**MARIA CURIE-SKLODOWSKA UNIVERSITY**

**FACULTY OF ARTS**

INSTITUTE OF FINE ARTS

Michał Mikulski

# PARALLEL COMPOSITIONS

## PhD THESIS DESCRIPTION

thesis supervisor
Ph. D habilitated in art Marek Letkiewicz,
professor of Maria Curie-Sklodowska University

auxilary thesis supervisor
Ph. D Sławomir Plewko

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## 1. Introduction

My PhD thesis composes of the series of five graphic works. This set is a visual presentation of the artistic assumptions undertaken during the implementation of the piece of work. It creates a coherent composition put in a horizontal order and it forms an indivisible whole. The presented graphic arts are made by means of the digital printing technique, in the full colour. The compositional format of all five works is 4 meter wide and 1,25 meter high.

The object complementing the main visual presentation that I am referring to within the name of this doctoral dissertation (Parallel Compositions) is a full-dimensional geometric figure. It emerges from the expression of the graphic art presented in reality and it extends the traditional print form. This object is visualised in the *Augmented Reality* environment and presented by means of the devices such as smartphone or tablet.
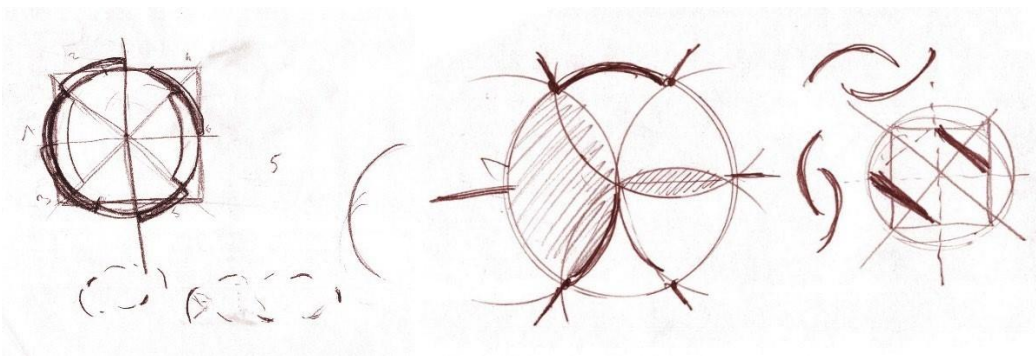
## 2. Concept

In the concept of the PhD thesis that I presented in the beginning of the doctoral program I planned to create a series of the graphic works performed by means of the digital printing technique. Based on the images created in the previous years, I was aware what means of artistic expressions I operate with and what art I move in. I have already developed skills and means to implement my objectives. Artistic forms have been evolving and a characteristic for me manner to draw a line has also been developed.

In my artistic creation, the main creative force is intuition, which is understood as a demiurge of the artistic instinct. With this awareness, while preparing a series of works for the purpose of the dissertation, I came to conclusion that I need a solution that would organise my activities - a way of calculation. I realised that I need a strong foundation, a thought, which I would develop the construction used in all artworks on. Thereby, I would unite the whole series so that it would become an inalterable unity. I needed a rigid framework that would balance what had been created intuitively thus far.

Looking for a form that would become this construction of the whole series and the origin of the piece of work, I made the easiest possible choice - I drew a circle on the piece of paper. I read the circle as a static form that is set and ready to accept any narration. While beginning to complement this closed space, I introduced a square to the circle. First divisions and contact points of the drawn lines were shown enabling to draw the next lines based on the newly created polygon.
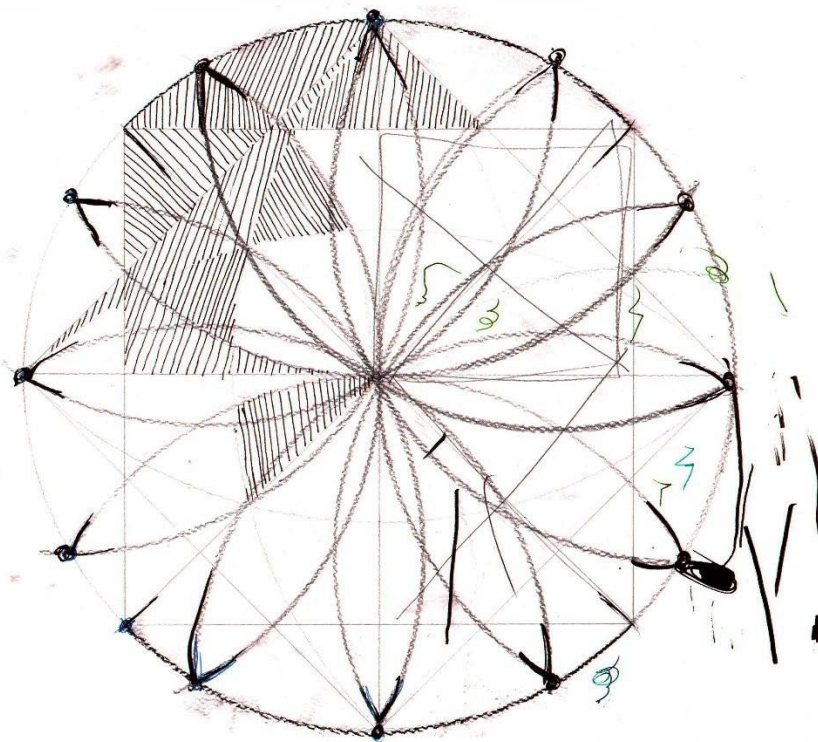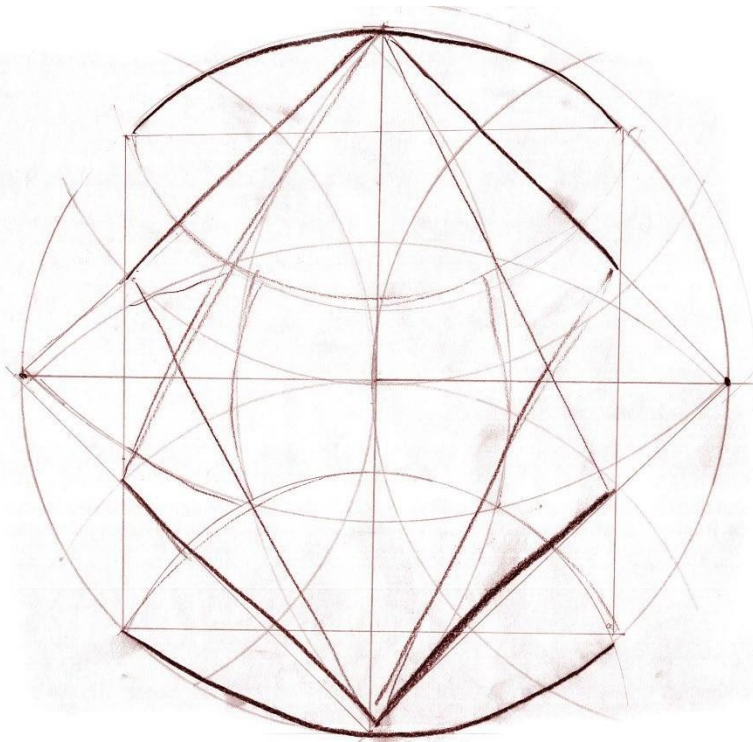
Preliminary Sketches
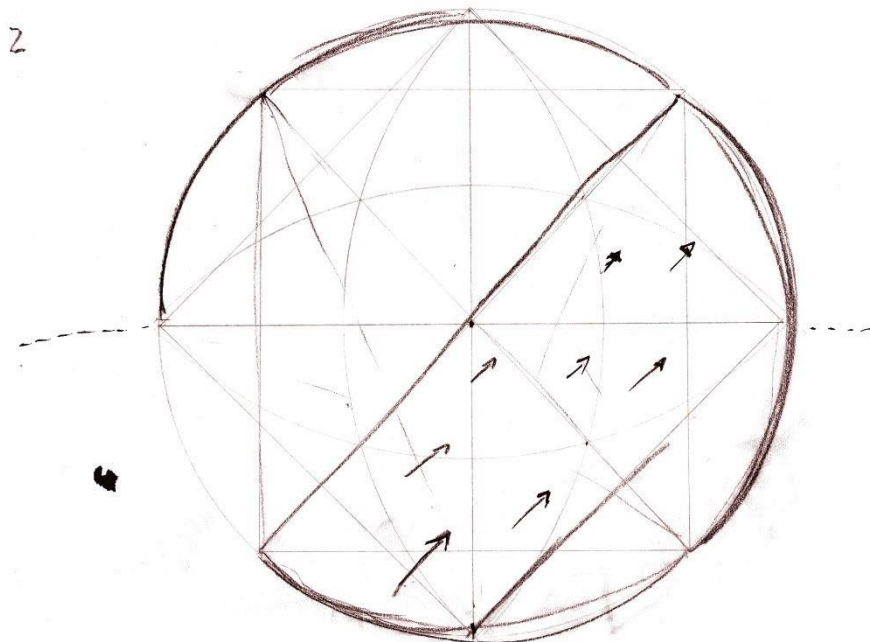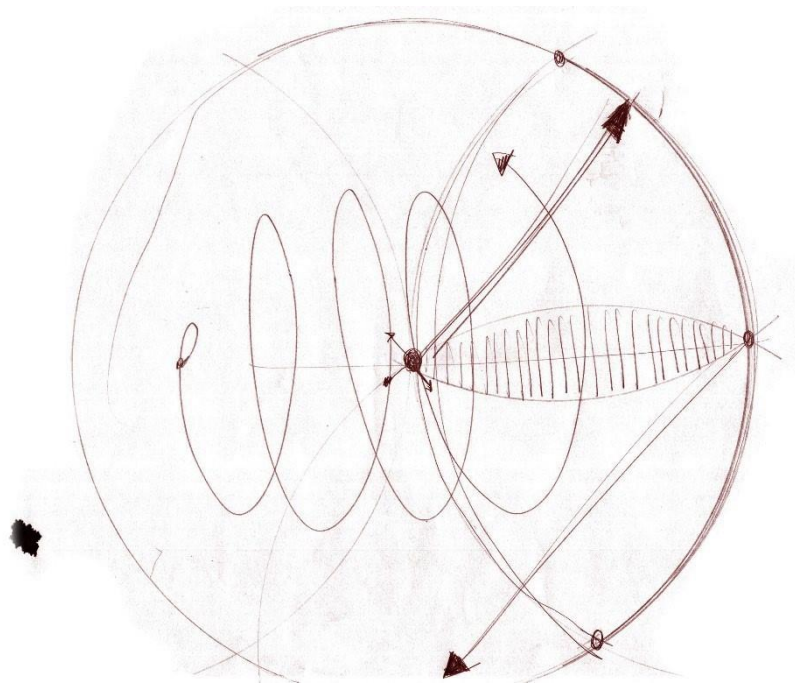
## 3. Graphic Construction

