IEEE CONTROL SYSTEMS SOCIETY TECHNICAL COMMITTEE ON DISCRETE EVENT SYSTEMS

Newsletter

March 2025

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Welcome to the 2025 March issue of the newsletter, also available online at https://ieeecss.org/tc/discrete-event-systems/newsletters

Editorial

You are welcome to submit new items to the newsletter (topics including schools, workshops, sessions, conferences, journals, books, software, positions). Also please encourage relevant colleagues and students to subscribe to this newsletter.

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1 Selections of Journal Publications

Contributed by: Xiang Yin (yinxiang@sjtu.edu.cn)

1.1. IEEE Transactions on Automatic Control

Volume: 70, Issue: 3, March 2025

• Predictability Verification of Fault Patterns in Labeled Petri Nets

Authors: Xuya Cong ; Zhenhua Yu ; Maria Pia Fanti ; Agostino Marcello Mangini ; Zhiwu Li Abstract: This article focuses on the predictability verification problem of fault patterns for both bounded and unbounded discrete event systems modeled with labeled Petri nets. A system is said to be predictable with respect to a fault pattern if any complete fault behavior in a fault pattern can be correctly predicted before its occurrence, where the fault patterns are characterized by a particular composition of a labeled Petri net with a fault pattern net. In this article, we construct a fault pattern predictor net and a basis fault pattern predictor graph (PG) that is based on the notion of basis markings. By exploiting the fault pattern predictor net and basis fault pattern PG, we derive a necessary and sufficient condition to check fault pattern predictability, which does not need the full reachability/coverability graph of a net, thus gaining practical computation benefits.

• State Estimation of Timed Automata Under Partial Observation

Authors: Chao Gao ; Dimitri Lefebvre ; Carla Seatzu ; Zhiwu Li ; Alessandro Giua Abstract: In this article, we consider partially observable timed automata endowed with a single clock. A time interval is associated with each transition specifying at which clock values it may occur. In addition, a resetting condition associated to a transition specifies how the clock value is updated upon its occurrence. This work deals with the estimation of the current state given a timed observation, i.e., a succession of pairs of an observable event and the time instant at which the event has occurred. The problem of state estimation for a timed automaton is reduced to the reachability analysis of an associated zone automaton, which provides a purely discrete event description of the behavior of the timed automaton. An algorithm is formulated to provide an approach for state estimation of a timed automaton based on the assumption that the clock is reset upon the occurrence of each observable transition.

• Automatic Verification of Bounded Synchronization for Heterogeneous Polynomial Networked Systems

Authors: Shuyuan Zhang ; Lei Wang ; Bai Xue ; Qing-Guo Wang

Abstract: This article explores the automatic verification of bounded synchronization for heterogeneous polynomial networked systems (HPNSs) with polynomial coupling function. In our method, the generalized blended dynamics is presented to analyze the heterogeneity of systems. By utilizing polynomial Lyapunov functions, the synchronization criterion for HPNSs under directed topology is presented, along with a bounded set where the synchronization errors of HPNSs reside when the time progresses towards infinity. Compared with the existing criteria from quadratic Lyapunov functions, our results yield a smaller bounded set and thus are less conservative. Drawing upon the established criterion, the synchronization verification problem is transformed into a sum-ofsquares optimization problem. This consequential optimization problem aligns with the paradigm of convex programming, thereby affording a polynomial-time solvability. The proposed optimization algorithm efficiently generates polynomial Lyapunov functions, facilitating automatic verification of bounded synchronization. Finally, two examples are given to demonstrate the efficacy of our method.

• Generalized Mean Robustness for Signal Temporal Logic

Authors: Noushin Mehdipour; Cristian-Ioan Vasile; Calin Belta

Abstract: Robustness functions provide quantitative scores to measure the satisfaction of temporal logic formulas. We introduce a general class of parameterized robustness functions for signal temporal logic (STL), and demonstrate how it can be used for control problems involving STL specifications. We employ power means and generalized functional means to capture robust satisfaction over space and time. We show that our general definition encompasses many of the STL robustness functions in the literature. Most importantly, we show how that our notion of robustness addresses

the two main limitations of the the traditional robustness (masking and locality), which currently limit using robustness-based approaches for control. The proposed robustness function parameters affect the conservativeness of the score, and can be chosen based on desired performance. We show how the proposed robustness can be used for control.

