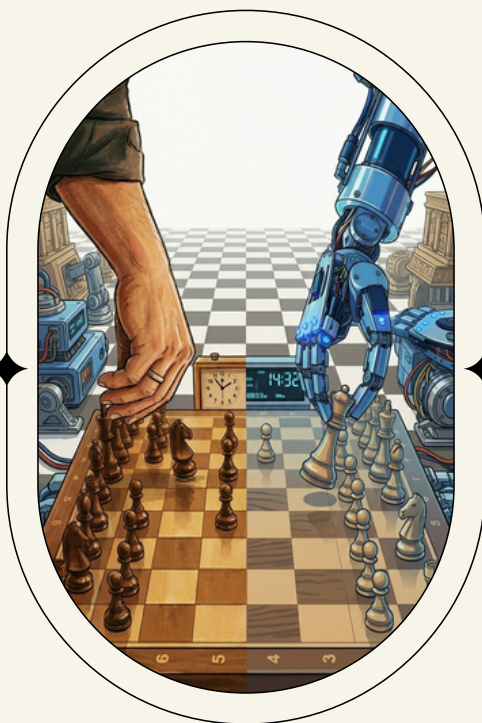


Chess Without Barriers:

the result of technology



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How has technological evolution made chess more inclusive? Chess is one of the oldest and most symbolic games in history, long associated with tradition and rigor. Yet, over the past few decades, technology has profoundly transformed the game, not only revolutionizing how it is studied and played competitively but also expanding its accessibility. Today, chess stands as a tangible example of how technological innovation can promote inclusivity, breaking down economic, geographical, social, and physical barriers.

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• CHESS AND VISUAL IMPAIRMENTS

A major first revolution in the world of chess came with the introduction of tools and game mechanisms designed specifically for blind or visually impaired players.

To promote inclusion, **specialized chessboards** were developed, featuring **unique technical details**.



First, the black squares are raised by about 3-4 millimeters, making it easier to distinguish them through touch. Each square also has a central hole where the pieces are securely placed; in turn, each piece is equipped with a peg to ensure stability during manual exploration of the board. In some modern chessboard variants, magnets are used instead of holes to keep the pieces in place.

To distinguish between black and white pieces, one color is smooth, while the other has a raised texture on top.

As a concrete example, we highlight (in the two photos) the **"Chess for the blind"** set, a one-of-a-kind chessboard and complete set of 32 pieces housed in the **International Chess Museum Giovanni Longo - City of Marostica**. Originating from the United Kingdom, this 19th-century set is crafted from natural bone and red-stained bone.



The game is played according to traditional chess rules; the only substantial difference is the requirement for both players (whether visually impaired or sighted) to **announce each move aloud before executing it**. Additionally, **each player has their own chessboard**, allowing the visually impaired player to freely explore the positions of the pieces without interfering with their opponent. The two **boards are updated to mirror each other**, accurately reflecting the progress of the game throughout its duration.

For time management, visually impaired chess players use **clocks equipped with voice synthesis**, which provide information about the remaining time, the number of moves made, and audible alerts for time control via headphones. This system enables the visually impaired player to compete independently without disturbing their opponent.

This format allows athletes with disabilities to compete on equal footing with all other players, demonstrating how the development of inclusive and innovative technologies can make competition **truly accessible and level the playing field for everyone**.

• ONLINE CHESS AND ACCESSIBILITY

Online chess has evolved significantly in recent years, becoming increasingly inclusive and accessible to players with diverse disabilities.

Major platforms like [Lichess.org](https://lichess.org) and [Chess.com](https://chess.com) have implemented specialized features to ensure everyone can play independently and competitively, breaking down sensory and motor barriers.

For visually impaired players, many sites offer support such as **screen readers** and **audio announcements** that describe piece movements. Some virtual chessboards allow users to **customize colors**, using high-contrast schemes or specific **symbols and patterns**, beneficial even for those with color vision deficiencies. These solutions make the game comfortable and accessible, enabling fair competition with others.