The square written in the circle was slowly exposed to further divisions. While drawing the arcs, I was continuing the already started process in order to draw a constructional geometric framework. This composition has become a starting point for the further re-organization of the drawing. Ultimately, a rose window was developed with twelve vertices tangential to the circle edge.
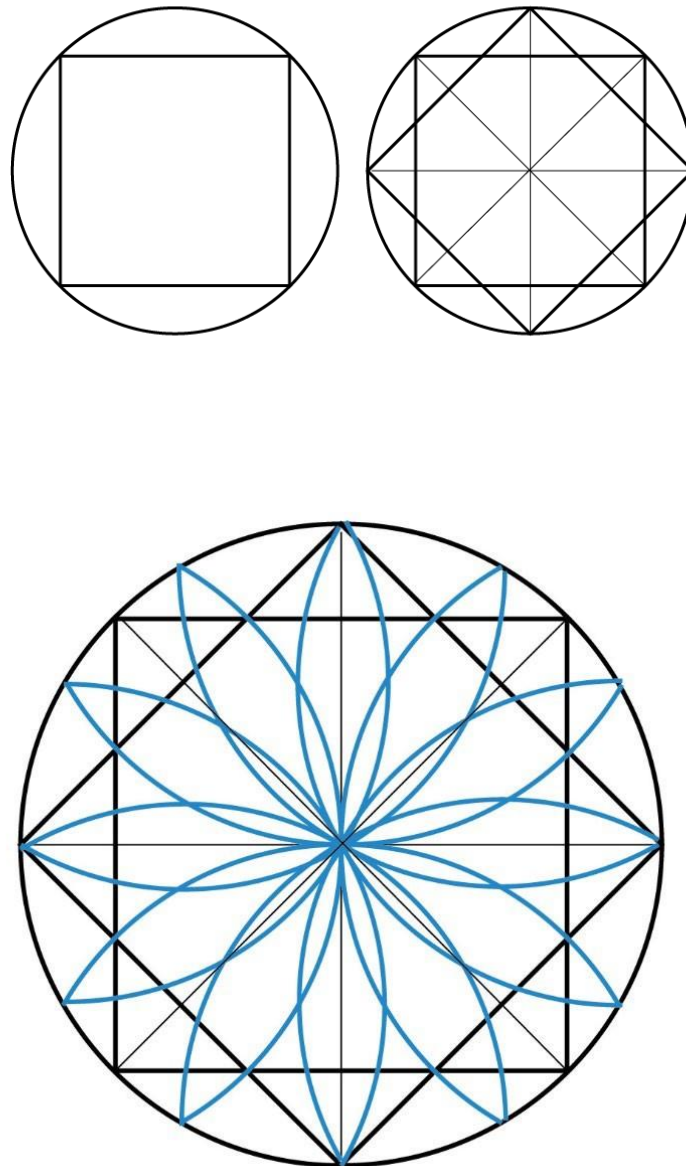
The geometrical construction that I received allowed me to initiate the next phase of the artistic creation. Due to the internal division made by means of the crossing of the drawn lines, smaller fields were extracted, which constituted a place to introduce the drawing structure. I filled the selected fields with a drawing and hatched them "mechanically", however without depriving them of the individual mark. Thanks to the drawing pens that I draw with, the ink mark spilling over a paperboard constitutes a peculiar character, which contributes to the individual engraving in the drawing. Additionally, I utilise the drawing tools of various thickness.

