

# Theory of Modern Architecture

## **Organic Architecture**

### **(Lecture 03)**

**Jangy Jalal Kadir**



## **Review of Lecture (2)**

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- **Art Nouveau was :**
- **The (New Art) or the(New Style).**
- **Using Abstract Shapes and Simplified Illustration with almost all the details removed.**
- **The Commercial Art used consistently to enhance the beauty of Industrial Products**
- **The Highly-stylized, flowing, Curvilinear Designs often incorporating floral and other plant-inspired motifs.**
- **Using Asymmetrical Shapes.**



# ORGANIC ARCHITECTURE

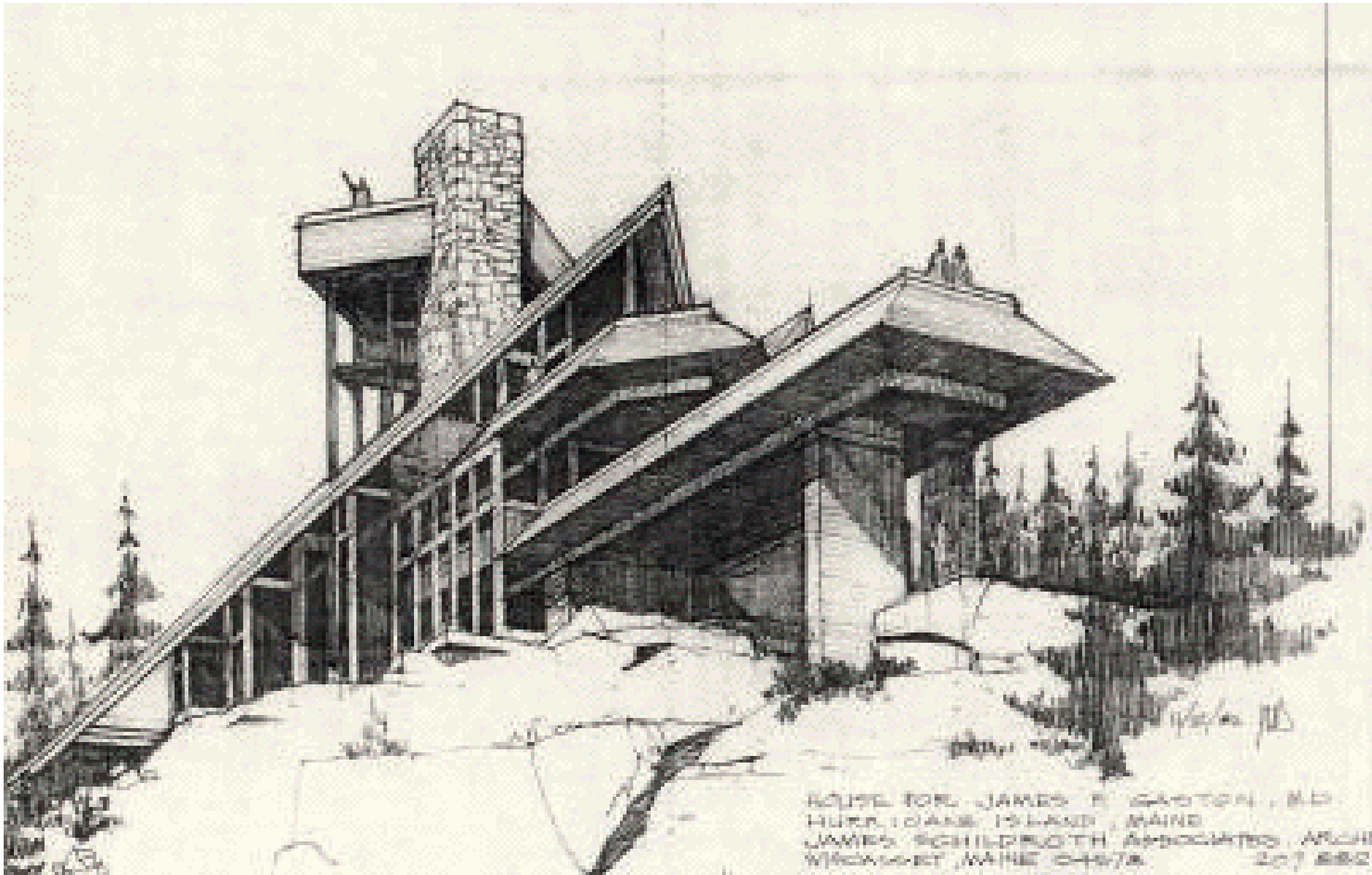
THE SOLOMON R. GUGGENHEIM MUSEUM



# What is organic architecture

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- **An architecture idea which promotes harmony between man-made structure and the nature around.**
- **The buildings and surroundings become part of a unified & interrelated composition.**
- **The term "Organic Architecture" was invented by the great architect, Frank Lloyd Wright (1867-1959).**
- **Organic architecture not only addresses environmental concerns but also expresses individuality.**
- **Each building is related to the variables like man, site & time so every resulting structure is unique & unrepeatable.**