• An Efficient Distributed Nash Equilibrium Seeking With Compressed and Event-Triggered Communication

Authors: Xiaomeng Chen ; Wei Huo ; Yuchi Wu ; Subhrakanti Dey ; Ling Shi

Abstract: Distributed Nash equilibrium (NE) seeking problems for networked games have been widely investigated in recent years. Despite the increasing attention, communication expenditure is becoming a major bottleneck for scaling up distributed approaches within limited communication bandwidth between agents. To reduce communication cost, an efficient event-triggered and compressed distributed NE seeking (ETC-DNES) algorithm is proposed in this article to obtain an NE for games over directed graphs, where the communication efficiency is improved by event-triggered exchanges of compressed information among neighbors. ETC-DNES saves communication costs in both transmitted bits and rounds of communication. Furthermore, our method only requires the row-stochastic property of the adjacency matrix, unlike previous approaches that hinged on doubly stochastic communication matrices. We provide convergence guarantees for ETC-DNES on games with restricted strongly monotone mappings and testify its efficiency with no sacrifice on the accuracy. The algorithm and analysis are extended to a compressed algorithm with stochastic event-triggered mechanism, i.e., stochastic event-triggered and compressed distributed NE seeking (SETC-DNES) algorithm. In SETC-DNES, we introduce a random variable in the triggering condition to further enhance the algorithm efficiency. We demonstrate that SETC-DNES guarantees linear convergence to the NE while achieving even greater reductions in communication costs compared to ETC-DNES. Finally, numerical simulations illustrate the effectiveness of the proposed algorithms.

• Stability Analysis and Stabilization of Semi-Markov Jump Linear Systems With Improved Efficiency of Probabilistic Information Utilization

Authors: Zepeng Ning ; Patrizio Colaneri ; Xunyuan Yin

Abstract: This article establishes a systematic methodology to improve the utilization efficiency of probabilistic information for the stability analysis and stabilizing control of discrete-time semi-Markov jump linear systems (SMJLSs). The transition and sojourn information is incompletely known, and the coupling between the known (or unknown) transition and unknown (or known) sojourn information renders the known probabilistic information difficult to be fully leveraged, which can lead to conservative results in system analysis and synthesis. To approximate the unknown transition and sojourn information, a polyhedral approach is developed, which facilitates the incorporation of the known probabilistic information coupled with unknown information. Accordingly, novel vertex-based Lyapunov functions are proposed to establish stability conditions. New criteria are established for the stability analysis and control of SMJLSs by incorporating all the jointly known transition and sojourn information, all the known probabilistic information, and both the known and the approximation of unknown probabilistic information, respectively. The effectiveness and superiority of the theoretical results are illustrated by a numerical example and a simulated continuous stirred tank reactor process.

• Bayesian Formal Synthesis of Unknown Systems via Robust Simulation Relations

Authors: Oliver Schön ; Birgit van Huijgevoort ; Sofie Haesaert ; Sadegh Soudjani

Abstract: This article addresses the problem of data-driven computation of controllers that are correct by design for safety-critical systems and can provably satisfy (complex) functional requirements. With a focus on continuous-space stochastic systems with parametric uncertainty, we propose a two-stage approach that decomposes the problem into a learning stage and a robust formal controller synthesis stage. The first stage utilizes available Bayesian regression results to compute robust credible sets for the true parameters of the system. For the second stage, we introduce methods for systems subject to both stochastic and parametric uncertainties. We provide simulation relations for enabling correct-by-design control refinement that are founded on coupling uncertainties of stochastic systems via subprobability measures. The presented relations are es-

sential for constructing abstract models that are related to not only one model but to a set of parameterized models. The results are demonstrated on three case studies, including a nonlinear and a high-dimensional system.

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1.2. Automatica

Volume: 173, March 2025

• Model predictive control of stochastic hybrid systems with signal temporal logic constraints

Authors: Yuhua Yao ; Jitao Sun ; Yu Zhang

Abstract: This paper investigates the control synthesis problem for stochastic hybrid systems with multiple tasks. The given tasks are characterized using signal temporal logic (STL) specifications, with the control goal being to execute them with specified probabilities. A deterministic model predictive control (MPC) problem is then derived by employing the unscented transformation (UT) and properties of STL. For scenarios where tasks overlap in time, we utilize dynamic weighting along with the inherent space robustness of each task to address a multi-objective MPC problem. We further propose a control strategy to ensure the recursive feasibility of deterministic MPC. Additionally, we apply the main results to a stochastic hybrid system with discrete dynamics represented by probabilistic Boolean control networks (PBCNs) and compare the results with existing research. The effectiveness of the proposed method is illustrated through a numerical example.