Hatching constitutes the primary building block of the graphical structure of my pieces of work. While making the first decisions, such as the direction and the density of the hatching, I receive a satisfactory artistic expression, obtained by the usage of the density, thickness, dynamics and direction of the line on the specific elements.
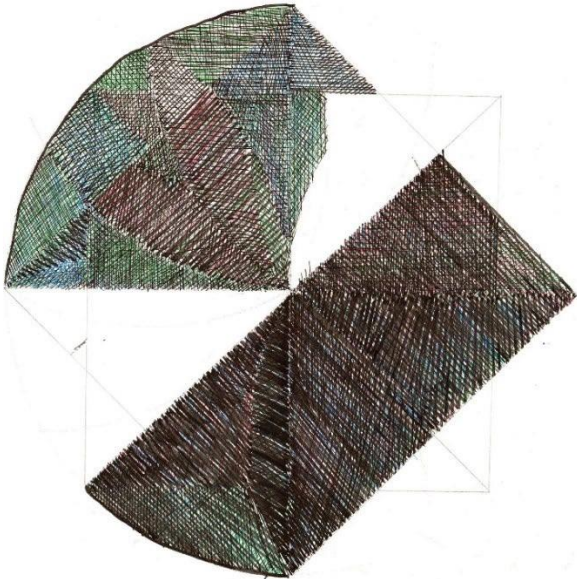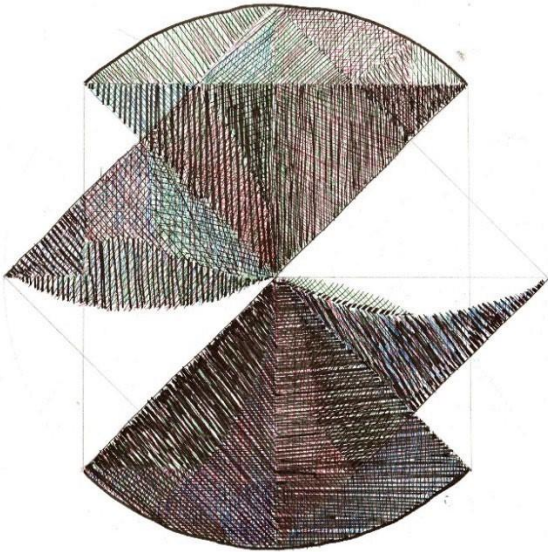
Achromatic Drawing
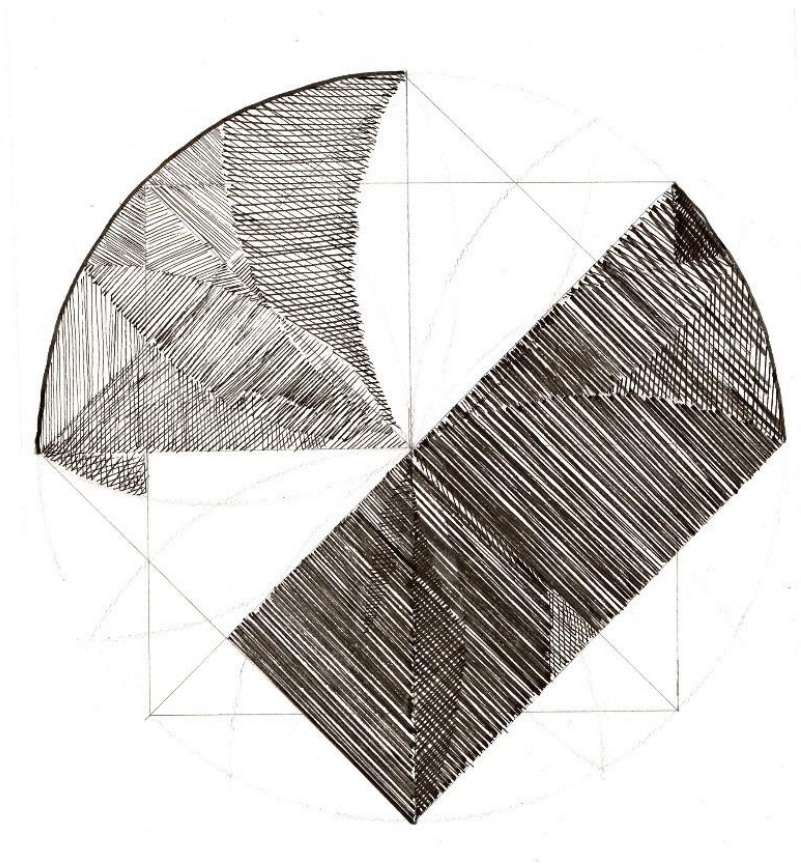
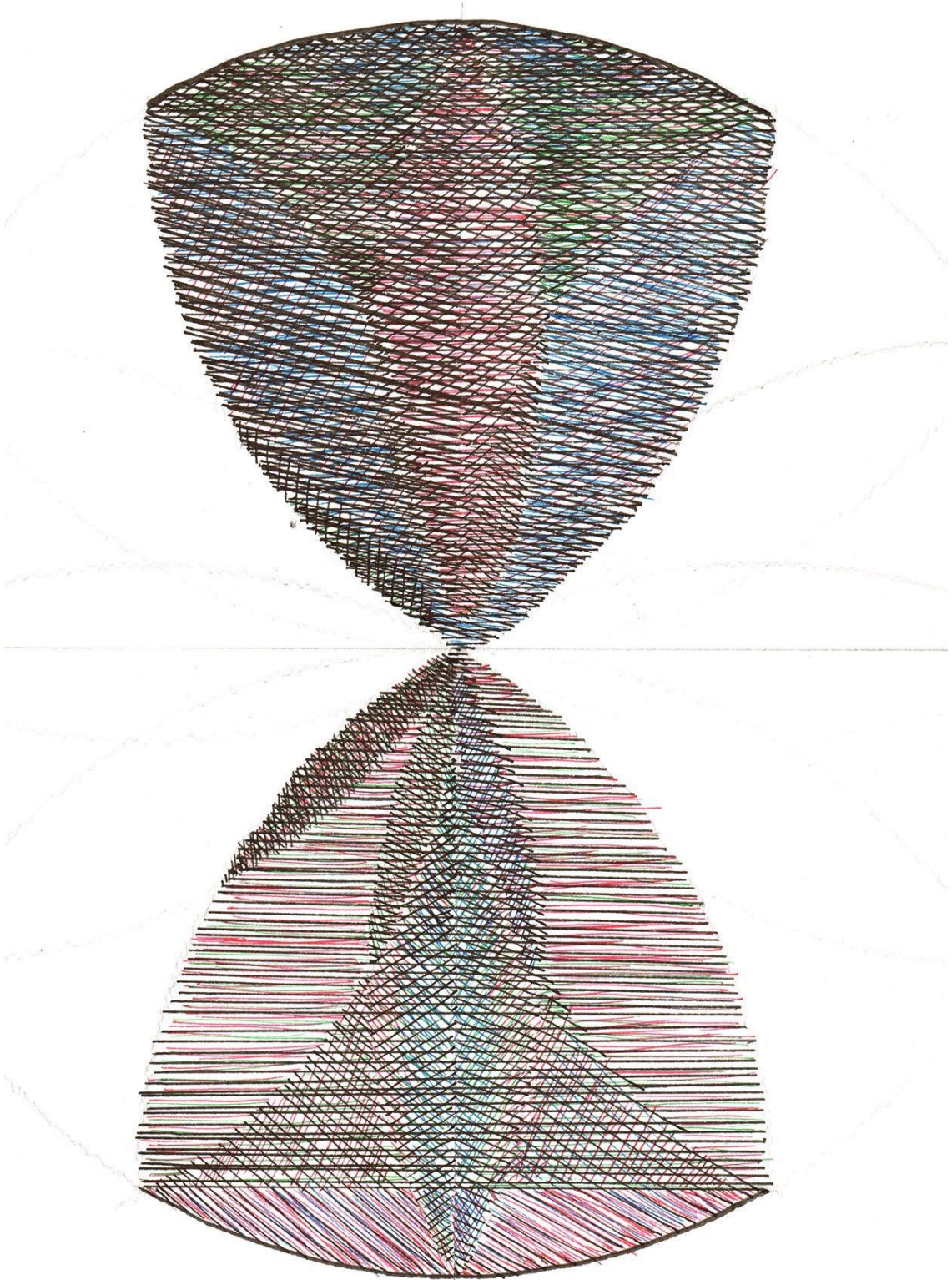After receiving an optimal monochromatic saturation, I gently introde a colour. Operating with pen and ink, I apply pigments on the paperboard: red, green and blue. The applied colours, in the combination with the monotonal drawing lose their purity and differentiate in regard to brightness and saturation.

Drawing with Usage of Colours

## 4. Digital Editing

The preparation for the process of digitalization of the drawing I start with the scanning of the paperboards with the drawing applied on them. By means of the scanner, I transfer the drawing to the digital format in order to perform further modifications in the specialised graphic program. The first significant interference, highly relevant from the composition point of view, is the format change. The paperboard, that I applied the drawing on, is of A3 format. The great resolution of the scanner allows to enlarge a drawing up to five times whilst keeping the character and detail of the work. With such a huge rescaling, I acquire an exaggeration of the structure of edges of the lines drawn with ink. This operation gives the drawing an individual character.

Detail of the Line Structure after Digital Rescaling
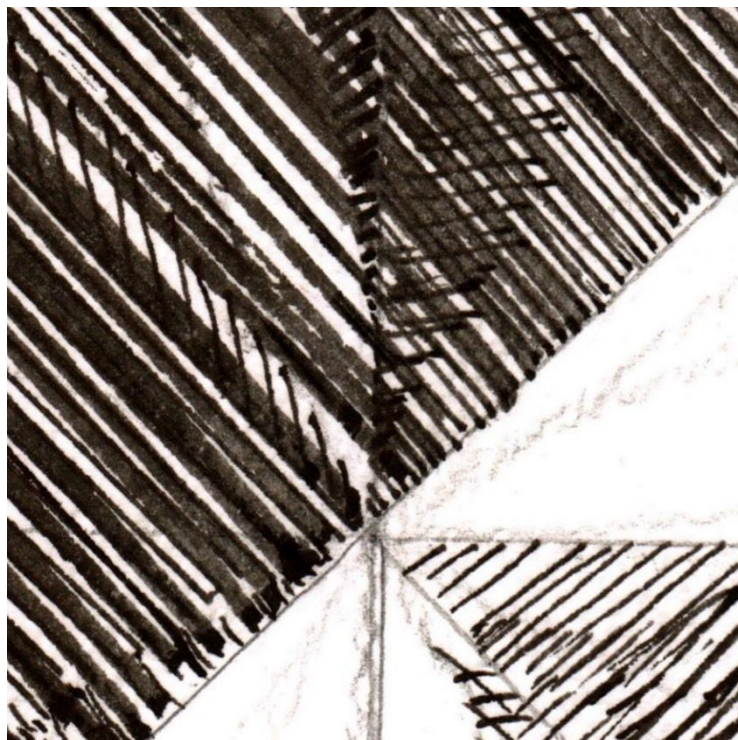
The next step, during the editing of the digital picture, is the recomposition of the graphic elements. Having at my disposal the resulting drawing forms, I recomposition them in order to determine the final form - a closed figure. From the drawing transferred to the computer, I create layers and put them onto each other while changing the parameters of their permeation. I take decisions related to the search of the suitable form during this creation on the spot. I look for the final drawing structure, coherent for all works.

As a consequence of mixing the layers, there is a concurrent process of the chromatic changes. Colour range becomes a resultant, determined by the current editing operations made in the graphic program.

