCEMENT OF HYBRID METHODS THAT COMBINE THE THREE AREAS

VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION

2009-02-13

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 18TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2011 HELD IN SNOWBIRD UT USA IN JULY 2011 THE 10 REVISED FULL PAPERS PRESENTED TOGETHER WITH 2 TOOL DEMONSTRATION PAPERS AND 1 INVITED CONTRIBUTION WERE CAREFULLY REVIEWED AND SELECTED FROM 29 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS ON ABSTRACTIONS AND STATE SPACE REDUCTIONS SEARCH STRATEGIES PROMELA ENCODINGS AND EXTENSIONS AND APPLICATIONS OF MODEL CHECKING

MODEL CHECKING SOFTWARE

2011-07-05

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 11TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2004 HELD IN BARCELONA SPAIN IN APRIL 2004 THE 19 REVISED FULL PAPERS PRESENTED TOGETHER WITH THE ABSTRACTS OF AN INVITED TALK AND 2 TUTORIALS WERE CAREFULLY REVIEWED AND SELECTED FROM 48 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS ON HEURISTICS AND PROBABILITIES IMPROVEMENTS OF SPIN VALIDATION OF TIMED SYSTEMS TOOL PRESENTATIONS ABSTRACTION AND SYMBOLIC METHODS AND APPLICATIONS

2023-09-03

10/14

FOX IN SOCKS DR SEUSSS OF TONGUE
TANGLERS BRIGHT EARLY BOARD BOOKS

MODEL CHECKING SOFTWARE

2004-03-18

THE SPIN WORKSHOP SERIES BRINGS TOGETHER RESEARCHERS AND PRACTITIONERS INTERESTED IN EXPLICIT STATE MODEL CHECKING TECHNOLOGY AS IT IS APPLIED TO THE VERIFICATION OF SOFTWARE SYSTEMS SINCE 1995 WHEN THE SPIN WORKSHOP SERIES WAS INSTIGATED SPIN WORKSHOPS HAVE BEEN HELD ON AN ANNUAL BASIS AT MONTREAL 1995 NEW BRUNSWICK 1996 ENSCHEDE 1997 PARIS 1998 TRENTO 1999 TOULOUSE 1999 STANFORD 2000 AND TORONTO 2001 WHILE THE FIRST SPIN WORKSHOP WAS A STAND ALONE EVENT LATER WORKSHOPS HAVE BEEN ORGANIZED AS MORE OR LESS CLOSELY RELATED EVENTS WITH LARGER CONFERENCES IN PARTICULAR WITH CAV 1996 TACAS 1997 FORTE PSTV 1998 FLOC 1999 WORLD CONGRESS ON FORMAL METHODS 1999 FMOODS 2000 AND ICSE 2001 THIS YEAR SPIN 2002 WAS HELD AS A SATELLITE EVENT OF ETAPS 2002 THE EUROPEAN JOINT CONFERENCES ON THEORY AND PRACTICE OF SOFTWARE THE COLOCATION OF SPIN WORKSHOPS WITH CONFERENCES HAS PROVEN TO BE VERY SUCCESSFUL AND HAS HELPED TO DISSEMINATE SPIN MODEL CHECKING TECHNOLOGY TO WIDER AUDIENCES SINCE 1999 THE PROCEEDINGS OF THE SPIN WORKSHOPS HAVE APPEARED IN SPRINGER VERLAG'S LECTURE NOTES IN COMPUTER SCIENCE SERIES THE HISTORY OF SUCCESSFUL SPIN WORKSHOPS IS EVIDENCE FOR THE MATURING OF MODEL CHECKING TECHNOLOGY NOT ONLY IN THE HARDWARE DOMAIN BUT INCREASINGLY ALSO IN THE SOFTWARE AREA WHILE IN EARLIER YEARS ALGORITHMS AND TOOL DEVELOPMENT AROUND THE SPIN MODEL CHECKER WERE THE FOCUS OF THIS WORKSHOP SERIES THE SCOPE HAS RECENTLY WIDENED TO INCLUDE MORE GENERAL APPROACHES TO SOFTWARE MODEL CHECKING CURRENT RESEARCH IN THIS AREA CONCENTRATES NOT SO MUCH ON COMPLETELY VERIFYING SYSTEM MODELS BUT RATHER ON ANALYZING SOURCE CODE IN ORDER TO DISCOVER SOFTWARE FAULTS