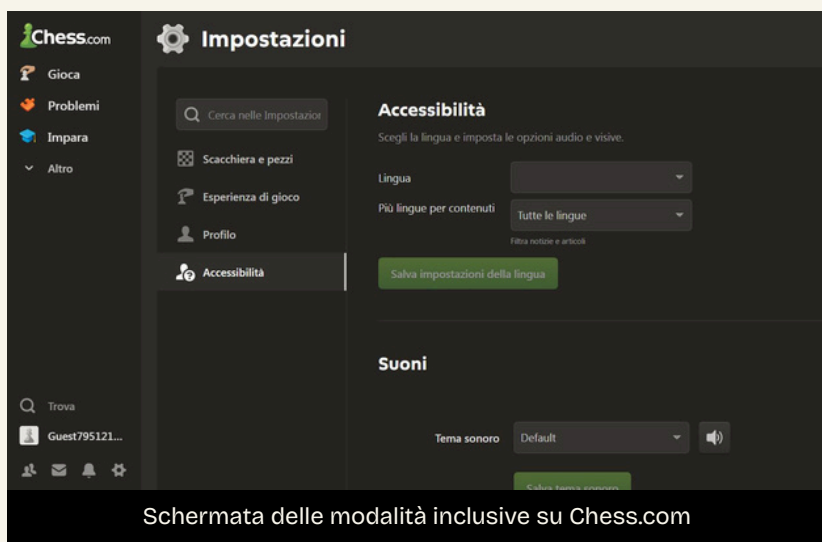


Schermata delle modalità inclusive su Linchess.org

For players with motor disabilities, assistive technologies such as **adapted mouse** (joysticks or trackballs), **one-handed keyboards** and **automatic selection systems** can be incredibly helpful. Additionally, **voice commands** and **eye-tracking systems** allow players to control the game without complex physical movements.

Online platforms support **keyboard shortcuts** and integrate with **assistive software**, while specialized chess programs offer **intuitive interfaces** and **simplified commands**.

Thanks to these innovations, chess becomes a powerful tool for inclusion, enabling people with sensory or motor disabilities to participate fully and with enjoyment. Digital accessibility in the world of chess not only expands the community of players but also promotes dignity and autonomy for those facing these challenges every day.



• INCLUSIVE PROJECTS

Several projects and associations play a crucial role in making chess accessible to people with disabilities, fostering training, participation, and competition at both national and international levels. Internationally, the following organizations are active:



- The **International Braille Chess Association** (IBCA), founded in 1958 in Paris, France, is the leading organization for chess players with visual impairments, including blind and partially sighted individuals.

Through its work, the IBCA has standardized tactile chessboards and developed specific regulations to ensure accessible and inclusive competitions. These tactile chessboards, equipped with holes and recesses to anchor the pieces, allow players, often blindfolded, to memorize positions exclusively through touch. This system, combined with adapted rules, enables visually impaired chess players to compete at high levels.

The association works closely with the **International Chess Federation (FIDE)** and has created a global network that connects national associations, schools, rehabilitation centers, and local federations. Its goal is to promote chess culture among people with visual impairments through **assistive technologies** and **dedicated software**, making learning and participation simpler and more effective.



Scacchiera Tattile per
Ipovedenti, produzione
contemporanea con stampa
3D, polimero termoplastico



- The **International Chess Committee of the Deaf** (ICCD), formerly known as the International Chess Silent Committee (ICSC), was founded in 1949 in Copenhagen, Denmark, and is recognized by FIDE as the leading body for promoting chess among deaf

individuals worldwide.

The ICCD is committed to ensuring fair and inclusive competition by organizing major international events, including: World Individual Championships for deaf men and women; Deaf Chess World Team Championships; European and Asian Continental Club Championships; International friendly tournaments.



To ensure accessibility and competitiveness, the ICCD implements specific regulations, including: **visual signals** (flags or lights) to replace verbal communication; **sign language interpreters or assistants** to facilitate communication; **visual devices and software** to support players with varying levels of deafness.

The rules of chess remain unchanged, but all information is conveyed **exclusively in visual format**, eliminating reliance on hearing.

- The **International Physically Disabled Chess Association** (IPCA), founded in 1995 in Bielefeld, Germany, is a international organization dedicated to making chess accessible to people with physical disabilities, such as limited mobility, cerebral palsy, spinal



injuries, or other conditions that restrict movement.

In collaboration with FIDE and other sector organizations, the IPCA hosts high-level international events, including: World Individual and Team Championships; Continental Championships; Friendly or demonstration tournaments



To achieve its goal, the association adopts tailored solutions, such as adapted equipment (**tactile chessboards, mobility aids and dedicated software**), flexible rules and procedures (**extended reflection times, assistance for moving pieces, and facilitated communication**) and **qualified support with trained referees and staff** to assist players during games.

At the national level, the following organization is active:

- The **Italian Chess Circle for the Blind and Visually Impaired**

(CSICI-ASD), founded in Perugia in 2023, serves as a national

reference point. Through courses, tournaments, and

awareness activities, it collaborates with public entities and schools to promote chess as an educational and social tool.