Editing in the Adobe Photoshop Program
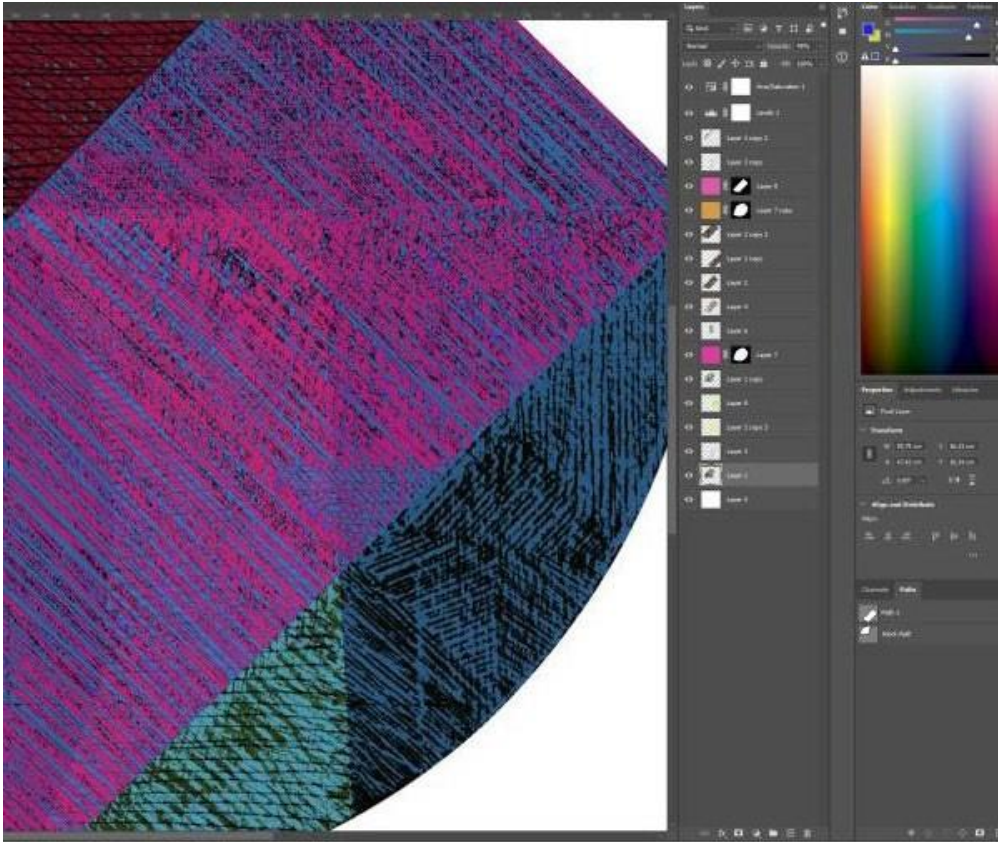
**5. Colour**

Application of the colorful pigment took place in the first phase of the work (manual drawing on the paperboard). The next step was to transfer the drawing to the digital format. While analysing the resultant colours, I modify and simplify th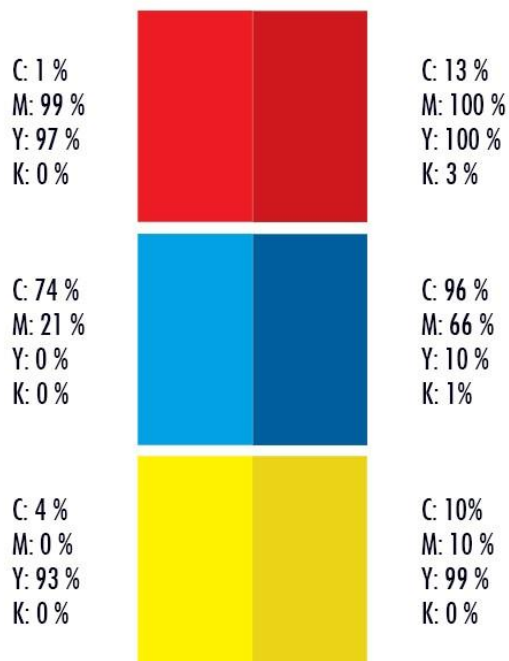em so that they become coherent with the drawing structure. Finally, I draw geometric arcs on the borders of the figure.

In contrast to the resultant drawing, they are solely created in the graphic program. The homogeneous colour that was applied creates a pure digital "tone". These figures are a visual enhancement of the whole content. Due to its raw character, they dominate compositionally on the surface. Simultaneously, they highlight the suppositions developed with the construction of the constructional-geometric schema. The arcs close the form inwards and highlight the internal intensities. To create them, I use the basic colours (red, yellow and blue), each in two brightness levels, which, as a result, gives me six hues to use.

Six Hues Applied to Draw the Geometric Arcs

C: 1 %
M: 99 %
Y: 97 %
K: 0 %

C: 13 %
M: 100 %
Y: 100 %
K: 3 %

C: 74 %
M: 21 %
Y: 0 %
K: 0 %

C: 96 %
M: 66 %
Y: 10 %
K: 1%

C: 4 %
M: 0 %
Y: 93 %
K: 0 %

C: 10%
M: 10 %
Y: 99 %
K: 0 %

## 6. Composition

The whole exhibition, considering the weight and construction of the set, is distinctively marked out by two axes of symmetry: vertical and horizontal. The form and the structure comprised within are led in such a way that they have their own internal common characteristic. Their construction, weight and special directions correspond with each other. The rectangle figures, isolated within the drawing structure are moved to the right, at forty-five degree angle by the dominant elements. This operation initiates the perturbation of statics triggered by the vertical and horizontal symmetry of the graphic layout.

Rectangles Stemming from the Compositional Schema
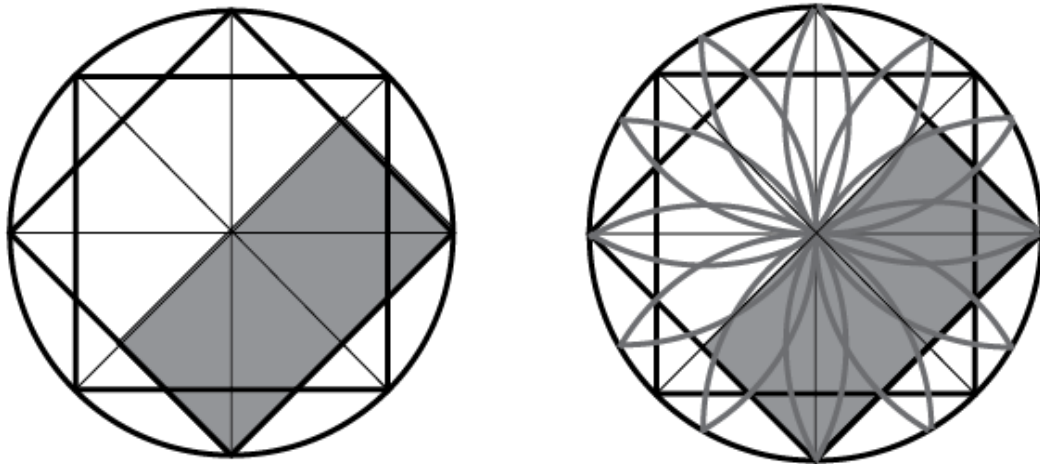


In the central part of the image, the compositional layout has been simplified and composes of the same arcs filled with the homogeneous colour. This element was created on the basis of the main constructional framework, and, through deprivation of the drawing content, it created an openwork construction. It is a space where the very pure and basic colour has remained, which determines the center of the composition. This space is full of optical vibration in perception since the neighboring graphic figures affect it.

Defining the horizontal and vertical ax of symmetry is also enhanced by two borderline images closing the series from the right and the left side. These works are of the simplest form, their shape is closed in one circle clipping, they are optically the smallest and thus, they develop lightness in relation to the central image. The shape of the borderline elements recurs in the mirror image. Their structure is diverse, yet similar enough in order to highlight the compositional coherence of the series. While creating opposite poles this way, they give it a concrete and inseparable character. On the invisible line, between the sharp vertices, all elements of the series are set. Such a composition sets the set of three central elements straight in a rotating motion, which are put on this axis, as if a spindle was spinning. All graphic elements are deprived of the background. Through the deprivation of the traditional compositional frameworks, they initiate to co-exist in the space.

Compositional Layout of All Works

## 7. Augmented Reality

*Augmented Reality* (AR) is a definition of multimedia graphics integrated with the environment of the recipient. As opposed to *Virtual Reality*, where we watch solely the three-dimensional graphics generated by computer, the AR system makes the perception of the real and virtual world at the same time. The image is generated by the dedicated software and displayed to the recipient on the mobile electronic devices, which enable to move in the space.

AR technology, used in such devices as smartphone or tablet, is a system that is based on a specific software. Such applications can be divided into two groups: the ones installed on a mobile device and those working via the www website that do not require an installation of an application on the device. Generally, these two ways of connecting with the AR system provide similar possibilities. According to me, an easier and simpler solution is to apply the system using the www website, which is built into the operating system. The whole procedure takes place without downloading and installing an additional application.

The virtual environment is started through the so-called markers. They are scanned via the built-in smartphone camera and determine the reference point between the real world and the virtual one. The image of the real world, thanks to the technological modules using sensors and servomechanisms, is "extended" by a graphic image generated within the information technology. A quite technologically advanced smartphone or tablet is required, with a high computing power and a functional module of positioning the device in order to ensure the proper reception. In the technical specification, for the subsets of devices reconstructing *Augmented Reality*, the processor of high performance and sensitive gyroscopes compose an indispensable basis of requirements needed for proper functioning.

While creating an environment, where a real image is mixed with a virtual one, I had a few technologies at my disposal to be chosen: *image AR* (image is a marker), *spatial AR* (virtual object is placed in a chosen place in space), *face AR* (face scanning and simultaneous applying on it a virtual graphic image that created an animated "mask") as well as *gps AR* (placement of a virtual object is determined by the coordinates given by the global positioning system GPS). I chose the spatial AR system as the most suitable method for my implementation. This way, the recipient may individually places a graphic object in space, which is a complement to implementation in the real space. This takes place thanks to the marker scanning, which is deliberately prepared for this implementation. It is a generated QR code; and after using this

marker, the system sends the user to the correspondent www link in order to implement the virtual graphic image in the real time along with the environment displayed on the smartphone screen. I considered this method to be the best in order to present the spatial figure created in the AR environment.

