

## ENG (Engineering)

The Engineering genre deals with programming, graphics and rendering, hardware, game AI, machine learning, simulation, mathematical sciences, development and operational efficiency, design and construction of network and database systems /services, fraud and security measures, etc., required for the development and operation of computer entertainment systems.

### Topics sought for the ENG genre of CEDEC 2026

#### Engine/Architecture/Programming Infrastructure

- Technology enabling cross-platform development across generations (differences in hardware for each generation of consoles, etc.)
- Optimization of low layers and utilization of proprietary implementations in general-purpose game engines
- General programming language
- Low-level programming (multi-core, multi-thread control, optimization, acceleration, memory management, and other)
- Examples and discussion of architecture design (domain-driven design, clean architecture, etc.)
- Optimization of compilers, toolchains, IDE, in-house tools, and others

#### Graphics/Rendering/Visual Technology

- Graphics and rendering technology
- Video distribution focused on 3D avatars, motion capture, interactive technology, metaverse building examples, etc.

#### Simulation/Animation/Game AI/UI

- Simulation technologies, game application case studies
- Game AI technologies
- Animation control technologies
- Technologies for UI painting and display control
- New interfaces for content using haptic technology and voice and image recognition

## Machine Learning/Data Science/Generative AI

- Examples of research and application of machine learning in computer entertainment
- Methods for optimizing efficiency of game development through various data (such as data pre-processing, AI utilization, data science, data visualization, etc.)
- Case studies of custom AI models tailored for teams
- Examples of automated generation (either still or motion) of assets, contents, programs, etc. which were then utilized within games

## Cloud/Network/Online Services

- Methods for investigating and estimating database bottlenecks in the cloud era and methods for tuning
- Development case studies of large-scale online contents and real-time online battle contents
- Utilization examples of advanced web/network technologies (HTTP/3, WebTransport, IPv6, gRPC, etc.)
- Design technology and test techniques dealing with network load, delay, loss, and others
- Using AI or data to streamline server construction and improve operational efficiency
- Explanation and utilization examples of server-less architecture
- Countermeasures for server/service failure and maintenance

## Security/Reliability/Quality Assurance

- Testing/debugging techniques for software targeting a variety of devices
- Technology to detect illegal activity, and to protect digital content and services from illegal activity (DRM, encryption, cheat measures, and other)
- Specific examples of improving software quality, such as test automation and QA efficiency
- Technology for the improvement of accessibility and implementation case studies

## Development Process/Development Environment

- Utilizing cloud environments for the communization and optimization of contents development processes

- Examples of development environments for content creation (in-game editors, dedicated web services, etc.)
- Utilization example of procedure technology
- Examples of solutions to technical issues in remote work and multi-location development
- Examples of high-volume resource/asset management and build pipelines
- Virtualization or decentralization of building systems and development environments (Cloud-based asset build and binary build, etc.)

#### **Hardware/Device-related Topics**

- Technology and actual examples unique to the platform (PC, console, smartphone, Internet, and others)
- VR/AR/XR devices and expression technology
- Examples of amusement machine development
- The IoT and robotics in computer entertainment
- Utilization case studies of state-of-the-art devices (such as drones, AI speakers, wearables, projectors, entertainment robots, etc.) for entertainment purposes
- Case studies of implementing and optimizing functionalities utilizing GPU/NPU

#### **Topics sought for tutorials**

- Automation technology for server building/operation
- Introduction to modern graphics
- Academic knowledge required for real-world application of machine learning (statistics, optimization methods, etc.)
- Beginner-gear content and hands-on experiences of the listed topics

**PRD (Production)**

The Production genre covers concrete examples of the development process, methods and environments of product management, sharing and accumulation of knowledge, initiatives in education and development of human resources, etc. in computer entertainment.

