

## TERESA RAMPAZZI: PIONEER OF ITALIAN ELECTRONIC MUSIC

Laura Zattra

Dottorato in Scienze della Musica  
Università di Trento  
laura\_zattra@yahoo.it

### ABSTRACT

Teresa Rampazzi (1914-2001), pianist and composer, is one of the pioneers of electronic music in Italy and the first Italian woman to produce and promote it.

She started her career as a pianist; in the 50s she attended the Darmstadt's *Ferienkurse*, she played in the Bartók Trio and was a member of the *Circolo Pozzetto*. She was deeply convinced of the necessity to develop Avant-Garde Music to prepare people for the *Neue MusiK* and new electronic paradigm.

In 1965, Teresa created the N.P.S. (Nuove Proposte Sonore) Group, in collaboration with Ennio Chiggio and they started to produce experiments with analogue equipment. After some disagreement, she continued her activity with young engineers and musicians.

From 1972 to 1979, she taught electronic music at the Paduan Conservatory and began to learn and produce computer music at the CSC (Centro di Sonologia Computazionale), obtaining numerous prizes. In 1984 she retired to Bassano (VI), where she continued her musical activity.

### 1. INTRODUCTION

Two key words characterize contemporary culture: overcoming and flexibility, that is the desire of rapidly overcoming each result with another, better and more functional product, and that flexibility needed to react to this velocity. Teresa Rampazzi, piano performer, composer and pioneer of computer music in Italy, is a good example of these two rules. In 1969 she wrote: "not only are generations forced to assimilate each transformation every ten year, but everyone must change ideas and attitude once or twice during his whole life" [1]. Well, T. Rampazzi's career shows numerous esthetical and musical turns which demonstrate, a posteriori, a clear artistic will. Before dedicating herself to electro-acoustic music, she became an assiduous promoter of Avant-Garde music: she played, for the first time in Italy, the Schönberg Suite op. 25 for piano; in her lounge, she often met Bruno Maderna, Heinz Klaus Metzger, Sylvano Bussotti, etc. When she was 50 years old, she took up analogue music composition. Finally, aged 60 and with her usual great enthusiasm, she began to study and produce computer music.

Nevertheless, T. Rampazzi is especially known for her electro-acoustic activity. She first encountered the new electronic paradigm exactly at its birth, "listening to its cries in the large Marienhöhe concert hall, in Darmstadt" [2, p.122]. Thanks to this discovery,

electronic music landed in Padova. Thanks to T. Rampazzi, some composers and engineers got together and founded the N.P.S. (Gruppo Nuove Proposte Sonore) and the CSC (Centro di Sonologia Computazionale). Knowing her activity means to analyze Padova's lively but sometimes contradictory musical life, over the last 50 years.

#### 1.1. Teresa Rampazzi performing activity

T. Rossi (this was her maiden name) was born in Vicenza in 1914. She had been interested in music since her childhood so, "as a typical good family daughter, I played the piano" [3, p.32]. She started studying music with a local teacher (Tonolli), but her father soon sent her to the Milan conservatory where she studied with Arrigo Pedrollo. Here she got to know Bruno Maderna and began to receive friends in her living room, people who would become very important in the contemporary music scene: Franco Donatoni, René Laibowitz, Severino Gazzelloni and Maderna.

In 1952 and 1954, Teresa Rampazzi attended the *Internationale Ferienkurse für Neue Musik* in Darmstadt and listened to electronic experiments made by Eimert. She had understood that that was the only way to completely reject tonal music. But in *Veneto*, the people were not ready to know electronic experimental music or Avant-Garde music. That's why in 1956 Teresa began to play with the Bartók Trio (Elio Peruzzi: clarinet, Edda Pitton: violin, Teresa Rampazzi: piano), and decided to promote the Avant-Garde music by Anton Webern and Alban Berg. In a city where Mahler's music was not known yet, this activity was not so easy. It was therefore crucial to prepare and open the public's mind to the *Neue Musik* and to electronic music.