While selecting the visual means for the layer of the augmented reality, I was mainly thinking about exposing the geometric elements comprised in the images. The solution that was implicated by the previous activities related to the elimination of the background in the printout, was to emerge into space with the three-colour geometric arcs. I gave the abstractive, arcuate forms a three-dimensional form, in the 3D edition program, I set these constructed full-dimensional forms while ascribing them to orientation in space. The front of each of them was set in one of the X, Y or Z axes. Thus, I created full dimensional arcs, which I combined into one figure while setting it in the space by means of the technology of the augmented reality. Thanks to Augmented Reality, we can see the same spatial object along with the graphic works exhibited on the wall.

Visualisation of Exhibition of Images and Spatial Object
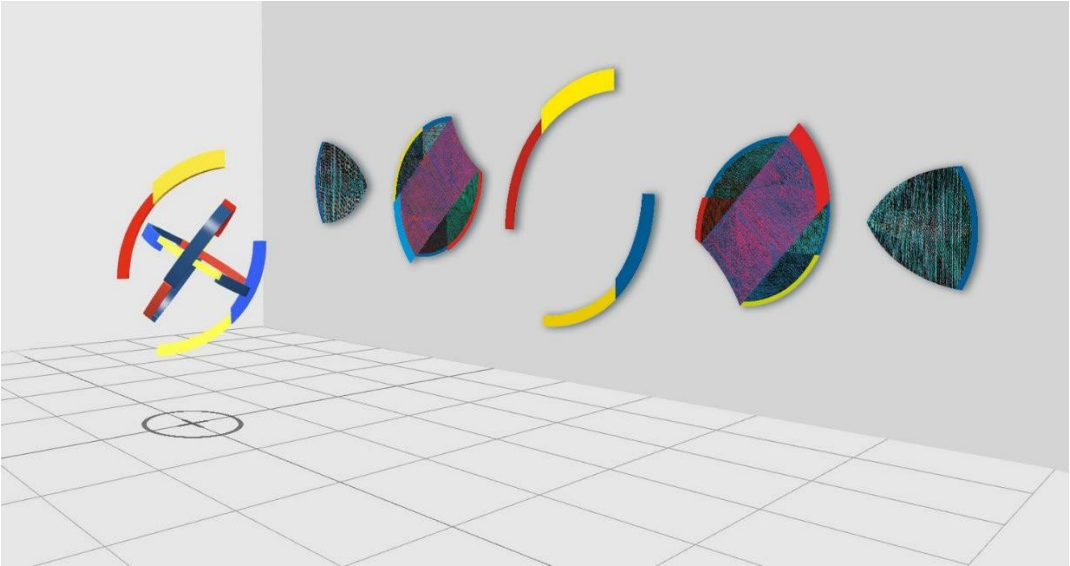
Full Dimensional Geometric Figure
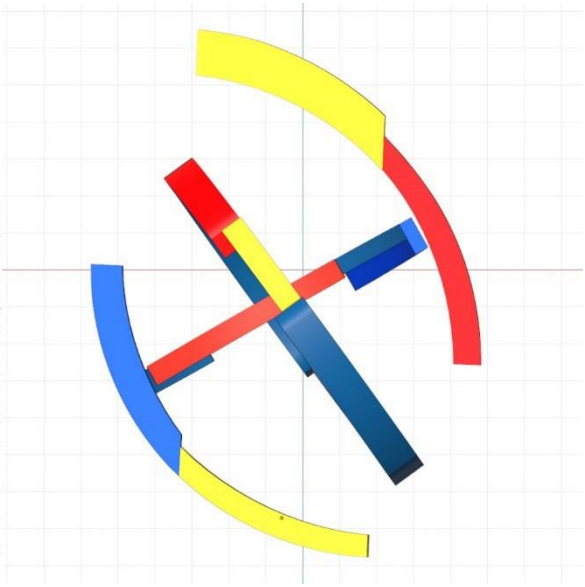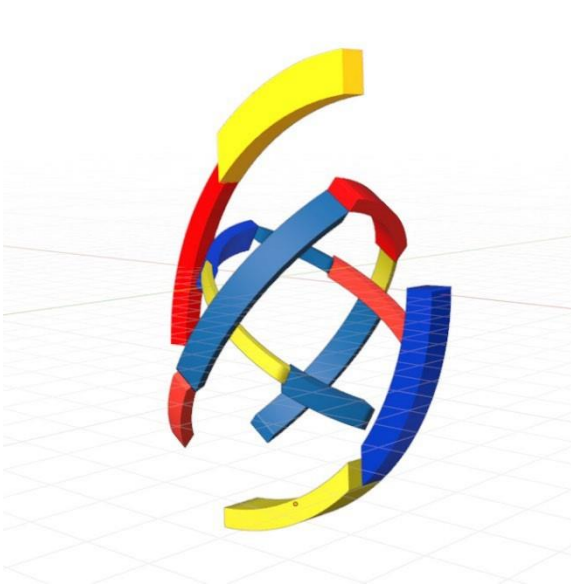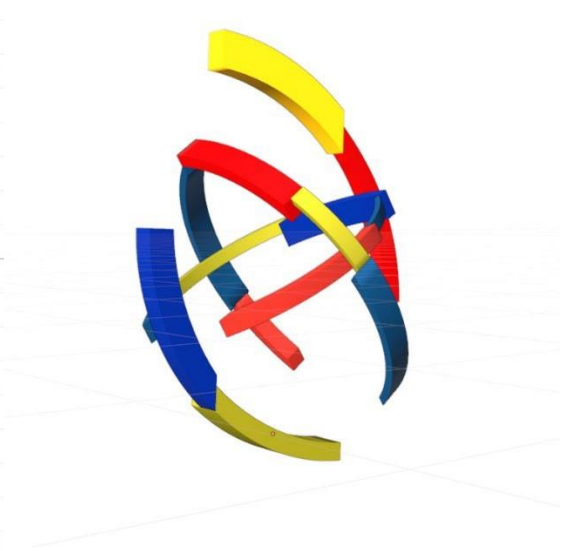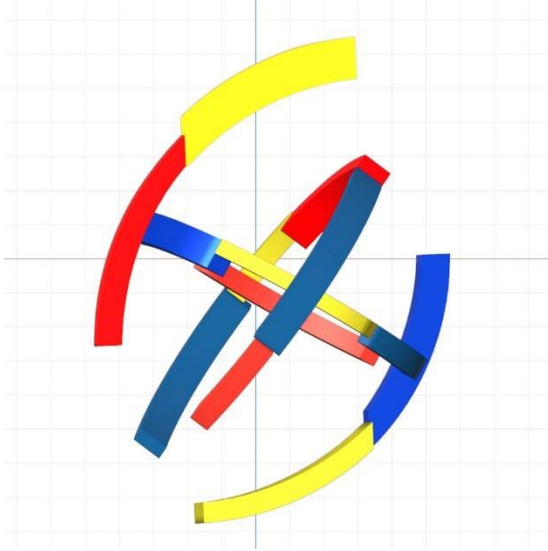
## 8. Inspirations


My current work hovers within the broadly defined non-figurative art. In order to answer the question - how this form of visual message has arisen in me, it is needed to go back in time and take a look at the factor that has had the major impact on the long-standing process of transformations within my artistic accomplishments.

Finalizing my studies majoring in Painting and Drawing at the Faculty of Art at Maria Curie-Sklodowska University (UMCS), for the first time there was a coherent style formed in my oil paintings, which was a result of my contemporary artistic aspirations. I was practicing a figurative painting, I was transforming the reality in such a way where the main role of the artistic message was being taken over by a colour laid by flat stain, and the figurative elements were becoming silhouette, and deprived of details. At that time, my attitude towards art was not foretelling any aspirations for applying a non-presenting form. However, factors such as focus on the colour and form simplification were leading me towards abstracting in form of artistic expression. This process was precisely inscribed into the last oil painting that I have painted on canvas.

Describing my paintings from that time, I would like to refer to the artistic creation of one of the prominent artists creating in the current of figurative art.  Wassily Kandinsky, who was also primarily focused on colour, stain and rhythmic form in his oil paintings, revaluated his figurative thinking at some point. An inspiration triggering an innovative look on the art has become his own painting. It was hanging upside down. At first, author did not recognize his own artwork. The event that distracted the artist's brain from routine has been induced by the change of perspective during the reception of the same object. This unexpectedly initiated process has developed and brought some distance to its own creativity, which, in turn, has provoked new reflections and those have provoked changes and a further development. The event was accidental and the reflection came spontaneously. Artist's open mind accepted the stimulus and changed it into idea.

Once technology development has introduced desktop computers to households and brought a possibility to edit digital graphics, I gave up painting for the development in the direction of new digital media. I exchanged paintbrush for computer mouse, and the moment of changing the tool has brought about a revolution in my art conception. Just like in the history of the painting of Kandinsky hanging upside down, it has "turned" my attitude toward it upside down.