**Topics sought for the PRD genre of CEDEC 2026****全般**

- Development case studies utilizing AI
- Development case studies in the realm of indie games

**Project People Management (discussion on projects, people, and organizations)**

- Initiatives to sustain development and utilization of titles that are operated long-term
- Career paths and evaluation systems in each profession
- Development of managers and leaders and career development from other professions
- Management methods that inspire the creation of innovative games
- Project management case studies in large-scale development
- Approaches, tools, and techniques to strengthen communication, team management, and improving productivity of development work
- Human resource development and personnel evaluation systems that fit diversified work styles
- Initiatives to promote self-management on the project teamProject manager and their roles, and initiatives to delegate authority to the team
- Methods for understanding team status for sound organizational management and project operation
- Team building and management expertise
- Initiatives to promote self-organization of project teams
- Examples of promoting mutual understanding and psychological safety
- Development case studies of multi-location/global development

**QA (quality assurance, discussion on testing methods and techniques)**

- Game title development case studies of shift-left practices enabled by early involvement of QA engineers
- Case studies demonstrating the effective use of manual/automated/AI-driven testing according to each phase of development
- Platform-specific debugging and automated testing methods, such as for PCs, mobiles, consoles, and arcades
- Debugging and automated testing methods in iOS
- Examples of automated testing of content with a huge number of combinations due to user customization
- Examples of asset validation and regression testing
- Examples of unit testing within the realm of client development
- Case studies of improving testing efficiency in multi-platform titles
- Examples of software tests applying machine learning

**Workflow (discussion on methods and techniques for automation and efficiency)**

- Content and asset production using machine learning
- Methods for creating, managing, and sharing terabyte-sized data asset
- Introduction and development of specialized tools for specific tasks to maximize team strengths
- Infrastructure development, including cloud utilization, for processes requiring large amounts of hardware resources, such as machine learning and large-scale authoring
- Workflow regarding localization (translation and cultural adaptation) that inspires production of appealing contents that can gain fans on a global level
- Examples of technological contributions to improving the user experience that utilize information about developer and user behavior
- Examples of building a development environment where you can work safely without any interruptions caused by errors or failures
- Examples of drawing up a workflow for a large-scale operation title

- Examples of titles with effort for automation in development
- Case studies of workflow construction for the appropriate operation of OSS and prevention of malicious external attacks
- Prototyping case studies in large-scale development
- Case studies of tool development and workflow enhancements designed to improve developer experience

#### **Knowledge Management (Discussions Related to Knowledge and Know-How)**

- Latest technologies and trends in the software development and information industry that can be applied to game development
- Case studies of initiative that form a stronger organizational culture and incorporates transformative measures
- Methods for effective internal communization and communication of information
- In-house conference management methods
- Effective communication and information-sharing within the company
- Examples of information-sharing and community activity outside of the company  
→ Examples of information-sharing and community activity unrestricted by organizational structure
- Approach from the development department for corporate branding
- Recruitment and onboarding customized to organizational culture

#### **Topics sought for tutorials**

- JSTQB utilization in game development
- Automated testing for game development
- PMBOK utilization in game development
- How to approach agile game development
- AI agent utilization in game development
- DevOps of game industry

## VA (Visual Arts)

The Visual Arts genre broadly covers the visual expression of digital content overall, pursuing the enhancement of expressive methods and production workflows in computer entertainment, while working in technologies and expertise needed to meet evolving and diverse development requirements.

### Topics sought for the VA genre of CEDEC 2026

#### General

- Knowledge surrounding art direction
- Movie/cutscene production techniques
- Knowledge and case studies on in-game motion planning

#### Rendering expressions

- Examples of Expression via ShaderMaterial
- Instances of state-of-the-art lighting techniques
- Expression techniques utilizing real-time GI and reflections
- Examples of ray tracing technology
- Expressions compatible with HDR displays
- Expression methods utilizing post-effect
- NPR expressions

#### Background/Character Assets

- Skills to create high-quality assets
- Preparing an environment for look development and improving its efficiency
- Techniques for efficiently creating large-scale assets
- Asset creation flow pertaining to 3D scans
- Examples of model and texture creation using procedure methods
- Examples of applying the latest LOD systems