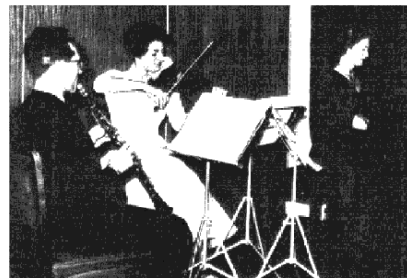


Fig.1. The Bartók Trio in 1959 (from the left: Elio Peruzzi, Edda Pitton, Teresa Rampazzi).

During this period, Teresa became a member of another group named *Circolo Pozzetto*. The cultural and political circumstances of this merit a little

digression. Its founder, Ettore Luccini, was an intellectual engaged in the Communist Federation of Padova. From 1956 to 1960 he drew together a large number of intellectuals (visual artists, poets, musicians, teachers, etc.) who met in periodical assemblies and talked about the cultural situation. He organized expositions, concerts and conferences in order to let the citizens know the most recent intellectual and artistic trends [4]. The *Pozzetto* “would have been the first positive answer to the isolation of many intellectual communists and to their own isolation towards the Party: a place where it would be possible to meet people, to exchange ideas, to reduce and overcome mental severity” [5]. Nevertheless, the group encountered serious difficulties caused by Luccini’s role in the political party. From the beginning he was suspected of promoting free thinking instead of encouraging thought from a political point of view. The Communist Federation had vigorously opposed this activity and eventually, this forced him to leave the city council’s Cultural Commission and the Provincial Federation. That’s why Luccini ended the *Circolo Pozzetto*.

Considering this background, Teresa Rampazzi’s participation did not come from political motivations. It originates from the coincidence of being introduced to the artist Sylvano Bussotti, a member of the group. This could be important to avoid some consequences derived from a political interpretation. However, some years later Teresa would be strictly involved in political sense, during students’ and workers’ demonstrations. This was part of her passionate character. In any case, from 1956 to 1960 she took part in *Circolo Pozzetto* to promote Avant-Garde and electronic music with auditions and conferences. During these conferences, Teresa talked about *Neue Musik* (Karlheinz Stockhausen, Henri Pousseur, etc.) and about the music composed by her friends F. Donatoni, Niccolò Castiglioni and Maderna. Moreover, in 1959 during auditions dedicated to the music realized between the two world wars, she played with the Bartók Trio and performed music by Bartók, Hindemith and Berg. But her most noteworthy concert is the one set in 1959 with John Cage, H.K. Metzger and S. Bussotti. The four performers ‘played’ with whatever could resonate, with the piano but also with sticks and screws.

### 1.2. The Informal Revolution

Combined with her fascination with electronic sounds, Cage’s Informal music made Teresa see the possibility to leave behind tonal music and the traditional form ‘start-development-end’. At this moment, all preambles for changing her musical activity were complete. She sold her piano in curious circumstances: a legend tells that she demolished it during a performance with Cage. Perhaps the truth is that her informal music techniques worried her friends and audience in such a way that this myth developed. In fact, musicologist Ugo Duse once said: “in Padova there were these crazy people who kicked the piano, slammed the keyboard shut, plucked the strings; this

phenomenon, which later spread across Italy, began softly in Padova too [...]. I consider Teresa Rampazzi to be the only person in Padova brave enough to be interested in it” [6]. According to another legend, Teresa’s husband bought her piano from her in order to save it from destruction. In any case, it is true that she did not want to see her piano anymore.