HOUSE FOR JAMES F. GASTON, M.D.  
HULL LOANS ISLAND, MAINE  
JAMES SCHILDRUPH ASSOCIATES, ARCHITECTS  
WINDHAM, VERMONT 05781 207 882

**Gastón House**



# Origin & Inspiration

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- **Primitive vernacular architecture was innately organic, based on natural forms, structures and simple, local materials.**
- **In the modernism the designers are awakening to a new world inspired by the creative forces of nature and biological organisms.**
- **Architects employing newer materials & technology in the application of natural shapes, rhythm & composition to their buildings.**
- **The re-emergence of organic design represents a new freedom of thought.**





# Origin & Inspiration

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- **It was in the USA that organic architecture began its great modern journey when Architect Louis Sullivan described his famous proverb that form follows function--a key concept for organic design.**
- **Frank Lloyd Wright would often choose sites close to woods, rock formations, or even waterfalls and his buildings would become part of nature.**
- **For Antonio Gaudi, Spanish architect the straight line belonged to men and the curved line to God.**





**Antonio Gaudí, Güell Park, Barcelona**

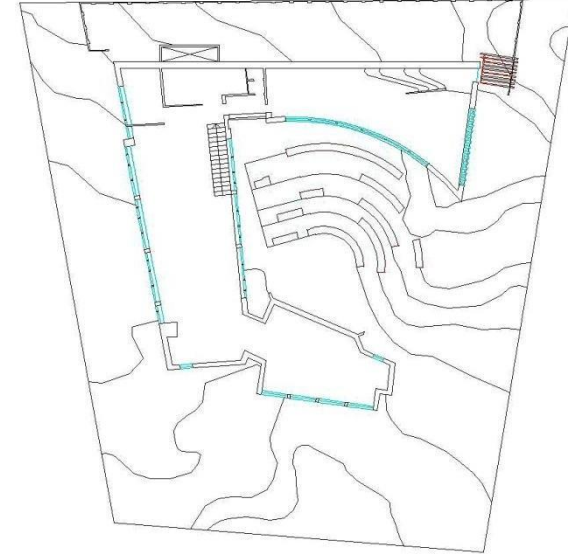
# Characteristics



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- **The design approach is inspired by nature & the built form grows out of the site, emerging like an organism from the seed of the nature.**
- **It is visually poetic, radical in design, multifaceted & surprising, distinctive but flexible & environmentally conscious.**
- **Organic architecture is said to be the mother of all architecture- sustainable or bio architecture, alternative architecture or any other.**
- **Flexible Free plan, allowing continuity of atmospheres.**
- **Unity between interior and exterior spaces.**

# Alvar Aalto Office-Helsinki 1953-1956





# Characteristics

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- **Rectilinear buildings are not ideal "green" buildings if they work against the dynamics of fluids, heat, light, sound, and force.**
- **The buildings need to work with nature and allow optimum shapes and forms to be developed that are more efficient, economic, and appropriate to local climate and environmental conditions.**
- **Essentially organic architecture is the literal design of every element of a building: From the windows, to the floors, to the individual chairs intended to fill the space.**

