RoboCupJunior OnStage - Scoresheets 2025

These are the official OnStage scoresheets for RoboCupJunior 2025. They are released by the RoboCupJunior OnStage League Committee. English rubrics have priority over any translations. Please note that score sheets are public, and all comments and suggestions will be welcome. Use the RCJ forum (https://junior.forum.robocup.org) if you want to provide feedback.

OnStage Overview

All teams are judged in the following areas: a Technical Description Poster, Technical Demonstration Video, Technical Interview, and an OnStage Performance.

Teams must present four of their robot(s) features throughout all elements of the competition: what the team believes are their best system/sensor integration, electromechanical design, interaction, or software solutions implemented on their robot(s).

The aim should be to present the integration of the chosen features and how the features contribute to the progression of the performance.

Examples of features include, but are not limited to:

- Locomotion
- Object/human detection or avoidance
- Human, robot and/or prop interaction
- Manipulation (grabbing/grasping)
- Visual/audio recognition
- Localization and mapping

Teams should describe and provide reasoning for their four chosen features in the Technical Description Poster and during their Technical Demonstration Video, before being judged on the implementation of these features during the Performance. Teams should demonstrate their understanding of their systems in the Technical Interview.
For clarification on a teams' features, please do not hesitate to reach out to the OnStage committee using listed communication forums.

Preface

Rubrics are made for teams to know what relevant aspects will be appreciated in terms of education by the judges at RoboCupJunior OnStage 2025. They are a useful source of information for teams.
These score sheets will be used at RoboCupJunior OnStage to evaluate your team.
Official RoboCupJunior site: https://junior.robocup.org (Click OnStage tab)
Official RoboCupJunior forum: https://junior.forum.robocup.org/

OnStage **Technical Video Demonstration** Score Sheet 2025

Team Name: ..... Country/Region: .....

Category	Examples of how high marks may be achieved are:	Mark
Robotic Demonstration and Features	**Demonstration of a fully working robotic system including the four chosen features.** - Demonstrates the overall capabilities of the robot(s), including the four chosen features - Demonstrates fully working robotic systems without costumes - Explanations how the four chosen features were selected by the team.	/6
Design Process	**Explain the design processes used during the development of the robotic systems including electromechanical, sensor, communication and software design choices.** - Highlights how the team overcame challenges in their design process, especially focusing on team's problem solving and teamwork - Communicates team member's roles and the contributions to the different systems (electromechanical, software etc.)	/3
Presentation	**Clarity and quality of the presentation.** - Presents a well-polished demonstration. Graphics and accompanying materials are clearly explained and presented. - Effectively communicates the technical capabilities of the robot to the audience in a concise and clear manner. - Technically unusual, creative, or ambitious concepts in the team's robotic performance are clearly explained.	/3
Innovation and Sustainability	**Illustrating new and/or innovative technology to the OnStage competition** - Innovation achieved with clear evidence of testing, research and development of the four chosen features - Innovation can be an inspiration for future competitors - Teams are able to explain how they considered sustainable practices during the development of their project.	/3
Total Score		/15

OnStage **Technical Interview** Score Sheet 2025

Team Name: ……..…… Country/Region: ……

Category	Examples of how high marks may be achieved are:	Mark
Programming	**Ability to explain the program and the interactions between the hardware and software:** - Choice of programming language - Difficulties with the software - Development of appropriate models, datasets and/or libraries to solve programming solutions - Efficient and optimized programming with clear documentation and commenting with evidence of version control - Development of calibration, testing and debugging functionalities - Usage of AI / AR technology	/7
Electro-mechanical Systems	**Ability to explain why electromechanical design choices were made:** - Choice of materials, microcontrollers and actuators - Development of custom electronics (including PCBs) - Power management, regulation, and battery choices - Design choices are made to ensure systems are reliable and durable - Sustainable design choices including the choice of materials **Explain how systems are fit for purpose - examples include:** - Complex mobility - omnidirectional/legged robots - Stable builds, system kinematics and design of custom components - High precision systems including pneumatics - Functional arms/hands/faces - Robotic arms for manipulation - Automatic balance system	/7
Sensor and Communicatio n Systems	**Ability to explain the role of sensors and communication in the systems and how the robots interact with the stage environment:** - Robot systems can dynamically respond to unplanned events - Robots can sense their environment and use the information to dynamically respond with an action - Integration of multi sensor systems to develop solutions - Development of communication between sensors - Creation of communication architectures (asymmetric communication) **Explain how systems are fit for purpose - examples include:** - Visual/Audio recognition - Developed guidance, navigation, and control systems - Robot-Robot and/or Natural Robot-Human interaction - Stage/Robot localization systems	/7
Innovation and Feature Development	**Ability to explain and showcase innovative features or robotic components** - Innovation achieved with clear evidence of testing, research and development. With innovations that can inspire future competitors - Teams are able to explain developments based on past feedback and performance results	/6
Teamwork and Collegiality	Evidence of team collaboration, problem solving and spirit in the performance and competition.	/3
Deductions *(At discretion of judges up to -15)*	Judges believe the work was not done by team members Team members are unable to explain their technical involvement with the robot	
Total Score		/30

OnStage **Technical Description Poster** Score Sheet 2025

Team Name: ……..…… Country/Region: ……

Category	Examples of how high marks may be achieved are	Mark
Abstract and Performance Description	- Clear overview of the performance idea and how the chosen technology adds to the performance as described in the abstract - Demonstrates authenticity in the project and performance development	/6
Technology and Innovation	- Electromechanical, sensors, communication, and software choices are clearly described - Clear definition of the four chosen features with evidence of learning through the use of words, diagrams and images - Depth and understanding of the four chosen features and how the chosen features add value to the performance	/6
Poster design	- Poster submitted using the correct format in paper format (A1) and virtually - The Poster should be presented in the style of a research poster - The Poster is easy to read and understand - The Poster is pleasing to look at (good contrast, good balance between wording and imagery)	/3
Total Score		/15

OnStage **Performance** Score Sheet 2025

Team Name: ..... Country/Region: .....

Category	Examples of how high marks may be achieved are	Mark
Visual Impact and Quality of the Whole Performance	**The robotic performance is engaging. For example:** - The theme is clearly shown throughout the performance. - Performance entertains and triggers an emotional response from the audience. - The performance area and set are used effectively. - Robot costumes add value to the performance.	/12
Robotic Interaction and System Integration	- Complex or challenging movements that fit the theme and add value to the performance. - Interesting, smooth, natural interaction between robots and/or humans. - Humans ensure they **never distract the audience** from robot actions, and their movements enhance the overall robotic performance. - All robotic systems (e.g. sensors, motors) are used effectively, in multiple ways, and throughout the performance. - Props are interactive and add value to the performance.	/12
Effective implementation of features presented by the team.	**Implementation of four chosen features:** Excellent implementation, visibility, and impact - features works as expected and add extensive value to the performance: Feature 1: /4 Feature 2: /4 Feature 3: /4 Feature 4: /4	/16
Deductions: (-3 for each at discretion of judges)	-3 for each unplanned human intervention inside the marked stage area (including remote or human controlled actions) -3 for each restart -3 each 10 seconds over the allotted time (on stage or performance) Performances that do not reach the minimum performance time will be scored zero *If a problem is not the fault of a team no deductions will be applied*	
Total Score		/40

Teams that infringe the rules will be warned that such infringements will not be allowed in the second performance.