In 1964 she met the visual artist Ennio Chiggio, member of the famous *Gruppo Enne*. This was a ‘laboratory’ whose components produced unpersonalized artistic products. Chiggio himself was fascinated by new sounds of some pieces created at *Centro di Fonologia della RAI di Milano*. Since he worked for an electronic firm, he easily obtained a semiprofessional recorder, a low-frequency generator, and a mixer. Teresa contacted him to borrow a mixer and a tape player for an audition. Chiggio writes: “that meeting was fatal, Teresa was very extraverted and enthusiastic and I showed her my equipment. She talked to me about the Bartók Trio, about Darmstadt, Maderna, Cage and we started to meet very often” [7].

## 2. THE ELECTRONIC MUSIC

### 2.1. The Analogue Music: N.P.S. Group

Initially, Teresa and Chiggio made some unofficial experiments. They listen to the *RAI-Radio Televisione Italiana*’s third musical program from which they recorded many pieces, from medieval to contemporary music (a lot of these tapes may be found at Padova University – Music Department). As medieval music was almost entirely vocal, it was a good model for studying how to use simple sinusoid sounds.

Their first experimental work consisted in a sound collage which would have functioned as musical background for an exposition by the *Gruppo Enne* at the Biennale di Venezia. It was a 30 minute tape, played very slowly (4.75 cm/s) to make even longer! On this occasion, Teresa and Chiggio decided to found a group inspired by *Gruppo Enne*. On 20<sup>th</sup> May 1965, they founded the N.P.S. (Nuove Proposte Sonore) [8]. The choice of the name (New Sound Proposals) shows a firm decision to eliminate any artistic aspiration: this was pure research and each result, named *oggetto sonoro* (sound object), would have been anonymous. These *oggetti sonori* were reminiscent of the Schaefferian masterpiece *Traité des objets musicaux* [9], but they were intended to be its evolution. The first N.P.S. members were Teresa, Chiggio, Memo Alfonsi (a young engineer interested in music) and Serenella Marega (Teresa’s friend).

The group’s inner organization reflected this ideal collectivism: all instruments were common property, even if individual members had bought them. Amongst the musical equipment they used was the following: a low frequency EICO generator, a radio which produced long-wave frequencies (useful for simulating coloured noise), a tape recorder, a mixer, a two track recorder [7]. In order to reverb sound, they put a loudspeaker at the top of the stairwell and a tape recorder at the bottom of it! “In any case, we could not

avoid the recording of a slammed door, during the so-called composition *Ricerca 4*" [2, p.123].

The manifesto was extremely rigid: "the instrument has no possibilities anymore, it has been raped, destroyed, it can no longer communicate..." [8]. This reflected the deep desire to conduct authentic research without thinking of a potential audience.

In 1965 two types of sound research started: *Ipotesi* (*Hypothesis*) and *Ricerca* (*Research*). Both categories were works from about 3' to 7' minutes, signed by Rampazzi, Chiggio, Alfonsi, Marega and Gianni Meiners. *Ipotesi 1* and *Ipotesi 2* consisted in a opposition of square waves streams and sinusoidal glissandi streams based on the Fletcher studies. In *Ricerca*, N.P.S. members studied the effect of close frequencies which diverge in time reaching the two extremes of the spectrum range. One year later they realized some sound objects – *Operativi* (*Operational*) – with coloured noise, square waves and beatings. *Funzioni* is a research of the glissando's effect. In 1967 N.P.S. produced the works *Ritmi* (rhythmical study) and *Moduli* (impulse and its attack) and, in 1968, *Interferenze* (*Interferences*), *Dinamiche* (*Dynamics*) and *Masse* (*Masses*) [7], [8].

Nevertheless, in 1967 members' ideas started to diverge. Teresa's musical instinct led her to aspire to greater artistic freedom, which was in contrast with Chiggio's motivation. For this reason, Chiggio preferred to leave the group. He once said: "Teresa was like that, she loved and hated to excess, she had enormous enthusiasm and was very stubborn. At that moment we could not reach a compromise so we did not meet for years, even if towards the end our friendship and mutual admiration permitted us to overcome all misunderstandings" (personal communication). In Chiggio's interpretation, "initially, N.P.S. Group had all the ingenuousness and force which characterize Avant-Garde movements. It aimed at "new" proposals, forgetting that from the Middle Ages, many musical trends had employed this term. Its manifesto annihilates every expressive quality of the traditional instruments, but in the end the group would deny all that" [7].