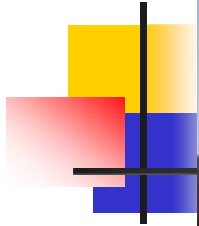
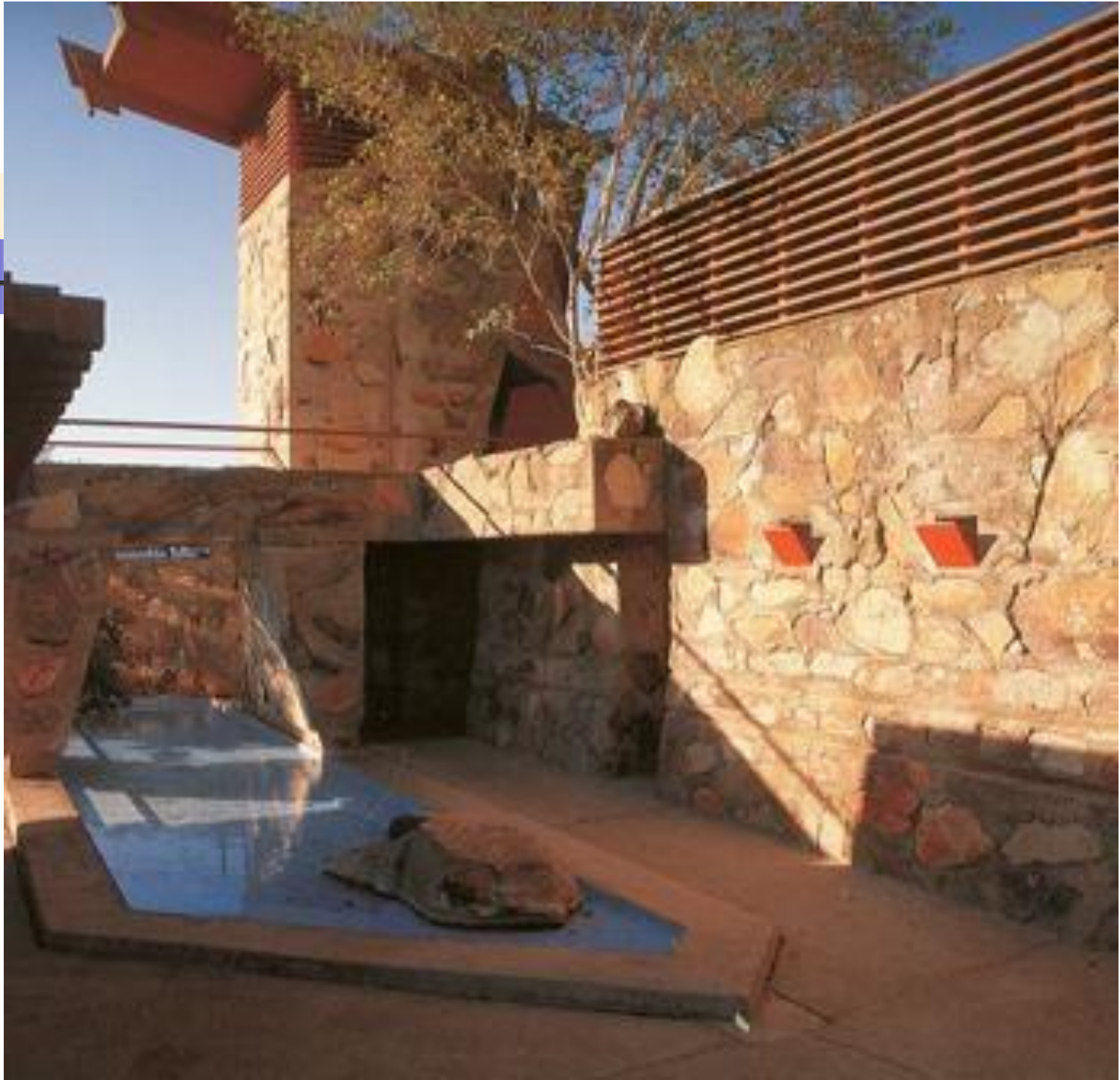




# Characteristics

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- **Respect for natural materials (wood should look like wood).**
- **Blend into the surroundings (a house should look part of the hill, not perched on it).**
- **An honest expression of the function of the building (don't make a bank look like a Greek temple).**
- **Everything relates to one another, reflecting the symbiotic ordering systems of nature.**





# Rules of organic architecture

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- **Let the design be:**
- **“Inspired by nature” and be sustainable, healthy, conserving, and diverse.**
- **Unfold, like an organism, “from the seed within”.**
- **Exist in the “continuous present” and “begin again and again”.**
- **“Follow the flows” and be flexible and adaptable.**
- **Satisfy social, physical, and spiritual needs.**
- **“Grow out of the site” and be unique.**
- **Celebrate the “spirit of youth”, play and surprise.**
- **Express the rhythm of music and the power of dance.**





**Robie House 1906-1909**



# Organic's architects

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- Gustav Stickley
- Antonio Gaudi
- Louis Sullivan
- Frank Lloyd Wright
- John Lautner
- Claude Bragdon
- Bruce Goff
- Rudolf Steiner
- Bruno Zevi
- Hundertwasser
- Neville Gruzman
- Alvar Aalto
- Eero Saarinen