MODEL CHECKING SOFTWARE

2002-03-27

INCREASING THE DESIGNER'S CONFIDENCE THAT A PIECE OF SOFTWARE OR HARDWARE IS COMPLIANT WITH ITS SPECIFICATION HAS BECOME A KEY OBJECTIVE IN THE DESIGN PROCESS FOR SOFTWARE AND HARDWARE SYSTEMS MANY APPROACHES TO REACHING THIS GOAL HAVE BEEN DEVELOPED INCLUDING RIGOROUS SPECIFICATION FORMAL VERIFICATION AUTOMATED VALIDATION AND TESTING FINITE STATE MODEL CHECKING AS IT IS SUPPORTED BY THE EXPLICIT STATE MODEL CHECKER SPIN IS ENJOYING A CONSTANTLY INCREASING POPULARITY IN AUTOMATED PROPERTY VALIDATION OF CONCURRENT MESSAGE BASED SYSTEMS SPIN HAS BEEN IN LARGE PARTS IMPLEMENTED AND IS BEING MAINTAINED BY GERARD HO-MANN AND IS FREELY AVAILABLE VIA FTP FROM NETLIB BELL LABS COM OR FROM URL [CM BELL LABS COM CM CS WHAT SPIN MAN README HTML](http://cm.bell-labs.com/cm/cs/what/spin-man/README.html) THE BEAUTY OF FINITE STATE MODEL CHECKING LIES IN THE POSSIBILITY OF BUILDING PUSH-BUTTON VALIDATION TOOLS WHEN THE STATE SPACE IS FINITE THE STATE SPACE TRAVERSAL WILL EVENTUALLY TERMINATE WITH A DEFINITE VERDICT ON THE PROPERTY THAT IS BEING VALIDATED EQUALLY HELPFUL IS THE FACT THAT IN CASE THE PROPERTY IS INVALIDATED THE MODEL CHECKER WILL RETURN A COUNTEREXAMPLE A FEATURE THAT GREATLY FACILITATES FAULT IDENTIFICATION ON THE DOWNSIDE THE TIME IT TAKES TO OBTAIN A VERDICT MAY BE VERY LONG IF THE STATE SPACE IS LARGE AND THE TYPE OF PROPERTIES THAT CAN BE VALIDATED IS RESTRICTED TO A LOGIC OF RATHER LIMITED EXPRESSIVENESS

MODEL CHECKING NONDETERMINISTIC AND RANDOMLY TIMED SYSTEMS

2010

THE REFEREED POST PROCEEDINGS OF THE 4TH WORKSHOP ON MODEL CHECKING AND ARTIFICIAL INTELLIGENCE ARE PRESENTED IN THIS VOLUME EIGHT FULL WORKSHOP PAPERS ARE PRESENTED ALONG WITH THREE POST PROCEEDINGS PAPERS PAPERS ARE ORGANIZED INTO TOPICAL SECTIONS COVERING PLANNING AND MODEL CHECKING HEURISTICS FOR REAL TIME MODEL CHECKING VERIFICATION OF MULTI-AGENT SYSTEMS AND LOGICS FOR MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

THEORETICAL AND PRACTICAL ASPECTS OF SPIN MODEL CHECKING

2003-05-21

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 23RD INTERNATIONAL SYMPOSIUM ON MODEL CHECKING SOFTWARE SPIN 2016 HELD IN EINDHOVEN THE NETHERLANDS IN APRIL 2016 THE 16 PAPERS PRESENTED CONSISTING OF 11 REGULAR PAPERS 1 IDEA PAPER AND 4 TOOL DEMONSTRATIONS WERE CAREFULLY REVIEWED AND SELECTED FROM 27 SUBMISSIONS TOPICS COVERED INCLUDE MODEL CHECKING TECHNIQUES MODEL CHECKING TOOLS CONCURRENT SYSTEM SEMANTICS EQUIVALENCE CHECKING TEMPORAL LOGICS PROBABILISTIC SYSTEMS SCHEDULE AND STRATEGY SYNTHESIS USING MODEL CHECKING AND VERIFICATION CASE STUDIES

MODEL CHECKING AND ARTIFICIAL INTELLIGENCE

2007-08-09

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING SOFTWARE SPIN 2006 HELD IN VIENNA AUSTRIA IN MARCH APRIL 2006 AS SATELLITE EVENT OF ETAPS 2006 THE 16 REVISED FULL PAPERS PRESENTED TOGETHER WITH THREE TOOL PRESENTATION PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 44 SUBMISSIONS THE PAPERS ARE ORGANIZED IN TOPICAL SECTIONS