**Fig. 2.** N.P.S. members during the first period (1965-1967): from the left Chiggio and Alfonsi, behind Rampazzi, Marega, Meiners [7].

During the second period of the N.P.S., Teresa opened her laboratory to young engineers and musicians and started a new epoch dedicating herself to teaching. In November 1968 she began to give free musical instruction. The students, who became new N.P.S. members, were Giovanni De Poli (born in 1946, engineer), Patrizia Gracis (1947, philosopher), Luciano Menini (1948, engineer), Serena Vivi (1945, mathematician) and, from December, Alvise Vidolin (1949, engineer). In a mutual exchange, they spoke about their technology knowledge, whereas Teresa offered her humanistic and musical experience.

At this moment musical equipment was arranged thus: six oscillators with manual control, six oscillators for frequency modulation, a white noise generator, an octave filter, a filter with changeable band, an amplitude modulator, a note switch, a reverb, a 10-channel mixer, an audio signal switchboard, four tapes, a stereo amplifier and a frequency meter [10].

Pieces created by N.P.S. members were now signed. This happened particularly for Teresa's compositions. *Freq.mod 2* (or *Fremod 2*), for example, is based on "fast glissandi in high frequencies, thick exploding glissandi, short explosions of filtered sounds, bands of frequency modulation as a chorus" [8]. It's interesting to notice that even the terminology is experimental and tries to classify sounds objects not definable with traditional terms. In July and September 1970, Teresa Rampazzi was invited by the Washington Catholic University of America and later by the Warsaw Experimental Studio where she exhibited the piece *Insiemi*. In January 1972 the Festival International de Musique Electroacoustique in Paris performed her music during a concert.

The initial attention on the term *sound object* changed now in *musical object*. This meant that the electronic instruments' analysis aimed at the 'musical' synthesis of the different electronic techniques. Moreover, "in our group cooperation continues to be crucial, but we pay attention to the individual proposals" [8]. In fact, from 1970 N.P.S. members did not produce research products anymore, but single works which combined all analytical results with more freedom. They also realized some soundtracks for films and documentaries: *La città*, 1971 (Studio Bignardi); *Vademecum*, 1971 (Max Garnier); *La città feticcio* and *La salute in fabbrica*, 1972 (Giuseppe Ferrara), *Endoscopia*, 1972 (Domenico Oselladore) [8].

In 1972, N.P.S. members bought a Synthi A Ems, which permitted better musical results. The Computer music trend started to seem attractive and considered necessary to develop Teresa's musical ideas.

In October 1972 the conservatory of Padova instituted a new electronic music course and assigned it to Teresa (this was the third course in Italy). She brought with her the whole musical equipment and, consequentially, she ended N.P.S. Group. However, she continued to produce works with the synthesizer: *La cattedrale* (1973) based on the set theory, *Glassrequiem* (1973), *Breath* (1974) and *Canti per Checca* (1975) realized with the voice of her daughter Francesca.