The change of technique as well as the change of perspective may serve as inspiration leading to the search for innovative forms within your own art. Computer techniques, motion-graphic techniques, bitmap and vector graphics, creation of websites were for me a source of inspiration, a way to grasp the past, a new path that I took to search for the unknown as yet artistic forms. At that time, right after the graduation from university, the design art that I was implementing for commercial purposes was intertwined with creative thinking on my own form of artistic expression. As a result of these experiments, graphic arts and short animations were being created that were presented in the web space.

In those forms, the lack of figuration was emanating more and more. New thinking processes, which, as a result, developed a turn toward abstraction, caused a desire to exit from the virtual space with the art and to face with such characteristic in the real space. In consequence, working on graphic arts presented in form of digital printing on paper was initiated. A return to tangible formats and an encounter with the paper structure afresh triggered in me a desire to dive into the primitive, traditional artistic technique. Outside of computer, I started to use a pen and an ink. This way, cross-hatching has become an important element of the construction in my graphic arts. Painting was transforming into the construction framework; this process was also impacting the construction of elements of the digital graphics. These two forms: traditional and digital, simultaneously placed on the surface, have become elements of the internal visual game for me that I was developing.

The pace of changes, introduced in the creative work, is not relevant to the very artwork. This process may be constant, balanced or abrupt and perverse. Such an evolution and a creative revolution are intertwined with each other within the same creative path of an artist. Means that trigger the changes in the creative process may be called inspirations. They have a permanent influence on perceiving the art by artist and pass from the environments thanks to our senses. Visual sensations, sound, and recalled emotional states create an inspiration free from any limitations. In my opinion, an inspiration is being recorded in the memory of a creative person as an idea, an impression, or an unforced observation sneaked into creative awareness.

Elimination of the object form from my graphic presentations may introduce an association with certain movements in the non-figurative art, i.e. with neoplasticism. This movement was established in the 20's. by Piet Mondrian and Theo van Doesburg. It limited the colour palette to three basic colours (yellow, red, and blue) and to two "non-colours" (black, grey, and white) as well as was characterized by appliance of vertical and horizontal lines, which divided the painting surface into squares and rectangles.

Although, I apply consciously sets of basic colours in the drawn geometric elements, it is not related with the simple transformation of the rules of neoplasticism. It results from the structure of objects included in my graphic arts, created by means of the technique of vector graphics as well as from enhancing the rigidity of a shape, by means of the simplest colour, the most basic one. A creative mind is not looking for an inspiration by force. A conscious observation and an analysis of experiences of other artists should only argue with the inner artistic soul. An inspiration should be a force inducing a transformation and a further development of artistic potential. Such a stimulus should work in a natural way in order to maintain independence in the creativity.

Creating and acknowledging the permanent principles leads to forming art movements that represent their own manifest, accept common tendencies and, foremost, introduce a discourse between participants. De Stijl is an example of such an art movement that stems from neoplasticism. My artistic personality is not that rigidly determined by frameworks of united characteristics, as it takes place in neoplasticism, and it does not require a unification with other artists. I have never felt any need to belong to any art movement.

The above mentioned self-analysis is of twice the value for me. Firstly, not only it is a sort of summary of a certain creative phase but also a life phase. A retrospective in a way and also a fresh view on my own paintings, while referring to Kandinsky, awakes new ideas, brings the action, and thus, it inspires me. Secondly, it provides me with a possibility to make sure that during the constant process of searching for new forms of the artistic expression, the one thing remains invariant that is most precious for me - my art is aligned with me.

## 9. Conclusion

While creating my doctoral dissertation, I marked a coherent geometric schema that became a starting point for the whole series of works. Each of five graphic works is created on a different clipping of the developed framework. Aiming at creating a series of five works - non-figurative compositions, which are one on the level of the mutual exhibition - I have obtained a homogeneous graphic construction. All works, combined with each other, may be closed as a whole.

Creation of abstract graphic forms set on neutral white background has become characteristic for my artworks. During the process of creating the doctoral dissertation, I performed a radical operation on reducing the background, which resulted in the physical cut-off of the image on the external figure outline. Deprivation of the background in each work enhanced the power of transfer as well as it consolidated the presented forms with the space that they are exhibited in. This operation became an impulse for further emergence into space. The separation created a room for action in the *Augmented Reality* environment, where the displayed geometric figure is presented on the background of the set interior.

The presence of *Augmented Reality* in art is dependent on the technological progress and is constantly developing. This innovative form of message comprises elements of surprise, a fast visual game with recipient, sometimes entertainment. A new visual stimulation, artificially combined with the real environment, breaks the habit in relation to the reception of the static piece of work. AR develops the virtual transfer while enhancing the content. In my artistic conception, the additional composition of AR comprises a supplement to the existing virtual message; it constitutes a parallel composition (which I am referring to in the title of the doctoral dissertation).

In hindsight, I notice how the trend founded on the assumptions of the non-figurative art is slowly permeating and developing in my creative work. It occurs in a non-imposed way, without revolution and turnover caused by for example the inspiration of a piece of work or a specific artist. What I notice in myself is a greater influence of such artists as El Lissitzky, Aleksander Rodczenko, Wassily Kandinsky, Laszlo Moholy-Nagy, Theo van Doesburg, Piet Mondrian.

Following my own individual development, I started to acknowledge more and more pieces of art of artists that are associated with the trend of geometric abstraction. Thought

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processes, observation as well as development of knowledge on the subject of formal assumptions of the non-figurative art have introduced new factors to my artistic invention. The fundamental intuitive nature in the creative process is now supported by the geometric calculation. The change in the perception of the non-figurative art has become a milestone for me that determines the next phase in the search for new directions and forms of the graphic expression.
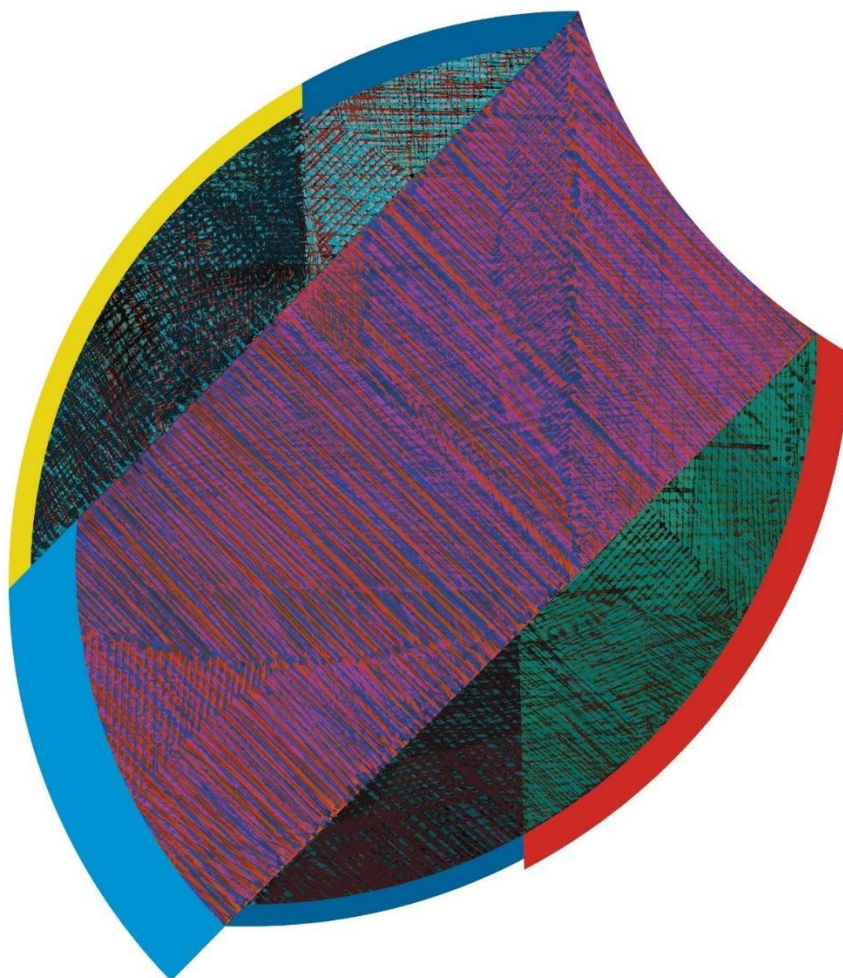
# 10. Documentation of Graphic Works