Among its achievements are the organization of numerous Italian championships and the training of high-level players, always supported by adapted educational materials and assistive technologies.

- The **Italian Blind and Visually Impaired Chess Players Amateur Sports Association**

(ASCID), founded in 1972 by a group of blind chess players, is

dedicated to ensuring that people with visual impairments can learn, play,

compete, and enjoy what they describe as “the world of chess experienced by

those who do not see, but imagine,” as stated on their website.

ASCID views chess as a fundamental right, because this sport enables athletes, both with and without visual disabilities, to compete on equal ground. The true advantage lies in thought, memory, and strategy, not sight.

Over time, the association has fostered technical growth among athletes and built a strong community, while also raising public



CSICI - ASD

Circolo Scacchistico Italiano per Ciechi e Ipovedenti
Associazione Sportiva Dilettantistica "CSICI-ASD"



and institutional awareness about the importance of sport as a tool for integration.

An innovative project that further expands this commitment is the **Chess Platform for Deaf People** (CHED), funded by the **Erasmus+** program.

CHED focuses on the learning and practice of chess among deaf individuals by developing an educational platform based on sign language videos. This initiative aims to counter systemic



marginalization and make the sport accessible through a visual language. These organizations stand as cornerstones in ensuring that thousands of people with disabilities of all kinds can access competitions, training and

communities. They transform chess into a tool of dignity, autonomy, and social participation.

• THE HAN BINBIN CASE

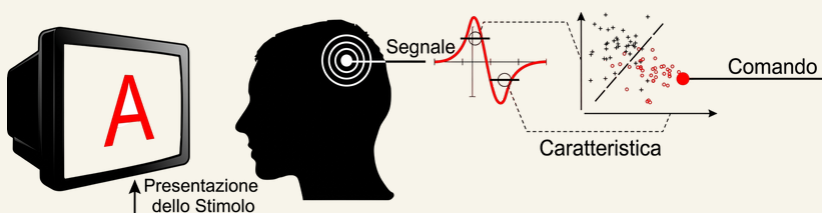
A significant example of how technology can promote inclusion is the story of Han BinBin, a chess player with **congenital cerebral palsy**.

This condition limits movement and coordination, making physical interaction with objects difficult, and, as a result, also challenging the learning of the game.



Initially, Han could move the pieces only by bringing the phone screen close to his face and using his nose, an extremely tiring and impractical method. Despite the challenges, Han **never stopped training**.

The breakthrough came with the adoption of a non-invasive **Brain-Computer Interface (BCI)** device, capable of detecting brain activity through an electroencephalogram. The system interprets the brainwaves and converts them into digital commands, allowing Han to **select and move chess pieces effortlessly, without any physical strain**.



Thanks to this technology, Han has been able to compete in national-level tournaments **on equal footing with other players**. His experience clearly demonstrates how technological evolution, when guided by inclusion, can open new possibilities in sports and daily life, offering many people the chance to express their talent without barriers.

• INSTITUTIONS AND NETWORKS FOR INCLUSIVE COMPETITIONS AND TOURNAMENTS

In the world of chess, there are numerous tournaments and initiatives designed to encourage the participation of people with disabilities, proving how the game can truly be inclusive.

In Italy, the **Italian Absolute Chess Championship for the Blind and Visually Impaired** stands as a key reference point, with a history spanning over fifty years.

This competition represents the pinnacle of the national movement and is often held in various Italian cities, serving as an important moment for meeting and sharing.

Alongside this event, the CSICI-ASD organizes numerous tournaments throughout the year, including the traditional **"Thermal Vacation"** event in Abano Terme.

During these occasions, tactile chessboards and specialized tools are used, enabling participants to play independently and in an accessible setting.

Since 1972, ASCID has also

been active, integrating into a broader international ecosystem represented by the IBCA. In this context, ASCID represents Italy in international tournaments and annually organizes the **Italian Rapid Chess Championship for the Blind and Visually Impaired**, a festive event that attracts participants from across Italy.

At the global level, the cornerstone of blind chess is the **Blind Chess Olympiad**, the chess equivalent of the Olympics for blind players. The first official edition was held in 1961 in Meschede, Germany, where eight teams played 122 matches in a round-robin format, with Yugoslavia taking the final victory.

Held every four years, the event is sponsored by the IBCA, which unites dozens of national associations from Europe, Asia, America, and Africa. The association is affiliated with the FIDE, and through this affiliation, it is recognized in the international sports system. In addition to promoting competitive activity, it works to standardize rules and tactile chessboards, with the goal of spreading the game worldwide.