#### Motion

- Skills to create high-quality motion
- Improving efficiency of motion production utilizing AI
- Examples of motion creation through procedural methods
- Improving efficiency and quality of rigging
- Case studies of unique motion expression
- Improving efficiency and quality of skinning

#### Motion capture

- Shooting methods for high-quality capture data
- Motion-capture systems of various types of input equipment
- Optimizing capture data and knowledge on processing
- Performance capture knowledge
- Expressions that utilize facial capture/hand capture
- Workflow linked to game engine

#### Effects

- Skills to create high-quality effects
- Instances of state-of-the-art effects
- Effect expression using dynamics
- Artistic particle control

#### User interface

- Attractive UI design methods
- Interface design for maximizing UX
- Knowledge surrounding localization and culture adaptation
- UI design for the VR/AR/MR environment
- Case studies of universal design implementation
- UI visuals and UX design utilizing AI
- Knowledge and case studies on efficient UI development environments

#### Artwork

- Knowledge surrounding concept art
- Knowledge surrounding background design
- Knowledge surrounding character design

#### Simulations

- Knowledge on character expression simulation
- Knowledge on fluid and atmospheric simulation
- Knowledge on destruction simulation
- Knowledge on greenery simulation
- Other examples of using simulations to improve efficiency and expression

## Technical art

- Visual expression with new technology
- Case studies on leveraging DCC tool functionalities and transitioning to other tools
- Scalable performance tuning methods
- Asset management and method for integration into game engines in game development
- Case studies of common authoring systems used across visual production and game development
- **Case studies of quantitative evaluation methods of the effects of efficiency improvements**

## Others

- Visual expression of VR/AR/MR
- Efficient reuse of legacy assets
- Optimization methods for mobile games
- Multi-platform support
- Skills and knowledge surrounding camera shooting useful in game production
- Video production in game engines, examples of applications outside of games
- Examples of industry-academia cooperation in the visual arts field
- Visual expression of esports
- New expressions produced through collaboration with other genres
- Case studies on utilizing devices within artists' work environments
- Knowledge on supervision of game development based on existing IPs
- Expression compatible with a diverse range of displays
- **Knowledge and case studies on accessibility**
- Knowledge on legal regulations and social norms relevant for artists
- Education and learning in all the above genres

## Topics sought for tutorials

- Tips on VFX, UI, TA, and procedural modeling
- Tool optimization in scripting language such as Python
- Fundamental knowledge on data creation

## BP (Business & Producing)

The business & production field includes examples of success for computer entertainment as seen from a business angle, the environment around pro gamers and esports, successful and unsuccessful examples from a business viewpoint, funding, all kinds of analysis, sales techniques, rights issues, game programming training business, etc. and handling of expertise that is not limited to technology for game title production.

### Topics sought for the BP genre of CEDEC 2026

- Analysis of market including titles and user trends
- Education for game creators targeted towards young people, both in Japan and overseas
- Community building/community management both online and in real life
- Diversification of billing and business schemes
- Utilizing LLM-related technology to title development/work
- Pioneering new markets (applying game development technologies to other industries, etc.)
- SDGs (Sustainable Development Goals) and ESG (Environmental, Social and Governance) initiatives
- CVAA Act, accessibility, and barrier-free information response
- Various discussions surrounding DE&I
- Use of NFT and other block chain technologies
- How to utilize edge AI and cloud AI in business
- Diversification of work styles
- Balance between games and personal life
- Intellectual property rights of AI learning data
- Digital marketing that does not rely on IDFA and AAID
- Examples of prize system computer entertainment such as esports
- Game streaming, commentary, guidelines, etc.
- License management and legal examples
- Matters of legal consideration regarding younger age groups such as parental controls
- Examples of success from Japan in overseas markets
- Examples of programing education utilizing computer entertainment
- Diversification of game development methods for individuals and small-scale businesse
- Examples in GDPR correspondence

- Ethical perspective of game contents
- Proposals from localization and culturization businesses
- Examples and proposals related to business morals

\* Both proposals and case studies are included.

