



TEOTRONICO

THE ROBOT PIANIST

EDUCATIONAL PROJECT OF MUSICAL APPRECIATION
FOR SCHOOLS AND FAMILY CONCERTS

A PROJECT WRITTEN BY ROBERTO PROSEDA
ROBOT CONCEIVED, BUILT AND CONTROLLED IN REAL-TIME BY MATTEO SUZZI (TEOTRONICA S.R.L.)

What is the difference between music reproduction and interpretation? How is it possible to change the phrasing and expression of a classical music work, still respecting the composers' ideas?

In this unique project, **a human pianist, Roberto Prosseda, challenges a robot-pianist, TeoTronico**. They will play the same pieces and the audience will notice how different they can sound, depending on the interpretation. The robot literally follows the indications in the score, without adding anything to it, while Roberto Prosseda adds what we call "interpretation".

Roberto Prosseda and TeoTronico will also discuss and debate their own performances, commenting and criticizing each other, in order to stimulate a better perception of the music from the audience.

WHAT IS TEOTRONICO ?

TeoTronico (2012) is a pianist-robot, designed and built by Matteo Suzzi (Teotronica srl). TeoTronico plays the piano with considerable dynamic control and articulation, moving its 53 fingers with great accuracy and speed.

He made his debut with the orchestra on August 26, 2012 with the Berlin Symphoniker conducted by Michelangelo Galeati at the Philharmonie in Berlin, performing Chopin's Grande Polonaise Brillante op. 22.

In November 4, 2012 TeoTronico played Mozart's Piano Concerto K 488 with Orchestra Sinfonica Siciliana conducted by Roberto Gianola.

In May 26, 2013 the Brazilian National Television Globo TV broadcast a reportage about TeoTronico and Roberto Prosseda in the prime time show "Fantastico":

<http://globoTV.globo.com/rede-globo/fantastico/t/edicoes/v/robo-pianista-encara-desafio-contra-maestro-italiano/2597122/>



WHAT DOES TEOTRONICO DO?

TeoTronico is a mechanical MIDI player. It may reproduce a piano score literally, playing it from a midi file: it is therefore an ideal interpreter of repertoire for player-piano by Stravinsky, Hindemith, Nancarrow, Ligeti. TeoTronico can also take the "appearance" of a real pianist piano, playing MIDI files derived from piano rolls recorded by great pianists of the past, such as Busoni, Debussy, Rachmaninoff, Hoffman. It can also play some "**mirror-pianist**" if connected to a digital piano played by a person (Roberto Prosseda, acting as "ghost-pianist"). In the "mirror-pianist" mode, TeoTronico can also play as a solo pianist with orchestra, in chamber ensembles and accompanist with singers, even remotely, miles away.



AND BESIDES PLAYING?

Teo can **talk, sing and make funny facial expressions.** It can reproduce written texts, grant or be dubbed in real time: in both modes, its lips movements are synchronized to the speech, in any language. Thus TeoTronico can **interact with its interlocutors**, even moving his head, mouth, eyes, eyelids and eyebrows. Equipped with proximity sensors, it can turn to the people who are approach it. When dubbed in real time, TeoTronico can **answer questions** from the audience. It can also **perform with other musicians** with an impressive versatility, if in "mirror-pianist" mode, with the assistance of a professional pianist.

WHAT IS IT FOR ?

TeoTronico is an innovative and effective instrument of musical education and appreciation. It attracts young audience with its funny appearance and can introduce the founding elements of musical language to school students of any grade, in an immediate, engaging, entertaining way.

TEOTRONICO VS. ROBERTO PROSSEDA

The debate on the role of the interpreter has been open for many decades. It has often been discussed how an interpreter can go towards a personal-creative-arbitrary interpretation of the score. This concert-challenge is intended to renew the piano recital format and to give the public more incentives for a conscious, critical and participative listening.

The program is divided into three parts. In the first part, we have the real challenge: Roberto Prosseda and the robot will alternate at the piano, performing the same pieces (selected from the audience favorite classical music works). The robot will literally reproduce the score, and soon after Roberto Prosseda will repeat the same piece giving a more "human" expression, in order to highlight the differences between a mere reproduction and a real, natural interpretation.

The second part will see the robot committed to re-incarnate the great pianists of the past (Rachmaninoff, Busoni, Hoffman), reproducing their piano rolls. The aesthetic debate then moves on the history of piano interpretation, offering very seldom played performances which made the history of piano interpretation over the past 100 years.

In the third and last part the robot will perform original music for player piano, such as Etude for pianola by Stravinsky and two studies of Conlon Nancarrow, a cult composer in some intellectual circles, which was among the first authors to fully understand the potential of the player piano. Ligeti took inspiration from him for many of his music, and openly, for his studies of piano.

Part one: Human Pianist vs Robot Pianist

The robot reproduces midi files "Robotics". Each song is performed soon after by Roberto Prosseda.

Chopin: Nocturne op. 9 No 2 in e flat major

Scarlatti: Sonata K 427

Mozart: Turkish March

Chopin: op. 25 No. 2

Part two: the robot reproduces piano rolls recorded by great pianists

Liszt Transcendental study No. 5 "Feux Follets"

Rimsky-Korsakov: Flight of the Bumblebee (roll by Rachmaninoff)

Mendelssohn: Spinning Song (roll by Rachmaninoff)

Joplin: Maple Leaf Rag

Liszt: La Campanella (roll by Busoni)

Chopin: Valse op 64 No 1 (roll by Hoffman)

Part three: the robot plays music for player piano.

Stravinsky: Etude for pianola (1915)

Nancarrow: Study No. 2a and no. 7 for the player piano

Ligeti: Study No. 14 for the player piano



FAMILY CONCERT: TEOTRONICO WITH ORCHESTRA

In this project TeoTronico and Roberto Prosseda alternate at the piano in the form of a "piano battle", alternating at the piano, performing pieces for piano and orchestra. TeoTronico can follow the indications of the conductor, with a flexible design and "human", if in "mirror-mode", remotely controlled by Roberto Prosseda as a "ghost-pianist". In this mode, the robot mirrors Prosseda's playing in real-time, including dynamic nuances and "rubato". The robot discusses and argues with Roberto Prosseda and the conductor, disagreeing about their interpretation, too "human", and asking why they add further expression to what is written in the score.

An opportunity to provide the public with valuable tools to a more conscious and perceptive listening. An ideal project for the "family concerts" with an audience of families and children. The project may also include music for solo orchestra inspired by the complex relationship between machine, automation and music. Each performance is alternated with short dialogues, with TeoTronico commenting and introducing the pieces to the audience.

 <http://www.youtube.com/watch?v=U5rKjrQ3JoE>

www.robertoprosseda.com
www.teotronica.it

Sample program 1

Orchestral Overture

Bach: Concerto in d minor BWV 1052, first movement.

TeoTronico, piano

Bach: Concerto in d major BWV 1054 (complete). Roberto Prosseda, piano

Bach Concerto BWV 1060 for two pianos and orchestra, third movement. TeoTronico and Roberto Prosseda, piano

Sample Program 2

Haydn: Toy Symphony

Mozart: Turkish March (TeoTronico, piano solo)

Mozart: Concerto K 488 (TeoTronico, piano)