# Frank Lloyd Wright

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- **"In an organic architecture the ground itself predetermines all features; the climate modifies them; available means limit them; function shapes them".**
- **"Organic Architecture develops from within outward - in harmony with the conditions of its being - as distinguished from one that is applied."**

**Frank Lloyd Wright, Architect**

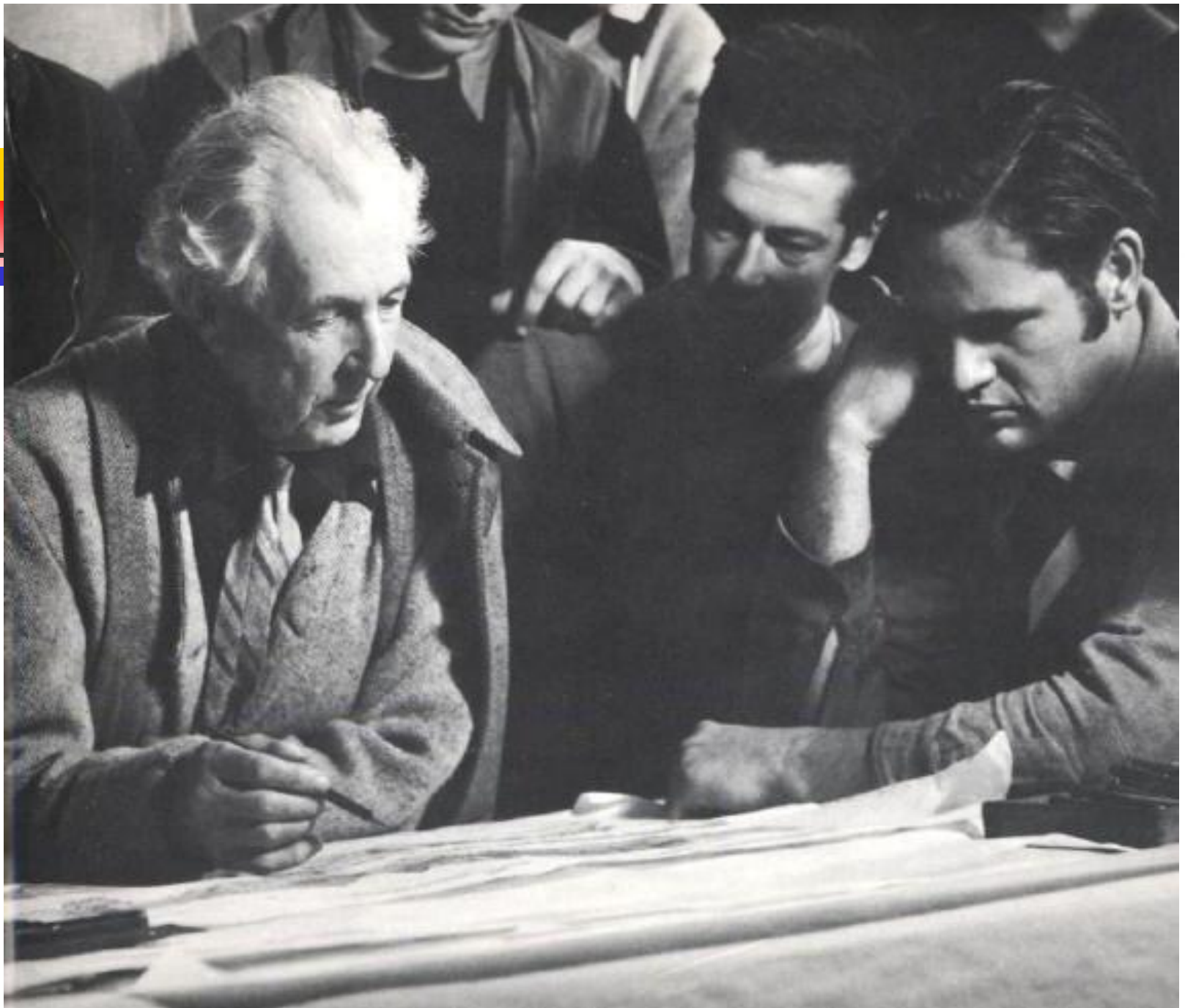


# Frank Lloyd Wright



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- **Frank Lloyd Wright was born in June 8, 1867**
- **Was an American architect, draftsman, interior designer, writer and educator,**
- **He designed more than 1,000 structures and completed 500 works.**
- **Wright believed in designing structures which were in harmony with humanity and its environment**
- **He was a popular lecturer in U.S & Europe**
- **He died in Arizona at the age of 92**
- **Never retired from his profession**





# Frank Lloyd Wright

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- Frank Lloyd Wright introduced the word ‘organic’ into his philosophy of architecture as early as 1908.
- It was an extension of the teachings of his mentor Louis Sullivan whose slogan “form follows function” became the mantra of modern architecture.
- Wright changed this phrase to “form and function are one,” using nature as the best example of this integration.
- Frank Lloyd Wright’s organic architecture is not a style of imitation, because he did not claim to be building forms which were representative of nature.