• Always guarding you: Strong initial-and-final-state opacity of discrete-event systems Authors: Shaowen Miao ; Aiwen Lai ; Jan Komenda

Abstract: Opacity is a security property of discrete-event systems that specifies whether the secret can be concealed from an external intruder. In this paper, we proposed two advanced variants of initial-and-final-state opacity, namely partially strong initial-and-final-state opacity (PSIFO) and strong initial-and-final-state opacity (SIFO), which impose more stringent security requirements, for discrete-event systems modeled by nondeterministic finite-state automata. SIFO (resp. PSIFO) is a property that for each path between a given secret state pair, there exists a strongly non-secret-pair path (resp. non-secret-pair path), with the same observation as that path. In other words, the strong version of initial-and-final-state opacity requires the existence of at least one path always guarding the secret. Furthermore, we conduct an analysis of the reductions from strong current-state opacity and initial-state opacity to PSIFO. Finally, two concurrent composition-based information structures are proposed to verify these two properties, the size of which grows exponentially with the number of states of the original system.

• Fault diagnosability evaluation for interconnected large-scale cyber-physical systems Authors: Dong Zhao ; Fangzhou Fu ; Dayi Wang ; Yang Shi

Abstract: A qualitative and quantitative fault diagnosability evaluation framework of interconnected large-scale cyber-physical systems with different interconnection topologies is established in this paper, where different levels of faults are considered. First, fault detectability and isolability of the considered system are defined in terms of residual sets under local and neighboring monitoring. On this basis, fault diagnosability metrics are developed based on the Mahalanobis distance and computed by solving optimization problems. In addition, the conditions of fault diagnosability and the analytical relations among fault diagnosis performance characteristics under different cyber interconnection and monitoring architectures are investigated. Finally, a power network system is utilized to demonstrate the effectiveness of the proposed fault diagnosability evaluation methods.

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1.3. IEEE Transactions on Control Systems Technology Volume: 33, Issue: 2, March 2025

• Robust Temporal Logic Task Planning for Multirobot Systems Under Permanent Robot Failures

Authors: Bohan Cui; Feifei Huang; Shaoyuan Li; Xiang Yin

Abstract: We investigate the multirobot task planning problem for intricate tasks specified by linear temporal logic (LTL) formulae. While most studies on this topic assume flawless robot performance, it is crucial to recognize that failures can always occur in the real world due to errors or disturbances. Therefore, to enhance the robustness of task planning for multirobot systems (MRSs), one must take the unexpected robot failures into account. In this article, we formulate and solve a new type of failure-aware multirobot task planning problem. Specifically, we aim to find a failurerobust plan that ensures the LTL task can always be accomplished, even if a maximum number of robots fail at any instant during the execution, where a failed robot can no longer contribute to the satisfaction of the LTL task. To achieve this, we extend the mixed-integer linear programming (MILP) approach to the failure-robust setting. To overcome the computational complexity, we identify a fragment of LTL formulae called the free-union-closed LTL, which allows for more scalable synthesis without considering the global combinatorial issue. We provide a systematic method to check this property, as well as several commonly used patterns as instances. We demonstrate the effectiveness of our approach through simulation and real-world experiments, showcasing our failure-robust plans and the efficiency of our simplified algorithm. Our approach offers an optimal and efficient way to achieve robustness in multirobot path planning under unforeseen failure events.

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1.4. Systems & Control Letters

Volume: 197, March 2025

• Resilient abstraction-based hierarchical control of linear systems Authors: Elnaz Firouzmand ; H.A. Talebi ; Iman Sharifi