YEAR	TITLE	AUTHORS	Duration
1965	<i>Ipotesi 1</i>	A C Ma Me R	4'
	<i>Ipotesi 2</i>	A C Ma Me R	5'
	<i>Ricerca 1</i>	A C Ma Me R	6'
	<i>Ricerca 2</i>	A C Ma R	5'30"
	<i>Ricerca 3</i>	R	7'30"
	<i>Ricerca 4</i>	A C Ma R	5'5"
1966	<i>Operativo 1</i>	Ma R	3'
	<i>Operativo 2</i>	Ma R	3'25"
	<i>Operativo 3</i>	R	3'55"
	<i>Funzione 1</i>	Ma R	4'10"
	<i>Funzione 3</i>	Ma R	1'30"
	<i>Funzione 4 (2 tracks)</i>	A Ma R	2'30"
	<i>Funzione 5</i>	Ma R	2'
	<i>Funzione 5a</i>	Ma Me R	1'
1967	<i>Ritmo 1</i>	Ma R	3'
	<i>Ritmo 2</i>	Ma R	3'
	<i>Ritmo 3</i>	A Ma Me R	2'40"
	<i>Modulo 1</i>	Ma R	3'
	<i>Modulo 2</i>	Ma R	3'
	<i>Modulo 3</i>	Ma R	2'20"
	<i>Modulo 4</i>	R	3'40"
	<i>Modulo 5</i>	Mk R	2'30"
1968	<i>Interferenze 1</i>	Ma R	3'30"
	<i>Interferenze 2</i>	Mk R	4'10"
	<i>Dinamica 1</i>	Ma Mk R	3'
	<i>Masse 1</i>	Mk R	3'
	<i>Masse 2</i>	R	2'30"
1969	<i>Freq.Mod 1</i>	Ma R	4'15"
	<i>Freq.Mod 2</i>	R	6'50"
1970	<i>Imp &amp; Rith.</i>	R	4'
	<i>Environ</i>	R	7'
	<i>Insieme</i>	G R	7'20"
1971	<i>Eco 1</i>	DP G Men Vid	3'50"
	<i>Filtro 1</i>	DP G Men Vid	6'80"
	<i>Taras su 3 dimensioni</i>	DP Men R Vid	10'50"
1972	<i>Immagini per Diana Babylon</i>	R	2h
	<i>Computer 1800</i>	R	8'20"
	<i>Hardlag</i>	DP Me Vid	5'15"

Fig. 3. Table of N.P.S. works [7], [8].

[Legend: A=Alfonsi, C=Chiggio, Ma=Marega, Me=Meiners, R=Rampazzi, Mk=Mazurek, DP=De Poli, G=Gracis, Men=Menini, V=Vivi, Vid=Vidolin]

### 2.1. Teresa and the 'big monster'

Musical Informatics was rapidly spreading across the world, but its unfriendly language was even more evident to musicians. Furthermore, in Italy the academic society (e.g. engineering faculties) and the conservatories were so definitely separated that composers had no possibilities to learn new digital technologies. For this reason, in 1965 Pietro Grossi did all he could for creating the first electronic music course in the Florence conservatory, followed by other courses including the one in Padova.

Moreover, the positive activity of the N.P.S. Group and the presence, in the Engineering Department, of Alvise Vidolin, Giovanni De Poli and their Professor Giovanni Battista Debiasi, showed that computer music could be seriously considered as a new research trend. In the beginning of the '70s, De Poli, Vidolin and Graziano Tisato, monitored by G.B. Debiasi, began an important investigation in sound synthesis [11]. They worked at the CCA (*Centro di Calcolo di Ateneo*), the university's administrative building, whose computers were not used after 2 PM and could be exploited for research activity. The composer James

Dashow worked with them; he brought from the USA the software Music 360 and Music4BF, and named the group *Computer Music Group*. In 1979 Debiasi and the university chancellor institutionalized this association and gave it the name CSC (*Centro di Sonologia Computazionale*).

In its constitutive statute, CSC intended to develop research, musical production and teaching. Teresa Rampazzi's participation must be considered from this two latter points of view. During the middle '70s, as lecturer she took part in electronic music seminars set in Vicenza (*Seminari di Villa Cordellina - Montecchio Maggiore - Vicenza*), organized by the composer Wolfango Dalla Vecchia (conservatory's director) in collaboration with G.B. Debiasi and with the *Computer Music Group* members. Students came from Italy, France, Germany, England, Romania, Greece, Australia, Canada, USA and South America.