MODEL CHECKING SOFTWARE

2016-04-07

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING OF SOFTWARE SPIN 2003 HELD IN PORTLAND OR USA IN MAY 2003 AS AN ICSE 2003 SATELLITE WORKSHOP THE 14 REVISED FULL PAPERS AND 3 REVISED TOOL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE BOOK PRESENTS STATE OF THE ART RESULTS ON THE ANALYSIS AND VERIFICATION OF DISTRIBUTED SOFTWARE SYSTEMS USING THE SPIN MODEL CHECKER AS ONE OF THE MOST POWERFUL AND WIDELY APPLIED SYSTEMS

MODEL CHECKING SOFTWARE

2006-03-15

IT WAS OUR GREAT PLEASURE TO HOLD THE 2ND INTERNATIONAL SYMPOSIUM ONAUTOMATED TE NOLOGY ON VERI CATION AND ANALYSIS ATVA IN TAIPEI TAIWAN ROC OCTOBER 31 NOVEMBER3 2004
THESERIESOFATVAMEETINGSISINTENDEDFORTHEPROMOTIONOFRELATED RESEARCH IN EASTERN ASIA IN THE LAST DECADE AUTOMATED TECHNOLOGY ON VERI CATION HAS BECOME THE NEW STRENGTH IN INDUSTRY AND BROUGHT FORWARD VARIOUS HOT RESEARCH ACTIVITIES IN BOTH EUROPE AND USA IN COMPARISON EASTERNASIA HAS BEEN QUIET IN THE FORUM WITH MORE AND MORE IC DESIGN HOUSES MOVING FROM SILICONVALLEY TO EASTERNASIA WE BELIEVE THIS IS A GOOD TIME TO START CULTIVATING RELATED RESEARCH ACTIVITIES IN THE REGION
THEEMPHASISOFTHEATVAWORKSHOPSERIESISONVARIOUSMECHANICALANDINFORMATIVE TECHNIQUES WHICH CAN GIVE ENGINEERS VALUABLE FEEDBACK TO FAST CONVERGE THEIR DESIGNS ACCORDING TO THE SPECI CATIONS THE SCOPE OF INTEREST CONTAINS THE FOLLOWING RESEARCH EAS MODEL CHECKING THEORY THEOREM PROVING THEORY STATE SPACE REDUCTION TECHNIQUES LANGUAGES IN AUTOMATED VERI CATION PARAMETRIC ANALYSIS OPTIMIZATION FORMAL PERF MANCE ANALYSIS REAL TIME SYSTEMS EMBEDDED SYSTEMS IN NITE STATE SYSTEMS PETRI NETS UML SYNTHESIS TOOLS AND PRACTICE IN INDUSTRY

MODEL CHECKING SOFTWARE

2014-03-12

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 8TH INTERNATIONAL SPIN WORKSHOP HELD IN TORONTO CANADA IN MAY 2001 THE SPIN MODEL CHECKER IS ONE OF THE MOST POWERFUL AND POPULAR SYSTEMS FOR THE ANALYSIS AND VERIFICATION OF DISTRIBUTED AND CONCURRENT SYSTEMS THE 13 REVISED FULL PAPERS PRESENTED TOGETHER WITH ONE INVITED SURVEY PAPER AND THREE INVITED INDUSTRIAL EXPERIENCE REPORTS WERE CAREFULLY REVIEWED AND SELECTED FROM 26 SUBMISSIONS BESIDES FOUNDATIONAL ISSUES OF PROGRAM ANALYSIS AND FORMAL VERIFICATION THE PAPERS FOCUS ON TOOLS FOR MODEL CHECKING AND PRACTICAL APPLICATIONS IN A VARIETY OF FIELDS

AUTOMATED TECHNOLOGY FOR VERIFICATION AND ANALYSIS

2004-10-11

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 10TH INTERNATIONAL SPIN WORKSHOP ON MODEL CHECKING OF SOFTWARE SPIN 2003 HELD IN PORTLAND OR USA IN MAY 2003 AS AN ICSE 2003 SATELLITE WORKSHOP THE 14 REVISED FULL PAPERS AND 3 REVISED TOOL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE BOOK PRESENTS STATE OF THE ART RESULTS ON THE ANALYSIS AND VERIFICATION OF DISTRIBUTED SOFTWARE SYSTEMS USING THE SPIN MODEL CHECKER AS ONE OF THE MOST POWERFUL AND WIDELY APPLIED SYSTEMS