\* The examples in each item include successful/unsuccessful cases

## **SND (Audio)**

The Sound genre covers production technologies and examples of all aspects of game sounds in computer entertainment, such as interactive uses of sound, production of music and sound effects, recording and editing of voice and music including Foley, the work flow of asset management and implementation, localization, as well as signal processing and spatial audio technologies (including virtual surround).

### **Topics sought for the SND (Audio) genre of CEDEC 2026**

#### **Topics of particular interest sought for the SND (Audio) genre**

- Examples of new concept proposals and endeavors related to acoustic effects
- Examples of improvements made to immersive spatial expression through sound, whether during the pre-rendering phase or in real-time
- Examples of interactive/generative sound control and pronunciation implementation (physics-based, animation-linked, physical modeling, etc.)
- Regarding motion generation/composition of interactive music
- Utilization examples of machine learning and deep learning in audio
- Case studies on generative AI initiatives
- Examples of automation/optimization of developing tool/authoring environment, and interworking with other software

#### **Basic topics sought for the SND (Audio) genre**

- Game sound production (music production, sound effects production, in-game mixing, sound direction, sound production)
- Voice (voice recording to insertion, voice direction, localization, examples of using voice synthesis/input/voice chat)
- Sound programming (examples of tool production/application and research & development)
- Development environment (personnel adjustment/cost/deadlines, work flow, cooperation with other work categories, QA, etc.)
- Business (legal knowledge relating to music copyright law, regulations and administration works)
- Examples of immersive productions that integrate haptics and sound
- Examples of accessibility initiatives

- Examples of sound production in a remote environment

#### **Topics sought for tutorials**

- The latest trends in immersive audio
- Basic knowledge to utilize machine learning in game sounds
- Fundamental knowledge of important concepts and attitudes in sound development
- Fundamental knowledge of the latest sound development technologies



## GD (Game Design)

The Game Design genre covers areas meant to “make games fun and move the hearts of users,” like planning and direction, game systems, level design, balancing, narrative design, and live ops.

This genre also actively covers tools and management knowledge related to the work of game designers, introduction of project case studies, and the hosting of roundtables where participants can exchange opinions.

### Topics sought for the GD genre of CEDEC 2026

#### Key Topics

- Concept-based game development and game design
- Co-creation with user communities through game demos and early access
- Design that inspires player’s curiosity and agency
- How to utilize generative AI in game design
- Design specifications for player actions and camera systems
- Open-world level design (layout and arrangement)

#### Planning/Directions

- Concept-based game development and game design
- Co-creation with user communities through game demos and early access
- Planning game spaces that provide lively experiences with streamers
- Hyper/hybrid casual planning
- Planning UGC platforms for co-creation with users
- Techniques for planning and presenting proposals

#### Trending Game Design

- Design that inspires player’s curiosity and agency
- How to utilize generative AI in game design
- Integrating roguelike/roguelite elements
- Elements that inspires players’ originality and ingenuity to clear games (emergent gameplay)
- Game development through unlocking knowledge (Metroidbrainia)
- Designing horror experiences
- Designing race games
- Game design that can be enjoyed instantly and cleared in a short time

- Overseas game design influenced by Japanese games

#### Specification/Mechanics

- Design specifications for player actions and camera systems
- Weapons, enemies, and actions that generate strategies in combat
- Case studies of boss battles where combat, level design, and narrative work together
- Game design for non-linear narrative experiences
- Rules, strategies, and balancing designed for PvP games
- Rewards and growth system that keeps players engaged
- Designing gameplay screens for convenient gameplay
- Case studies of specification that considers localization/culturalization
- Data specifications and text techniques for large-scale text production
- Deliberation processes for accessibility and utility specification
- Deliberation processes for online matching specification
- Knowledge surrounding cross-platform response
- New approaches to combat design in RPGs
- Designing synergies between RPG skills and card games
- Game design for extraction shooter type games