Authors: Emaz Frouzmand ; H.A. Taleor ; Iman Sharm **Abstract:** This paper develops a resilient hierarchical control structure for cyber–physical systems (CPSs) using an extended resilient approximate simulation function. Data transmission

tems (CPSs) using an extended resilient approximate simulation function. Data transmission through wireless communication channels in CPSs is vulnerable to cyber-attacks. Furthermore, these systems may be modeled using linear dynamics with high-state dimensions. Hence, the control synthesis problem for concrete systems is computationally challenging. The extended resilient approximate simulation function introduced in this paper enables the use of an abstract system for computationally efficient controller design. This function is mathematically defined as the sum of the resilient approximate simulation function between the abstract model and the unknown input observer (UIO), and the simple approximate simulation function between the UIO and the concrete system. Accordingly, the controller can first be designed for the abstract system and then refined for the concrete system by introducing an appropriate interface controller. This controller constitutes an observer-based robust control law based on to guarantee the desired performance despite external disturbances and includes an adaptive compensator to mitigate the effect of attacks on the simulation relation. The applicability of the presented approach is demonstrated through two case studies: load frequency control in a power system and frequency regulation in an isolated area of the New England 39-Bus Test System.

• Event-dependent intermittent synchronization of complex networks based on discretetime state observation

Authors: Zelin Yang ; Jian-An Wang ; Jie Zhang ; Mingjie Li ; Hui Shi

Abstract: This paper studies the synchronization issue of complex networks via event-dependent intermittent discrete-time observation control (EIDOC) for the first time. Three non-negative real domains are characterized by introducing two boundary functions. The work and rest time of intermittent control rely on the relationship between the Lyapunov function trajectory and non-negative regions. The proposed aperiodically intermittent control is based on discrete-time state observation rather than continuous observation during the work interval. Some sufficient criteria are derived for ensuring synchronization of the network. The theoretical results are employed to deal with single pendulum systems, and numerical simulation have demonstrated the effectiveness of the derived method.

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1.5. IEEE Transactions on Cybernetics

Volume: 55, Issue: 3, March 2025

• Temporal Logic Disturbance Rejection Control of Nonlinear Systems Using Control Barrier Functions

Authors: Chengqian Zhou ; Jun Yang ; Shihua Li ; Wen-Hua Chen

Abstract: The high level of autonomy within autonomous systems demands new control strategies to achieve more complex objectives while ensuring both safety and robustness, rather than relying solely on a given reference. To this end, this article addresses the problem of temporal logic disturbance rejection control (TLDRC) for a class of nonlinear systems subject to disturbances. Signal temporal logic (STL) specifications are introduced for the representation of complex tasks. A control barrier function (CBF), composed of a monotonic function characterizing the temporal behavior of the system and a predicate function, is constructed to encode the STL specifications. To guarantee robustness against disturbances, generalized proportional integral observers (GPIOs) are introduced for higher-accuracy disturbance estimation. It is shown that by fully exploiting the constructed CBF and the disturbance estimate, the developed TLDRC strategy is able to ensure the STL specifications and compensate undesirable effects caused by unknown disturbances, even if they are fast-time-varying. A numerical example is presented to illustrate the effectiveness of the proposed strategy.

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1.6. IEEE Transactions on Systems, Man, and Cybernetics: Systems Volume: 55, Issue: 3, March 2025

• Approximate Dynamic Programming for Constrained Piecewise Affine Systems With Stability and Safety Guarantees

Authors: Kanghui He ; Shengling Shi ; Ton van den Boom ; Bart De Schutter

Abstract: Infinite-horizon optimal control of constrained piecewise affine (PWA) systems has been approximately addressed by hybrid model predictive control (MPC), which, however, has computational limitations, both in offline design and online implementation. In this article, we consider an alternative approach based on approximate dynamic programming (ADP), an important class of methods in reinforcement learning. We accommodate nonconvex union-of-polyhedra state constraints and linear input constraints into ADP by designing PWA penalty functions. PWA function approximation is used, which allows for a mixed-integer encoding to implement ADP. The main advantage of the proposed ADP method is its online computational efficiency. Particularly, we propose two control policies, which lead to solving a smaller-scale mixed-integer linear program than conventional hybrid MPC, or a single convex quadratic program, depending on whether the policy is implicitly determined online or explicitly computed offline. We characterize the stability and safety properties of the closed-loop systems, as well as the suboptimality of the proposed policies, by quantifying the approximation errors of value functions and policies. We also develop an offline mixed-integer-linear-programming-based method to certify the reliability of the proposed method. Simulation results on an inverted pendulum with elastic walls and on an adaptive cruise control problem validate the control performance in terms of constraint satisfaction and CPU time.

