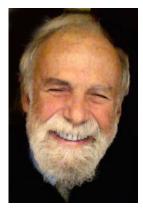
#### **CELESTINO SODDU**



curriculum vitae (2024)

> Registered Architect in Rome, Italy, since 1971

> Professor of Architectural Design at Italian Universities since 1971. (since 1988 at Politecnico di Milano University, Italy). Until 2015/2016 he is the professor of "Generative Design" at the Master School of Design of Politecnico di Milano University. (English language teaching)

> Director of Generative Design Lab, Politecnico di Milano University

> Honorary Professor of Xi'an University of Architecture and Technology and at Shanghai University, China

> Chairman of Generative Art annual international conference. (since 1998)

> Coordinator of "Euro-China Exchange: technology and Culture of Generative Approach", a program financed by European Commission. (2002-2005)

> Co-director of GASATHJ Journal at Domus Argenia, the Research Center on Generative Art, Sardinia. Italy

> Scientific Director of Argenia Association.

His offices are in Pigra (lake of Como), in Serramanna (Sardinia), in Rome.

> Office at Domus Argenia, 00186 Rome, via del Governo Vecchio 91

> Office at Generative Art and Design Lab, Argenia Association, 09038 Serramanna (Cagliari, Sardinia, Italy), via Eleonora d'Arborea 1-5, via Roma 101

> Private office in Pigra (Como, Italy), Piazza Curt da Marc 6, 22020 Pigra

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#### websites:

https://www.soddu.it / http://www.generativedesign.com (the personal website) since 1998 https://www.generativeart.com (the site of the annual international conference Generative Art https://www.generativworld.it. (with metaverse)

http://www.generativism.com (the wiki interactive site for students and researchers)

https://www.gasathj.com (Generative Art Science and Technology hard Journal)

http://www.artscience-ebookshop.com\_ebooks and proceedings for free reading and downloading

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Celestino Soddu was born the 2<sup>nd</sup> of April 1945, he lived in Cagliari, Milan and Rome and obtained his University Master Degree in Architecture at Rome University "La Sapienza" in 1970. In the same year he passed the State Examination for Professional Architects and Engineering Register.

He is registered architect since 1971. His activity is in the fields of architecture, town design, and architectural object design. The professional order of Architects in Rome published his architectural works in the book "50 years of profession".

He made architecture, industrial design and town design projects realized in Italy (1972-1984) and Somalia (in 1984-1989). In the subsequent years, he made visionary architecture projects for Chicago, New York, Washington DC, Los Angeles, Rome, Tel Aviv, Milan, Hong Kong, Shanghai, Beijing, Tianjin, Delhi, Lecco, Cagliari, Ravenna, Venice and Verona. He presented them in international solo exhibitions (Washington D.C., Los Angeles, Hong Kong, Milan, Rome) and in other international events.

#### Activities

He teaches in Italian Universities since 1971.

He was, from 1988, professor (Architecture Design studios) at Politecnico di Milano University, School of Architecture, School of Design and School of Engineering-Architecture. In 2014/2015 his teaching was "Generative Design" at the Master School of Design of Politecnico di Milano.

In 1992 he founded and, until 2019 he was the director of the Generative Design Lab at Politecnico di Milano University. The topic of this Lab is approaching the most advanced possibilities in design processes.

At present he is chair of Generative Art annual international conferences and the director of Generative Art and Science Lab of Argenia.

In 2002-2005, he had funds from European Community as coordinator for establishing mutual cultural and business relations between Europe and China and for enlarging the activity of his Generative Design Lab

with other Generative Design Labs in Europe (Kassel and Eindhoven) and in China (Shanghai and Tianjin). The exchange activities in China involves, until now, universities and research centres of Xi'an, Beijing, Tianjin, Shanghai, Changsha, Hong Kong and Macau.

#### Background and advanced research

Beginning from 1979, his research is about the *dynamic evolution of the artificial systems complexity*, designing sequences of original software to emulate and control architectural, environmental and industrial design processes and to improve the manufacturing industrial processes.

The last versions of these original software programs are used for Design professional and research activities.

In 1984 and 1985 he made his first series of lectures in USA and Canada for presenting the possibility of computers in Architectural design (Waterloo University. Concordia University. in Montreal, Penn State University.) and, as an expert of the Italian Foreign Office, he worked in Somalia teaching and designing architectures.

# In 1986, he designed the first original software to control the dynamic evolution of the genius loci of artificial environments and to create Generative Identity Codes for fitting cities Identities and environment harmony.