#### DataTuning/Level Design

- Open-world level design
- Level design (layout and arrangement) that enhances narrative/immersive experiences
- Level design for PvP
- Co-op level design (layout and arrangement)
- Puzzle design, arrangement, and tuning

- Quests and missions design, large-scale production, and tuning
- Tutorial design and specifications
- Balancing in-game economy (experience level and items)
- Instinctual and comfortable game feel
- Tuning enemy AI and combat balance
- Knowledge for mass-producing cutscenes by game designers

### **Live Ops**

- Closing measures in relation to conclusion of services
- Service design that improves user retention and re-engagement
- Anniversary measures to liven up contents with players

### **Narrative**

- Text creation knowledge to achieve alignment with the game's world
- Interactive experience within the story
- Skills in outsourcing, supervising, and providing feedback on game scenario writing
- Design of appealing characters
- Constructing worldbuilding unique to games
- Integrating gameplay and narratives

### **Tools/Management**

- Changes in game design workflow driven by the introduction of AI tools
- Cloud-based specification management
- Game engine knowledge essential for game designers
- Prototyping methods led by game designers
- No-code scripting skills
- Methods for user testing and how to measure "fun"
- Concept-sharing within teams
- Recruitment, training, and skill development of game designers

- Case studies of obtaining patents for game design and its research methods

### **Approaches from related fields**

- Application of UX design and HCE (human-centered engineering)
- Knowledge in tabletop games, immersive entertainment
- Reverse import of gamification technology

### **Tutorials**

- Skills and knowledge in creating specification documents and data lists
- Explaining specifications of past projects (post-mortem)
- Specifications that don't increase bug-related or testing labor

## AC (Academic Research)

The academic research field is an area that handles academic research topics that contribute to the development of entertainment. Specifically, these topics include interactive technology and display technology anticipated to be practically implemented in the future, research on state-of-the-art technology like content creation technology, application of existing technology overlooked by the entertainment industry, research relating to entertainment evaluation methods, and knowledge within interdisciplinary research or liberal arts and social sciences that provide insight into technology and entertainment.

### Topics sought for the AC genre of CEDEC 2026

#### Cutting-edge interaction technology

- Interaction technologies applicable to entertainment
- Interaction technologies using sensations such as auditory, tactile and olfactory senses
- Interaction technologies using virtual characters/avatars
- Systems using body information (fingerprint, retina, pulse rate, skin conduction, brainwaves, eyes, etc.)
- Technology for expanding experiences or ability and research examples (Augmented Human Technology, Superhuman Sports)
- Application of 3D printing and rapid prototyping technologies in entertainment content

#### Cutting-edge display technology

- Live-action based CG technologies (NeRF, 3D Gaussian Splatting, etc.) and their latest trends
- State-of-the-art information display technologies and research examples (displays, HMD, projection systems, etc.)

#### Fundamental Technologies

- AI and human co-creation support technology for content creation in entertainment
- Generative AI and its latest trends
- Next technology to follow VR/AR/MR, and its utilization method
- Fundamental technologies and knowledge for VR/AR/MR and the metaverse
- Examples of evaluation methods, evaluation technology, and evaluation analysis of entertainment
- Relationship-building between entertainment content and humans backed by cognitive science,

behavioral psychology, etc.

- Technologies and topics about ensuring accessibility
- Sensing technology that acquires human movement and emotions
- Knowledge of tools for creating entertainment content or the development of tools
- Technologies and news topics about producing content using remote equipment, such as drones
- New game design that expands the frame of existing games

#### Applications in combination with other fields

- Education and research of gaming technologies and their application case studies
- Applied research on entertainment for education and welfare, etc.
- Applications of wearable systems and robot technology from the wider field of engineering for entertainment
- Humanities research on entertainment and its utilization method
- Case studies of co-creation between academic researchers and production sites

#### Topics sought for tutorials

- The latest trend of every kind of display technology
- Trends and technology prospects related to the metaverse
- Configuration method of expressions and experiences utilizing sense of touch
- Experimental design and statistical method for experimental data analysis
- Methods of experimental planning and experiment data analysis