**Taliesin School of Architecture**



# Frank Lloyd Wright

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- **Organic architecture is a reinterpretation of nature's principles as they had been filtered through the intelligent minds of men and women who could then build forms which are more natural than nature itself.**
- **Organic architecture involves a respect for the properties of the materials—you don't twist steel into a flower—and a respect for the harmonious relationship between the form/design and the function of the building.**
- **Organic architecture is also an attempt to integrate the spaces into a coherent whole: a marriage between the site and the structure and a union between the context and the structure.**



**Harley Bradley House**



# Frank Lloyd Wright

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- **The core of his ideology was always the belief that architecture has an inherent relationship with both its site and its time.**
- **He was affected by Japanese Philosophy and Architecture, and also by Maya temples.**
- **The question of style was not important to Frank Lloyd Wright.**
- **A building was a product of its place and its time, intimately connected to a particular moment and site—never the result of an imposed style.**



**Imperial Hotel- Japan 1915**



# Frank Lloyd Wright

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- In 1957, two years before his death, Frank Lloyd Wright published the book, *A Testament*, which was a philosophical summation of his architectural career. In an essay entitled “The New Architecture: Principles”, he put forth nine principles of architecture that reflected the development of his organic philosophy.
- The principles addressed ideas about the relationship of the human scale to the landscape, the use of new materials like glass and steel to achieve more spatial architecture, and the development of a building’s architectural “character,” which was his answer to the notion of style.
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**Robie House 1906-1909**