At the international level, the FIDE also promotes the **World Chess Games for the Disabled**, which include categories dedicated to various types of disabilities, to ensure fair and accessible competition for all.



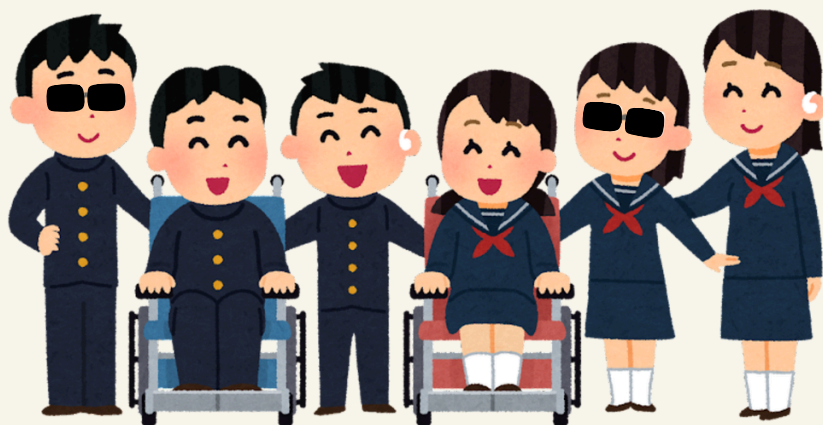


The championship includes categories such as **blind and visually impaired** (IBCA), **deaf** (ICSC), **physical disabilities** (IPCA), **intellectual disabilities** and **other disabilities**. Over the years, the event has been hosted in various cities worldwide, welcoming teams from many countries.

For example, the **first tournament** of this type was held from 24 to 30 October 2011 in Dresden, Germany, with the registration of thirty-five players from six different nations (Germany, Uzbekistan, Italy, Spain, Russia, and India), marking an important historical moment for inclusivity in the game.

During the competitions, players face off in various game formats, including standard chess, rapid (games lasting around 20-30 minutes), and blitz (games lasting just a few minutes), depending on the edition and organizational possibilities. The organization of the tournament area follows specific FIDE guidelines, which, for example, require that each table host only one game and that assistants be provided for players with motor disabilities.

At the **last World Championship** in 2023, the winner was Marcin Tazbirm, while the best-performing Italian athlete was



Duilio Collutiis, who secured fifth place.

Moreover, FIDE has established **guidelines and requirements** to ensure that players with disabilities can also participate in “traditional” tournaments, not specifically designed for them. This marks a decisive step toward an inclusive approach that does not separate but integrates, allowing everyone to compete and share the same passion.



• BIBLIOGRAPHY

To delve deeper into the topic, you can explore the title:

> [Lichess.org](https://lichess.org/);

> [Chess.com](https://www.chess.com/);

> IBCA - [International Braille Chess Association](https://www.internationalbraillichess.org/);

> FIDE - [Federazione Internazionale degli Scacchi](https://www.fide.com/it/);

> ICCD - [International Chess Committee of the Deaf](https://www.iccd.org/);

> IPCA - [Associazione Internazionale degli Scacchisti con Disabilità Fisica](https://www.ipca.org/);

> CSICI-ASD - [Circolo Scacchistico Italiano per Ciechi e Ipovedenti](https://www.csici-asd.org/);

> ASCID - [Associazione Sportiva Dilettantistica Scacchisti Ciechi e Ipovedenti Italiani](https://www.ascid.org/);

- > Hans-Gerd Schaefer, June 26, 2018, [IBCA 1958-2000 Our History](http://lbca-info.org), lbca-info.org;
- > Wikipedia (s.d.), December 8, 2025, [International Braille Chess Association](#);
- > CHED - [Chess Platform for Deaf People](#);
- > Comitato Italiano Paralimpico (s.d.), [Scacchi \(Chess\)](#);
- > Adamo Genco, January 10, 2026, [Scacchi cinesi e interfaccia cerebrale: la sfida storica di Han Binbin \(Chinese Chess and Brain Interface: Han Binbin's Historic Challenge\)](#), HDblog.
- > Il Cavallo Silenzioso, December 2011, [1° Giochi Mondiali di Scacchi per Disabili \(1st World Chess Games for the Disabled\)](#), Asis89.it;
- > Federazione Scacchistica Italiana (FSI), October 25, 2020, [Requisiti per eventi cui partecipano giocatori diversamente abili \(Requirements for Events Involving Players with Disabilities\)](#), Arbitriscacchi.com.