However, Teresa Rampazzi suffered for the lack of collaboration between the conservatory and the *Computer Music Group*. For this reason, in 1974 she convinced the director W. Dalla Vecchia to establish a formal contract, which allowed the students access to the University's machines.

In 1974 Teresa was 60 years old. Her enthusiasm in learning new digital techniques was remarkable. Regarding this, she said: "I thought the computer could be finally a serious person whom you could speak with. I began to study but, unexpectedly, I discovered a great length not in calculating (the computer was incredibly quick) but in writing all the instructions required for a mutual comprehension" [2, p.125]. Teresa Rampazzi's difficulties with computer were also caused by her eyesight problems. For this reason she called it 'the great monster'. But her troubles were not so different from other composers who learned computer language and worked with perforated listings. In 1976 G. Tisato created for her the language ICMS (*Interactive Computer Music System*). It was a real time software which did editing and mixing and was connected with a video. Teresa selected her 'windows' with a light pen. Her first piece, which is also the first piece realized by *Computer Music Group* together with a piece by James Dashow, was exactly titled *With the light pen* (1976). This piece obtained a special mention at the International Electroacoustic Music Competition in Bourges (France).

Right through this period, she taught to her students analogue techniques during her lessons at conservatory, whereas at CCA she collaborated with them on the same level in producing computer music. She realized other pieces: in 1978 *Computer dances* (Special mention, Bourges, 1978) which is "based on 8 sections in which the signals gradually overlap in a constantly increasing number according to the shortening of the signals" [12a]. It had been realized on the IBM S/7 (16bit) of the CCA, with the ICMS. During its realization, Teresa wrote (it's noticeable her ability and candor to describe her music and compositional processes): "the great monster who keeps me nailed here to my place has given me a time limit and not a moment can be lost. Great reflectors have been

placed around me to enable me to work all night. My eyes are burning; at times I feel I cannot see how everything should be; the entire immense vault covered with figures and a strange type of flowers. Nothing however will be still. I have predisposed things so that everything moves and dances as elegant a manner as possible" [12b].

In 1979 she realized *Fluxus*, (Disk LP EDI-PAN PRC S 20-16, Rome, 1984), based on a fragment by Heraclitus; in 1980 *Atmen noch* which won the Second Price at VIII *Concours Internationale de Musique Electroaoustique de Bourges* (1980, first price not awarded). Among the other pieces we mention *Requiem per Ananda* (1982), which combine some phonemes taken from the Requiem Mass by Louis da Victoria (1548-1611) with digital signals.

In 1984 her husband died and this experience sharpened even more her refusal towards the past. She sold her home, gave all her musical property to conservatory and musical institutions (now these materials – disks, books, scores, tapes, sketches – may be found at Padova's Music Department) and decided to retire. She first went to Assisi for some years and later she settled in Bassano (Vicenza) where she lived until December 2001. Here she created a little home studio where, helped by the technician Tonino Delfino, she continued to compose (especially with the Yamaha DX7) and listen to music, faithful to her desire to put music before her personal achievement.

YEAR	TITLE	Traces	Duration
1973	<i>La cattedrale</i>	Mono	15'15"
1974	<i>Breath Glassrequiem (Omaggio a Mozart)</i>	4 tracks	18'34"
		Stereo	9'10"
1975	<i>Canti per Checca</i>	4 tracks	9'45"
1976	<i>With the light pen Melismi (Stockholm – Padova)</i>	Stereo	8'30"
		4 tracks	7'50"
1977	<i>Timbri 1597-1977 (Omaggio a Giovanni Gabrieli)</i>	4 tracks	14'30"
1978	<i>Computer dances</i>	4 tracks	10'30"
1979	<i>Fluxus</i>	Stereo	10'40"
1980	<i>Amen noch</i>	4 tracks	15'10"
1981	<i>Metamorfosi Danza seconda</i>	4 tracks	8'30"
		4 tracks	8'
1982	<i>Geometrie in moto Requiem per Ananda</i>	4 tracks	11'40"
		4 tracks	8'15"
1983	<i>Spettri</i>	4 tracks	9'46"
1984	<i>Eka'</i>	4 tracks	19'50"
1987	<i>Parole di Qoelét ...Quasi un Haiku...</i>	Stereo	30'
		Stereo	?
1988	<i>Forse fantasmi</i>	Stereo	?
'90s	<i>Incantamento di Silo Polifonie di Novembre</i>	Stereo	?
		Stereo	?