# Falling water Frank Lloyd Wright



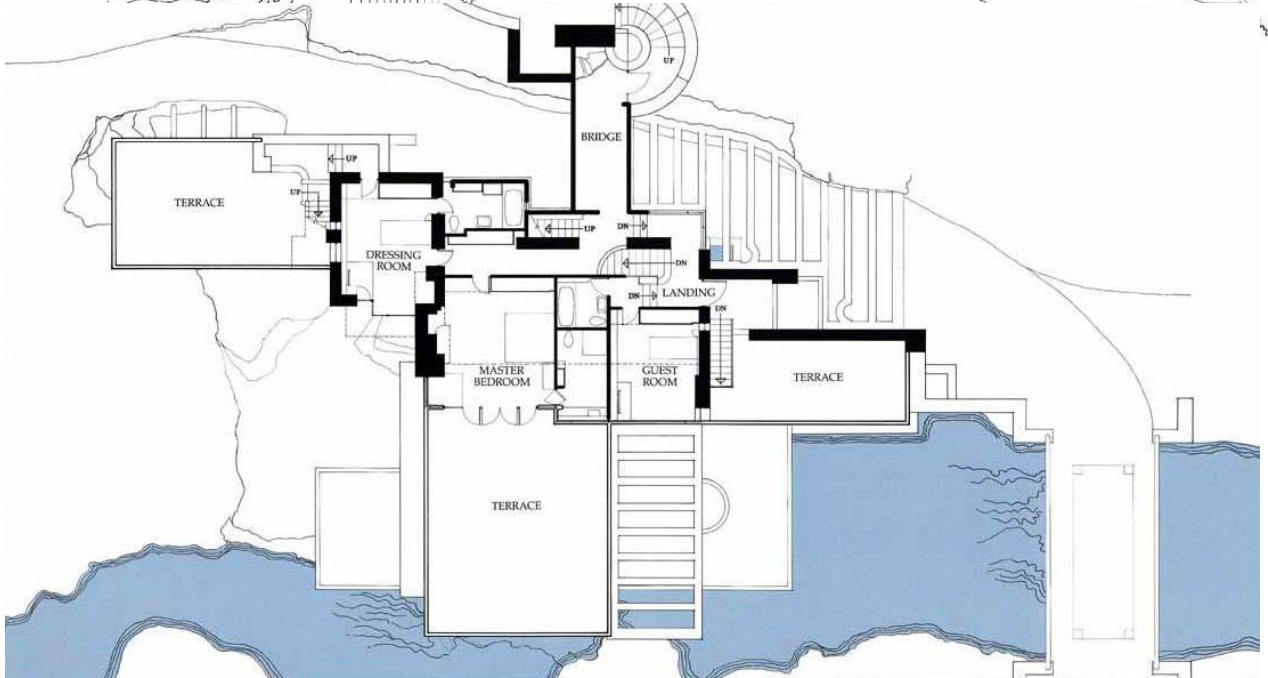
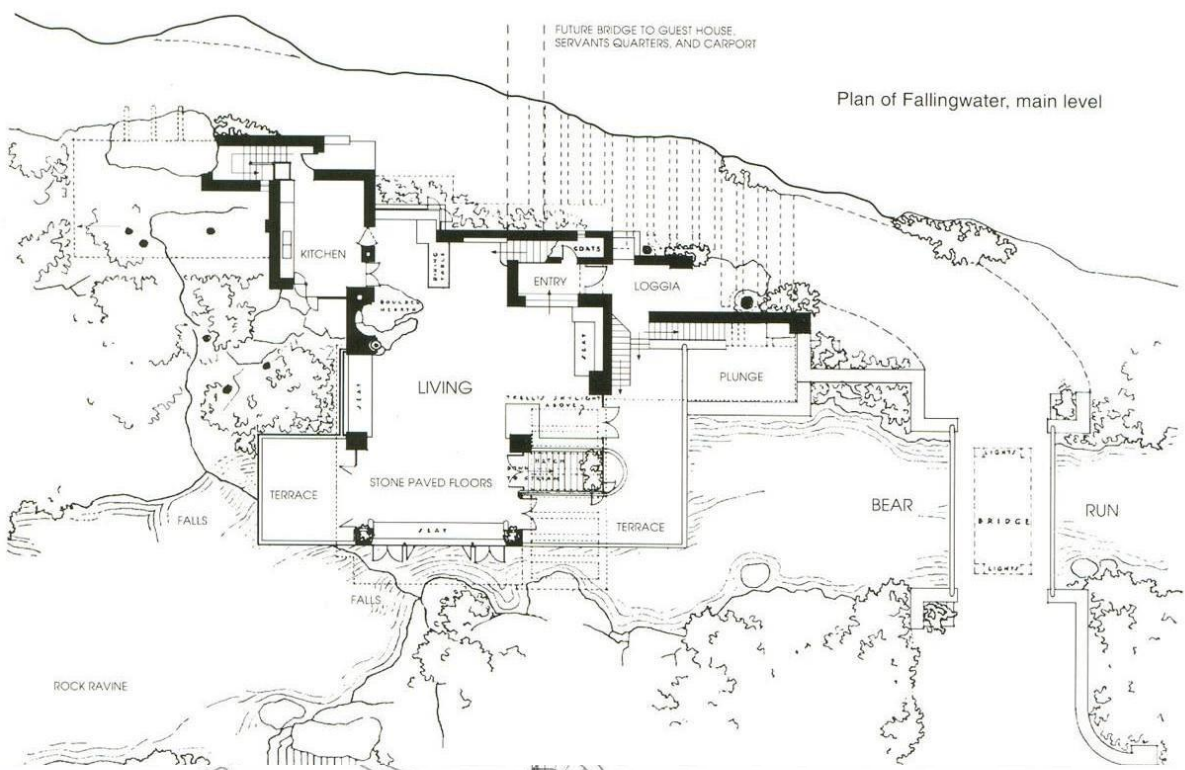
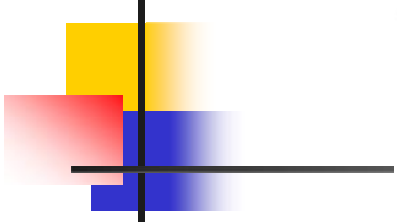
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- Falling water is also known as Kaufmann Residence
- Is a house designed by architect Frank Lloyd Wright in 1935 Pennsylvania,
- This residence was built partly over a waterfall
- Earlier, it was used as a weekly home but later on it was opened to the public as a museum

## Design principle :

- The design of Falling water should come from the site like a flower growing from the ground.
- The quality and nature of materials are seen 'flowing or growing.'