*Series without Name [Polish Cykl bez nazwy],* digital printout, 125 x 400 cm, 2021
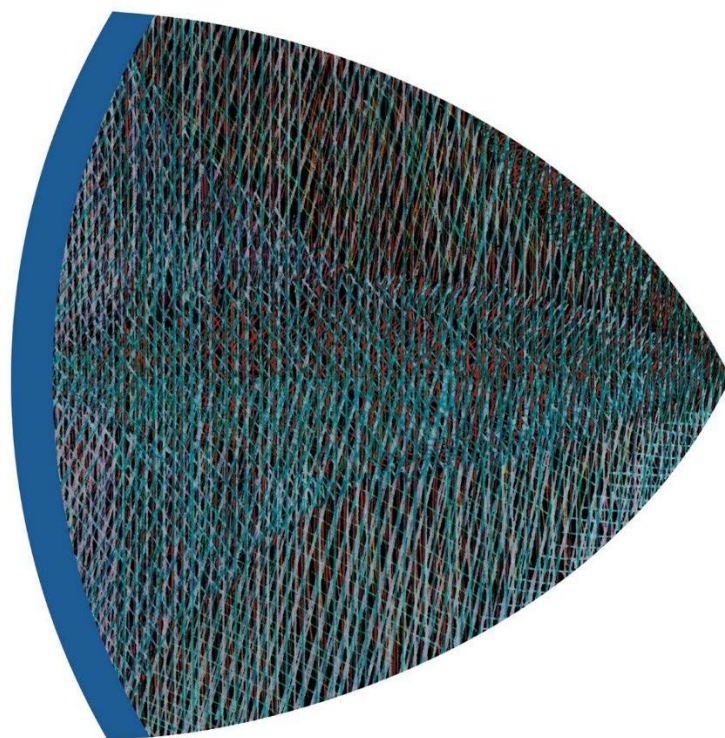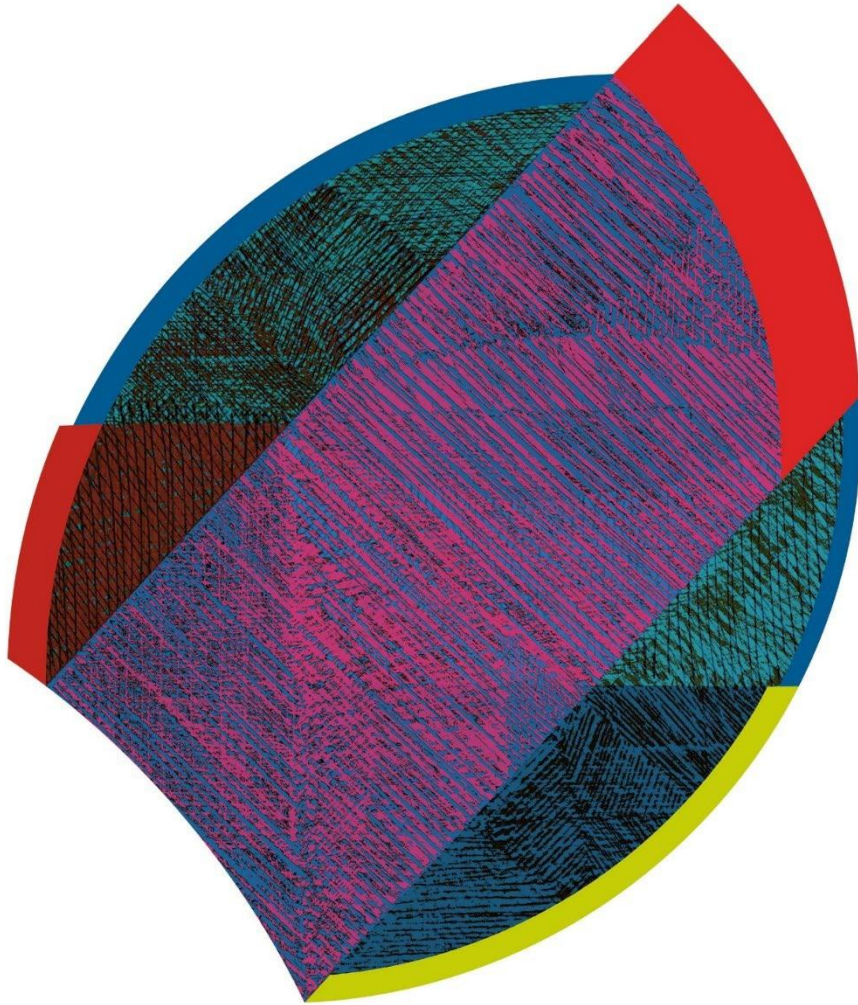
*First figure in the Series without Name [Polish Pierwsza figura w Cyklu bez nazwy]*, 47 x 47 cm
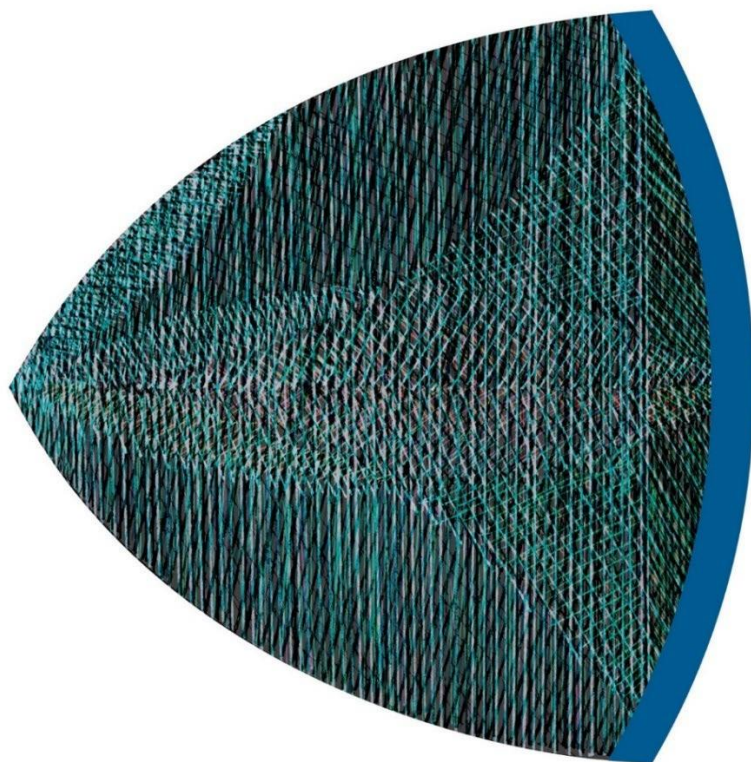
*Second Figure in the Series without Name [Polish Druga figura w Cyklu bez nazwy],* 70 x 80 cm