Fig. 4. Teresa Rampazzi's works from 1973 to 2001.

### 3. CONCLUSIONS

Throughout her career, Teresa Rampazzi played an important role in the promotion of contemporary and electronic music. Her cultural and artistic independence permitted her to be sensitive to any intellectual stimulus and to change her ideas without contradiction. She studied in depth every new

esthetical choice with obstinacy and determination, forcing herself to forget completely each precedent experience.

Finally, in order to understand her activity as a musician, it is important to underline her dedication to teaching and her perspective as a woman. Nevertheless, she was not a feminist and she did not recriminate sexual differences in the artistic world. She once said: "just as there are many women who have a demanding profession, the same is true in music [...]. Unwittingly I risked compromising my musical interests when I got married. But they were much too important for me" [3, p.66]. As a woman, she sometimes seemed an eccentric composer, but she refused to be considered a woman composer whose gender dominated her music. If someone asked her if there was a feminine way to make music, she answered: "absolutely not. There is neither male nor female music. There are pieces composed by men which seem to be composed by a woman and vice versa, if by 'feminine' you think of something sweet, elegant, delicate. But a woman can be as vigorous as a man, or even more!" [3, p.72].



Fig. 3. T. Rampazzi in her home studio in Bassano, Vicenza (late '90s).

### 4. REFERENCES

- [1] Rampazzi, T., "Tempo e ritmo", *Filmspecial*, July 1969.
- [2] Rampazzi, T., "Piccolo discorso con Michela", *Autobiografia della musica contemporanea* (Michela Mollia ed.), pp. 122-126, Cosenza, Lerici, 1979.
- [3] Galanti, L., *L'altra metà del rigo. La donna e la composizione femminile oggi in Italia*, Imola, Grafiche Galeati, 1983.
- [4] *La stagione del Pozzetto. 1956-1960. Documentazione e dibattiti da un avvenimento culturale in Padova*, unique issue, 1979.
- [5] *Il Pozzetto. Un orizzonte aperto. Ettore Lucini e la sua lotta contro l'isolamento politico e culturale della sinistra*, Padova, Editore Programma, 1992.

- [6] Di Capua, G., *Teresa Rampazzi. Fino all'ultimo suono*, Radiotre, 3/10/17 marzo 1993 (prima puntata).
- [7] Chiggio, E., *Oggetto sonoro. Lectures. Musica elettronica – Fonologia n. 7*, Edizioni multimediali del Barbagianni, p.1, March 2002.
- [8] *NPS 65-72. Sette anni di attività del gruppo nuove proposte sonore nello studio di fonologia musicale di Padova*, conservatorio 'C. Pollini', Padova, unpublished.
- [9] Schaeffer, P., *Traité des objets musicaux*, Paris, Seuil, 1966.
- [10] Vidolin, A., *Contatti elettronici. La linea veneta nella musica della nuova avanguardia*, in *Venezia Arti 1989/3*, Bollettino del Dipartimento di Storia e Critica delle Arti dell'Università di Venezia, 1989.
- [11] Durante, S., Zattra, L. (eds.), *Vent'anni di musica elettronica all'Università di Padova. Il Centro di sonologia computazionale*, Palermo, CIMS, 2002.
- [12] Rampazzi, T., "*Computer dances 1978. Technical description [a] and Metaphoric description [b]* (in English), unpublished.