# Falling water Frank Lloyd Wright



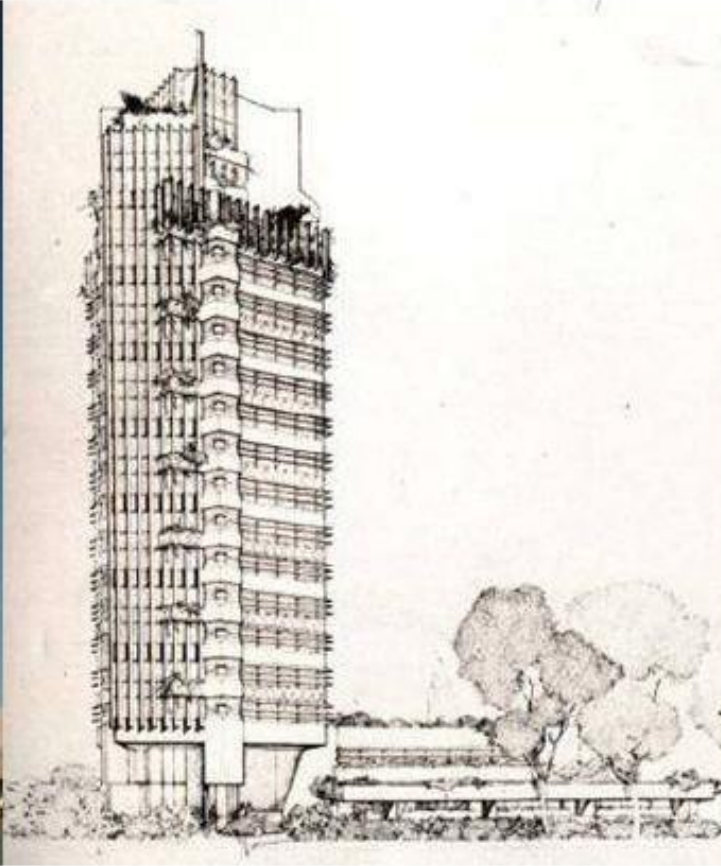
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## Design Construction :

- It is a three storied cantilevered house
- Terrace seems to float in the air above the stream
- Made use of combination of materials such as wood, glass & reinforced concrete
- Vertical anchor made up of stone rises more than 3 stories
- Vertical anchor consists of windows starting from floor to ceiling
- The windows are glass framed with steel.
- Horizontals of the cantilevers are made of reinforced concrete which are embedded in rocks
- The main level is connected to the stream via the staircase.