• Deadlock Analysis and Avoidance for Automated Manufacturing Systems Based on Petri Nets With Forward-Conflict-Free Structures

Authors: Yan Yang ; Zhijie Liu ; Zhijia Zhao ; MengChu Zhou

Abstract: While a deadlock control problem in complex resource allocation systems (RASs) has been extensively studied in the literature, the corresponding results that are applicable to assembly systems are quite limited, both, in terms of structural analysis of deadlocks and deadlock resolution. Taking Petri nets (PNs) as a modeling and analysis tool, this article focuses on the deadlock control problem for a forward-conflict free net (FCFN), which allows for batch assembly and multiple resource allocations. First, a new structural characterization of deadlocks in FCFN is proposed through two structural objects: 1) circuit and 2) ω -structure. The starting point for this is motivated by the fact that deadlocks in assembly systems stem not only from the circular wait of resources but also the parts waiting for their assembly with other parts. Subsequently, based on these two objects, a necessary and sufficient condition about FCFNs liveness is obtained: 1) an FCFN is liveness. if and only if no circuit and 2) ω -structure are saturated at any reachable marking. Finally, in order to prevent each such object from inducing deadlocks, a hierarchical search algorithm appropriate for real-time implementation is developed to avoid its saturation. The proposed algorithm is proven to be capable of ensuring the deadlock-free operation of FCFNs. Moreover, several examples are provided to demonstrate its effectiveness.

2 Conferences

Contributed by: Xiang Yin (yinxiang@sjtu.edu.cn)

2.1 2025 ACM International Conference on Hybrid Systems: Computation and Control (HSCC)

Irvine, California, USA, May 6-9, 2025. https://hscc.acm.org/2025/

- 2.2 2025 IEEE International Conference on Robotics and Automation (ICRA) Atlanta, USA, May 19-23, 2025. https://2025.ieee-icra.org/
- 2.3 2025 Annual Learning for Dynamics & Control Conference (L4DC) Ann Arbor, Michigan, USA, June 4-6, 2025. https://sites.google.com/umich.edu/14dc2025/
- 2.4 2025 IFAC Workshop on Smart Energy Systems for Efficient and Sustainable Smart Grids and Smart Cities (SENSYS 2025) Bari, Italy, June 18-20, 2025. https://conferences.ifac-control.org/sensys2025/
- 2.5 **2025 European Control Conference (ECC)** Thessaloniki, Greece, June 24-27, 2025. https://ecc25.euca-ecc.org/
- 2.6 2025 American Control Conference (ACC) Denver, Colorado, USA, July 8-10, 2025. https://acc2025.a2c2.org/
- 2.7 2025 International Conference on Automation Science and Engineering (CASE) Los Angeles, California, USA, August 17-21, 2025. https://2025.ieeecase.org/
- 2.8 2025 IEEE Conference on Control Technology and Applications (CCTA) San Diego, California, USA, August 25-27, 2025. https://ccta2025.ieeecss.org/
- 2.9 2025 IEEE International Conference on Emerging Technologies and Factory Automation (ETFA)
 Porto, Portugal, September 9-12, 2025.
 https://etfa2025.ieee-ies.org/
- 2.10 **2025 International Conference on Systems, Man, and Cybernetics (SMC)** Vienna, Austria, October 5-8, 2025. https://www.ieeesmc2025.org/
- 2.11 2025 IEEE Conference on Decision and Control (CDC) Rio de Janeiro, Brazil December 9-12, 2025. https://cdc2025.ieeecss.org/

3 Books

3.1 Invitation to Supervisory Control of Discrete-Event Systems with Hands-On Python Software Tool

Author: Kai Cai, Osaka Metropolitan University.

Publish Information: Kindle Direct Publishing, 2024, ISBN: 9798373331449

Book website: https://www.caikai.org/invitation-scdes

About the book:

This book is for anyone who is interested in getting a quick start with the supervisory control theory of discrete-event systems. A companion software package PyTCT (python-based TCT) is available for the reader to get hands-on experience with the theory.

Your feedback comments on how the book materials may be improved are highly appreciated and please send them to: cai@omu.ac.jp

3.2 Cybersecurity of Discrete Event Systems—From Smart Attacks to Resilient Defence

Author: Rong Su, Nanyang Technological University.