*Third Figure in the Series without Name [Polish Trzecia figura w Cyklu bez nazwy],* 95 x 125 cm
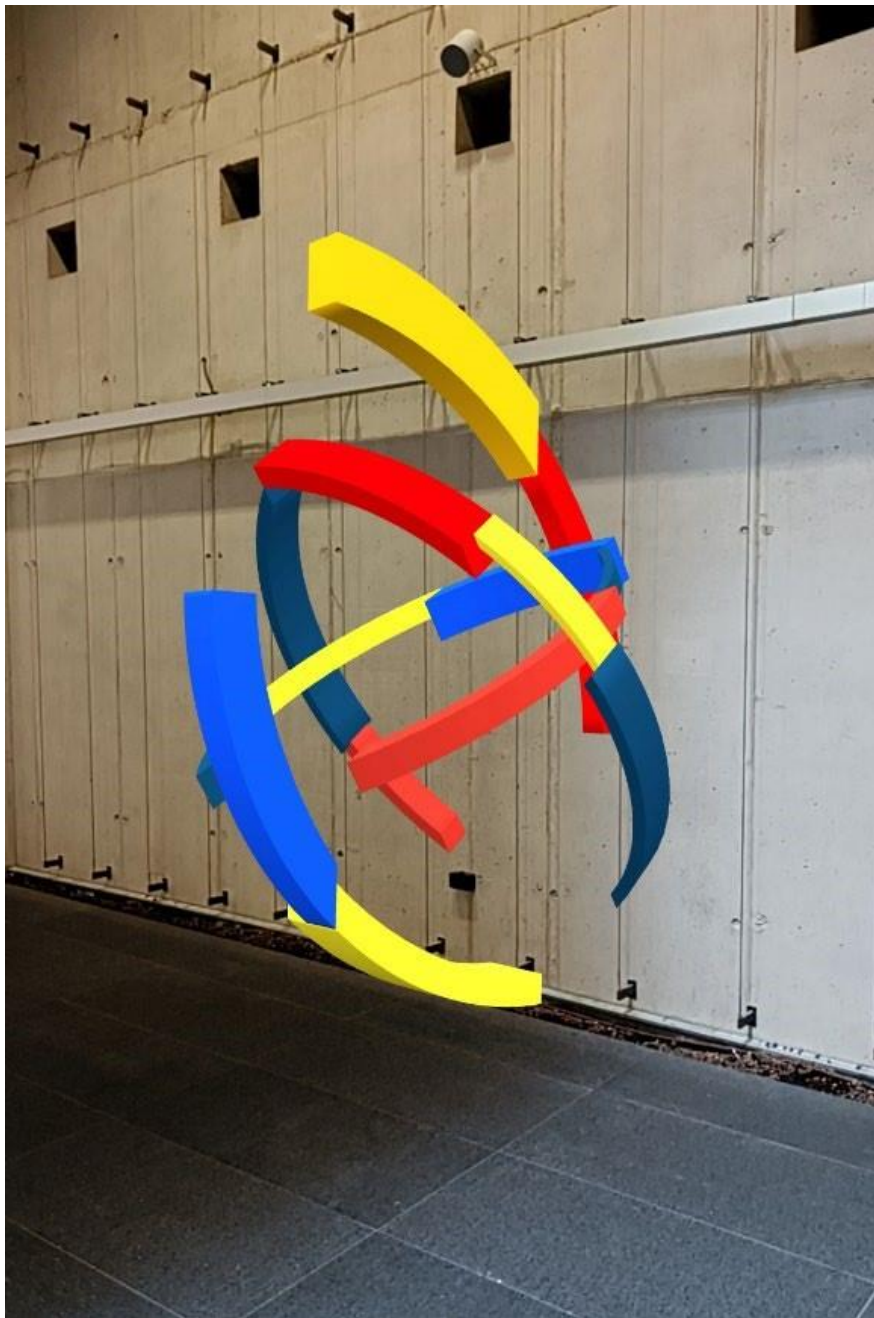
*Fourth Figure in the Series without Name [Polish Czwarta figura w Cyklu bez nazwy],* 70 x 80 cm
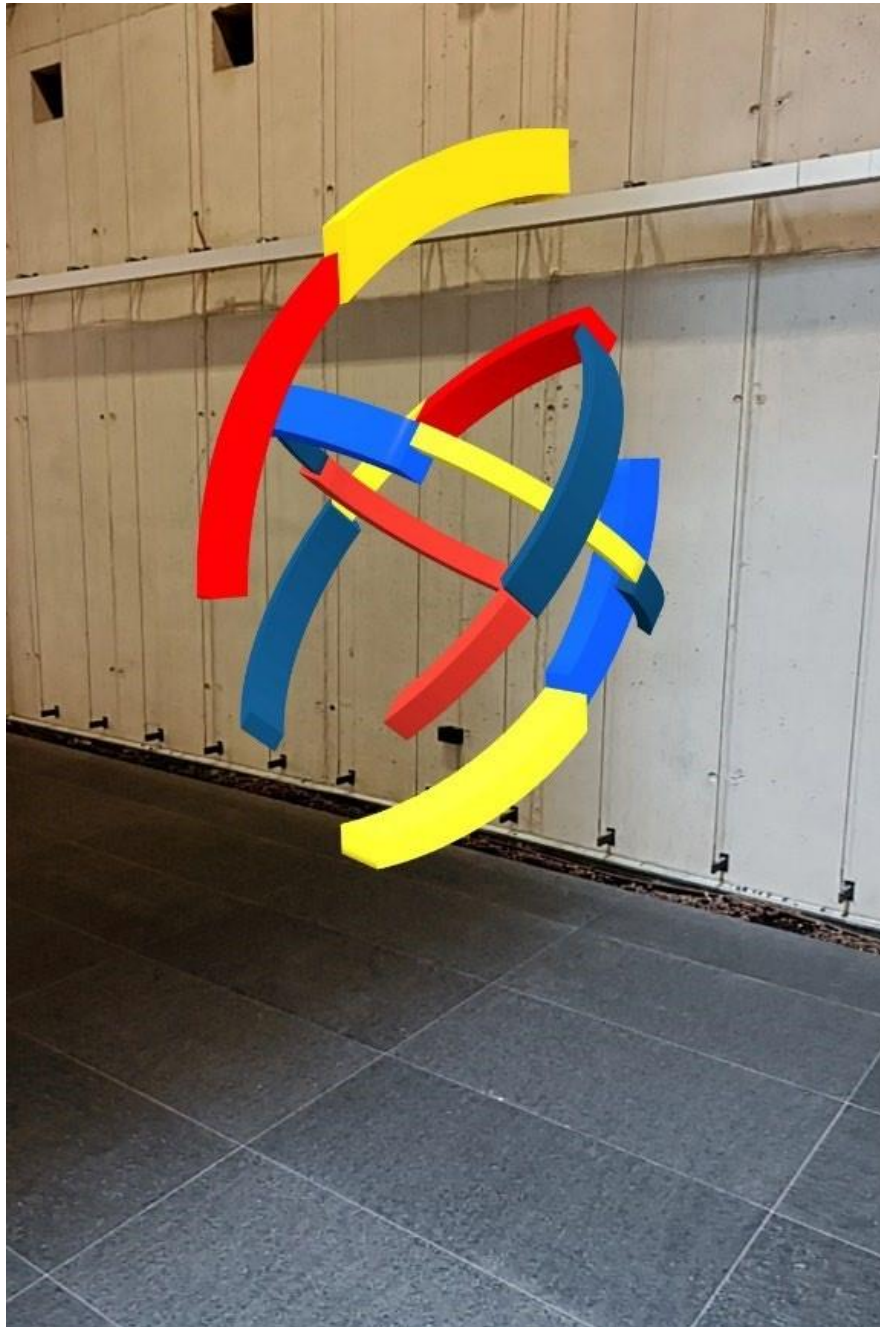
*Fifth Figure in the Series without Name [Polish Piąta figura w Cyklu bez nazwy],* 47 x 47  cm
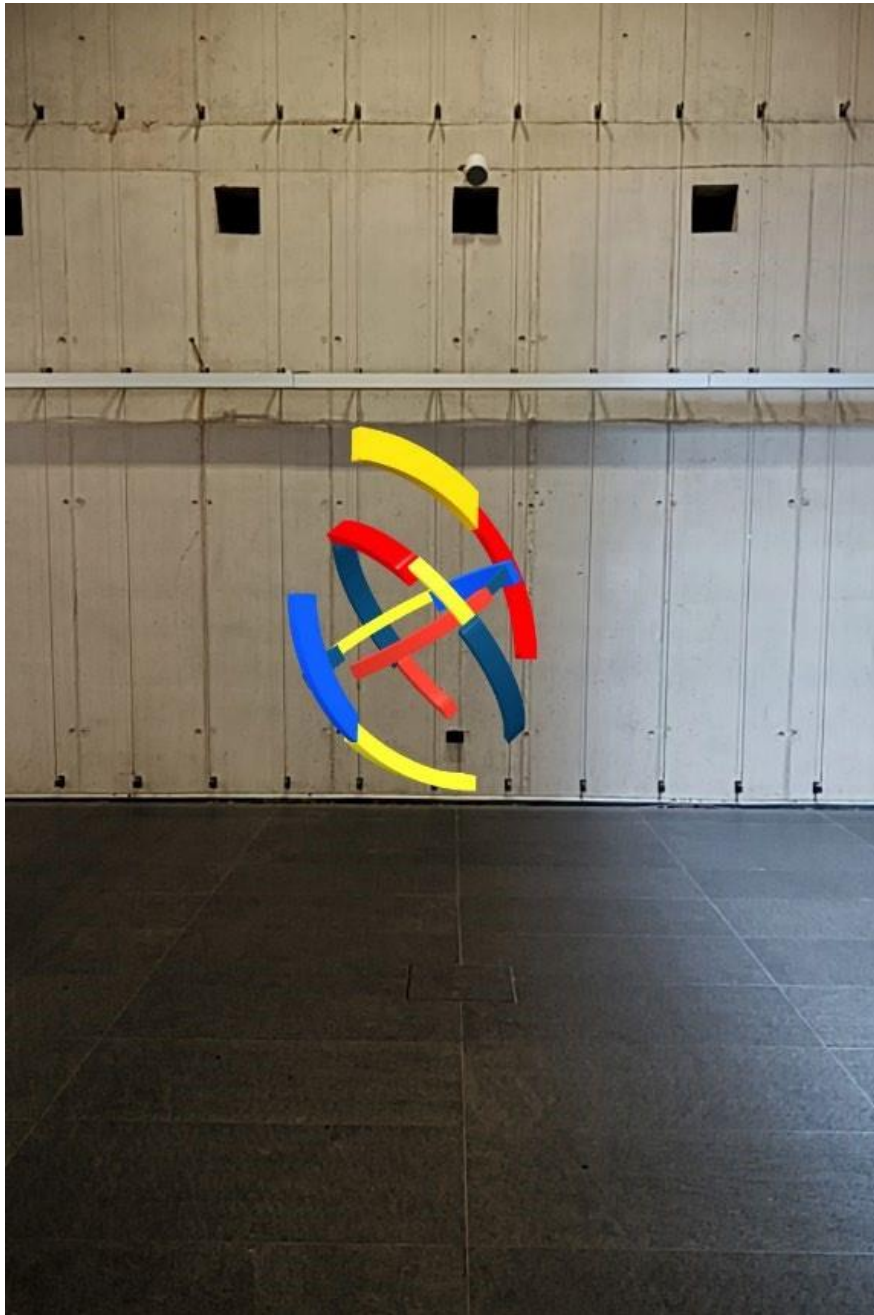
*Full-dimensional geometric Figure [Polish Pełnowymiarowa figura geometryczna],*
Augmented Reality inside a building, screenshot no. 1 from the smartphone

*Full-dimensional Geometric Figure [Polish Pełnowymiarowa figura geometryczna],*
Augmented Reality inside a building, screenshot no. 2 from the smartphone

*Full-dimensional Geometric Figure [Polish Pełnowymiarowa figura geometryczna],*
Augmented Reality inside a building, screenshot no. 3 from the smartphone

*Full-dimensional Geometric Figure [Polish Pełnowymiarowa figura geometryczna],*
Augmented Reality inside a building, screenshot no. 4 from the smartphone

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