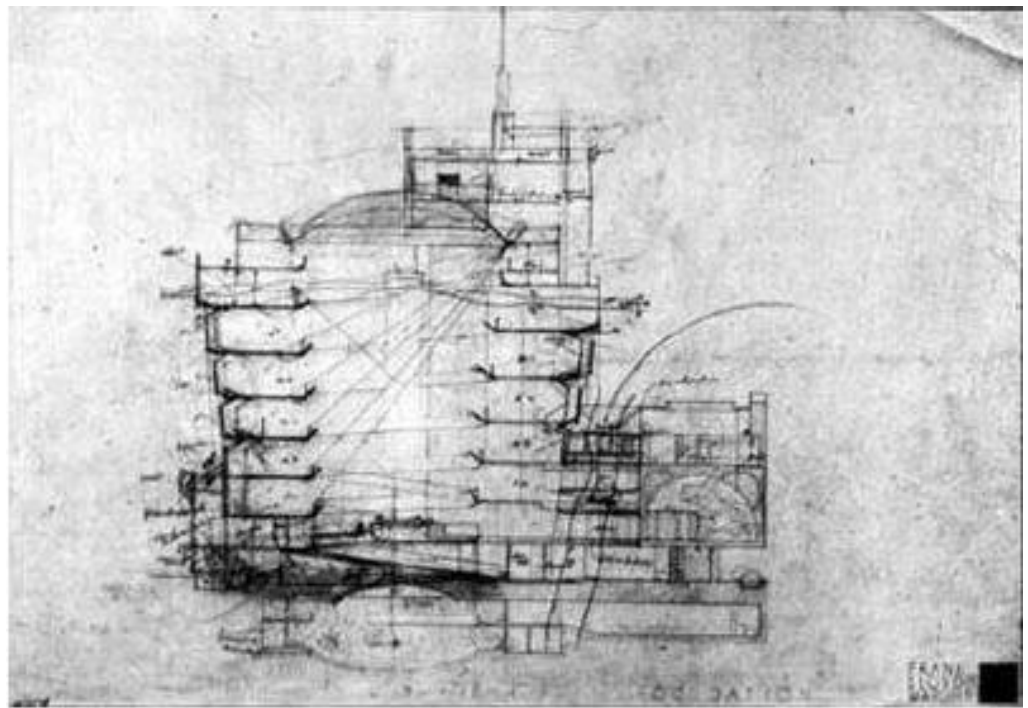
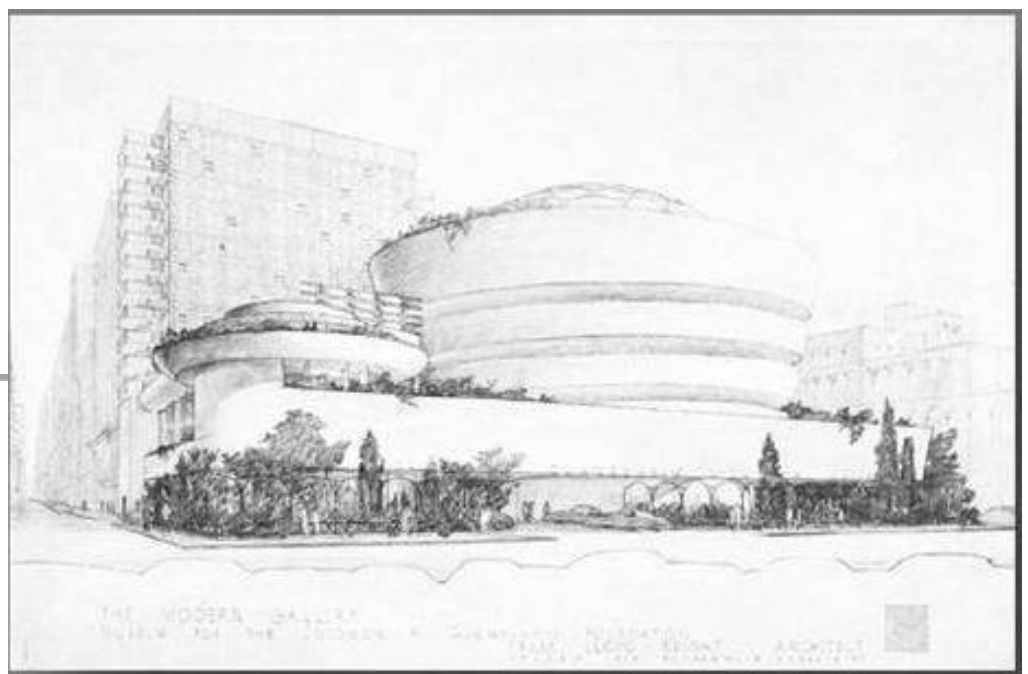
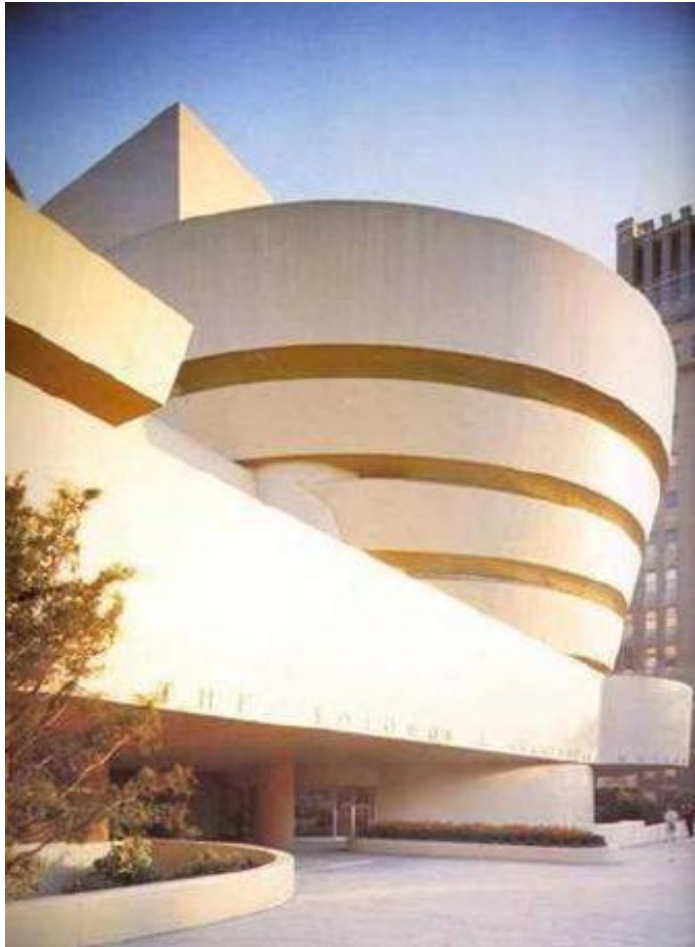


**Price Tower**



## Johnson Laboratories

# Guggenheim Museum





**Frank Lloyd Wright in Baghdad 1957**