MODEL CHECKING SOFTWARE

2003-06-29

THIS BOOK CONSTITUTES THE REFEREED PROCEEDINGS OF THE 13TH INTERNATIONAL CONFERENCE ON VERIFICATION MODEL TANGERS BRIGHT EARLY BOARD BOOKS

2023-09-03 12/14

CHECKING AND ABSTRACT INTERPRETATION VMCAI 2012 HELD IN PHILADELPHIA PA USA IN JANUARY 2012 CO LOCATED WITH THE SYMPOSIUM ON PRINCIPLES OF PROGRAMMING LANGUAGES POPL 2012 THE 26 REVISED FULL PAPERS PRESENTED WERE CAREFULLY REVIEWED AND SELECTED FROM 70 SUBMISSIONS THE PAPERS COVER A WIDE RANGE OF TOPICS INCLUDING PROGRAM VERIFICATION MODEL CHECKING ABSTRACT INTERPRETATION STATIC ANALYSIS DEDUCTIVE METHODS PROGRAM CERTIFICATION DEBUGGING TECHNIQUES ABSTRACT DOMAINS TYPE SYSTEMS AND OPTIMIZATION

MODEL CHECKING SOFTWARE

2003-08-03

THE THIRD INTERNATIONAL CONFERENCE ON INFORMATION SYSTEMS DESIGN AND INTELLIGENT APPLICATIONS INDIA 2016 HELD IN VISAKHAPATNAM INDIA DURING JANUARY 8 9 2016 THE BOOK COVERS ALL ASPECTS OF INFORMATION SYSTEM DESIGN COMPUTER SCIENCE AND TECHNOLOGY GENERAL SCIENCES AND EDUCATIONAL RESEARCH UPON A DOUBLE BLIND REVIEW PROCESS A NUMBER OF HIGH QUALITY PAPERS ARE SELECTED AND COLLECTED IN THE BOOK WHICH IS COMPOSED OF THREE DIFFERENT VOLUMES AND COVERS A VARIETY OF TOPICS INCLUDING NATURAL LANGUAGE PROCESSING ARTIFICIAL INTELLIGENCE SECURITY AND PRIVACY COMMUNICATIONS WIRELESS AND SENSOR NETWORKS MICROELECTRONICS CIRCUIT AND SYSTEMS MACHINE LEARNING SOFT COMPUTING MOBILE COMPUTING AND APPLICATIONS CLOUD COMPUTING SOFTWARE ENGINEERING GRAPHICS AND IMAGE PROCESSING RURAL ENGINEERING E COMMERCE E GOVERNANCE BUSINESS COMPUTING MOLECULAR COMPUTING NANO COMPUTING CHEMICAL COMPUTING INTELLIGENT COMPUTING FOR GIS AND REMOTE SENSING BIO INFORMATICS AND BIO COMPUTING THESE FIELDS ARE NOT ONLY LIMITED TO COMPUTER RESEARCHERS BUT ALSO INCLUDE MATHEMATICS CHEMISTRY BIOLOGY BIO CHEMISTRY ENGINEERING STATISTICS AND ALL OTHERS IN WHICH COMPUTER TECHNIQUES MAY ASSIST

VERIFICATION, MODEL CHECKING, AND ABSTRACT INTERPRETATION

2012-01-21

THIS BOOK CONSTITUTES THE THOROUGHLY REFEREED POST CONFERENCE PROCEEDINGS OF THE 6TH INTERNATIONAL HAIFA VERIFICATION CONFERENCE HVC 2010 HELD IN HAIFA ISRAEL IN OCTOBER 2010 THE 10 REVISED FULL PAPERS PRESENTED TOGETHER WITH 7 INVITED PAPERS WERE CAREFULLY REVIEWED AND SELECTED FROM 30 SUBMISSIONS THE PAPERS ADDRESS ALL CURRENT ISSUES CHALLENGES AND FUTURE DIRECTIONS OF VERIFICATION FOR HARDWARE SOFTWARE AND HYBRID SYSTEMS AND HAVE A RESEARCH FOCUS ON HYBRID METHODS AND THE MIGRATION OF METHODS AND IDEAS BETWEEN HARDWARE AND SOFTWARE STATIC AND DYNAMIC ANALYSIS PRE AND POST SILICON

INFORMATION SYSTEMS DESIGN AND INTELLIGENT APPLICATIONS

2016-02-05

HARDWARE AND SOFTWARE: VERIFICATION AND TESTING

2011-03-17

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