Description: This book describes analysis and control against smart cyberattacks in discrete event systems (DES), modelled by regular languages or finite-state automata. "Smart attacks" cannot be detected by the supervisor until an irreversible process towards ensured damage occurs. An attack may be conducted either in the observation channel (i.e., the input of the supervisor) or in the command channel (i.e., the output of the supervisor), or both simultaneously. Therefore, defense strategies against these attacks are urgently needed. This book provides an overview of the latest theories and includes empirical examples to illustrate concepts and methods. By centering on what information is available and how such information is used, the readers are provided with methods to evaluate the cyber vulnerability of a given system and to design a resilient supervisor against relevant smart attacks. By focusing on a conceptual introduction and systematic analysis, this book provides a solid theoretical foundation for future exploration by researchers and graduate students who are interested in cybersecurity research, not necessarily limited to those in the DES community. Readers are recommended to have a background in formal language theory.

Additional information on the book can be found at

https://www.routledge.com/Cybersecurity-of-Discrete-Event-Systems-From-Smart-Attacks-to-Resilien Su/p/book/9781032368108?srsltid=AfmBOor9fqjhOR7YfMgGE8cozOrHXF6YyKhoucc7UzqYlY9GhcWpQBg3, where an inspection copy is possible for educational institutions.

3.3 Graph-Theoretical Methods in Systems Theory and Control

Author: Jan Lunze, Ruhr-University, Germany

Description: The book describes for numerous scenarios how to use the structural properties of a system represented by a graph to simplify modelling, analysis, and design tasks. For example, block diagrams and coupling graphs can be used to decompose systems, automata graphs to analyse discrete-event systems and Markov chains, structure graphs to find generic properties of linear systems or communication graphs to design networked control systems. The book includes many examples derived from diverse fields of application, exercises with solutions and MATLAB scripts to implement graph-theoretical methods for systems analysis.

Additional information on the book can be found at www.editionmora.de/gmsc

The book is produced as "print-on-demand" and can be ordered directly at the printer: https://publish.bookmundo.de/books/349971

3.4 Safe Autonomy with Control Barrier Functions: Theory and Applications

Authors: Wei Xiao, Christos G. Cassandras, and Calin Belta

Description: The book presents the concept of Control Barrier Function (CBF), which captures the evolution of safety requirements during the execution of a system and can be used to enforce safety. Safety is central to autonomous systems since they are intended to operate with minimal or no human supervision. The book includes both theoretical and application perspectives on how safety can be guaranteed. It explains how the CBF approach is computationally efficient and can easily deal with nonlinear models and complex constraints used in a wide spectrum of applications, including autonomous driving, robotics, and traffic control. Safety guarantees can be integrated into the operation of such autonomous systems, including typical safety requirements that involve collision avoidance, technological system limitations, and bounds on real-time executions. Adaptive and event-driven approaches for safety are also discussed for time-varying execution bounds and noisy dynamics, as well as for systems with unknown dynamics.

Additional information on the book can be found at https://link.springer.com/book/10.1007/978-3-031-27576-0

where an eBook version can also be downloaded (free for some educational institutions).

4 Software Tools

4.1 Eclipse ESCET[™] version 6.0 release

The Eclipse Supervisory Control Engineering Toolkit (Eclipse ESCET) project provides a model-based approach and toolkit for the development of supervisory controllers. It includes the languages CIF, Chi and ToolDef. ESCET, initially developed by Eindhoven University of Technology, is since January 2020 an Eclipse Foundation open-source project. More information can be found on the toolkit's website at https://www.eclipse.dev/escet/.

In December 2024, ESCET version 6.0 has been released and can be downloaded from https://www.eclipse.dev/escet/download.html. he main changes in this version are

- The CIF PLC code generator that was previously labeled as the 'experimental' version is now the 'stable' version. Support for some targets is still experimental. The CIF PLC code generator that was previously labeled as the 'stable' version is now the 'deprecated' version. Furthermore, the now 'stable' version includes several bug fixes and improvements.
- The performance of data-based synthesis as well as the bounded response, confluence and nonblocking under control checks may have slightly improved due to fixing a BDD variable leak in computing edge support variable sets. Furthermore, the printed output of several checks have been improved.
- A new Convert to interface transformation is now available that converts a CIF specification to its interface. It comes in two flavors: one to generate a full interface and one to generate a reduced interface.
- Several improvements to the HTML code generator. Furthermore, the generator generates now by default HTML code and not Simulink code.

The full ESCET release notes, including links to the language specific release notes and release notes from previous versions, are available from https://www.eclipse.dev/escet/release-notes.html.