Beginning from 1992 his research was about the design of species, the design of the morphogenetic codes of architecture and artificial industrial objects and about the management and the innovation of the manufacturing processes.

Every his architectural project, realized like AI generative software, can generate a sequence of different architectures/environments characterized by the same genius loci. With this tool, it is possible to evaluate the quality of the incoming architectural events during the increasing complexity of design processes. He used this generative software in designing the evolution of some town environments in front of the need to preserve the identity of particular genius loci.

He designed *original software also in the field of representation*, (his patent of 360-degree anamorphic technical representation is used in advanced installations) and in the field of 3D creative interpretation of 2D artwork.

In Industrial design, his generative projects are useful devices to manage and control the quality and the complexity of the new industrial products. These projects are able to **generate and endless sequence of** *different 3dmodels of industrial objects, all unique and unrepeatable*, but all belonging to the same design concept and to the same functional requests. It is the industrial production of different and unrepeatable objects enhancing the brand identity and recognizability. He experimented this design and industrial production approach at the School of Design at Hong Kong Polytechnic University, Industrial Centre, in 2001. At present his Argenia generative software is able to generate many different 3D models belonging to different Ideas structured as paradigms, from cars to chairs, from baroque cathedrals to UFO, from skyscrapers to lamps. In this years he was supervisor and axaminer of Master and PhD thesis in Milan, in Kassel, Germany and in Hong Kong PolyU.

Starting in 1995 he designed AI software for Art too. In 2013, following his past experience as a jazzman, he fixed his old AI generative project Musicablu, able to generate complete scores (midi) of music following peculiar characters. The generative engines generate in parallel the riff and the melody, the rhythm, the harmony the counterpoints and all the musical structure.

He has his Internet site beginning from 1995 (<u>www.generativedesign.com</u> and <u>www.soddu.it</u>) where it is possible to find his research and the works of his students. In this Internet site, it is possible to look at one thousand of homepages of students (Italian and foreign students of his workshops) and one hundred of theses for the final master degree in Politecnico di Milano University made with his supervision. Starting since 2008 he opened a wiki interactive website where students can exchange experiences and present their work.

Beginning in 1998 he is the Chair, with Enrica Colabella, and the organizer of the annual International Generative Art Conference (arrived to the 27<sup>th</sup> edition) hosted at Politecnico di Milano University (1998-2010) and at other cultural entities as CRUI (conference of rectors of Italian universities), Rome in 2011, San Micheletto, Lucca, in 2012 at Triennale in Milan in 2013, in Rome in 2014 at Angelica Library and in Venice in 2015 at the BLM foundation and at the Music Conservatory, in Florence, Ravenna Art Museum, Verona National Museum of Natural History and Rome Villa Giulia Museum, in Cagliari at the National Archaeological Museum, in Rome at Vallicelliana Library and in Venice at the UNESCO Office.

These with the participation of researchers from UK, Germany, Finland, US, Israel, Canada, France, Romania, Belgium, Sweden, Netherlands, Japan, Hong Kong, New Zeeland, Australia, Spain, Sweden, Brazil, Peru', India, Indonesia, Slovenia, Malaysia, China, Taiwan, Latvia, Romania, Switzerland, Poland, Portugal, Lebanon, Korea, Thailand, Mexico and Italy. The GA conference has its website: <u>http://www.generativeart.com</u> with around 1300 papers for free reading.

Starting since 2021 he designed a metaverse for his virtual architectures and for the exhibitions of the Generative Art conference (www.generativeworld.it)

#### Some exhibitions, lectures and communication activities of the last years:

## 1991-2000

□ He presented his design research and projects in International Conferences and in workshops in Italy and also in other countries: Oxford, (UK) 1991, Lausanne (Swiss) 1991, Stockholm (Sweden) 1992, Montreal (Canada) 1992, Zurich (Swiss) 1993, Singapore 1993, Neuchatel (Swiss) 1993, Wien (Austria) 1993, Istanbul (Turkey) 1994, Freiburg (Germany) 1995, Sheffield (UK) 1995, Helsinki (Fin) 1997, Stockholm (Sweden) 1997, Lancaster (UK) 1998, Edinburgh (UK) 1999, Brussels (Belgium) 1999, Kassel (Germany) 2000, Weimar (Germany) 2000, Schwabish Gmuend (Germany) 2000, Las Vegas (US) 2000, Portland (US) 2000, Seattle (US) 2000.

## 2001

□ Professorial Research Fellow at **Hong Kong** Polytechnic University. He improved his generative software to realize, as direct output, an endless sequence of unique and unrepeatable physical objects made by rapid prototyping devices.

□ "Architectural Generative Design", lecture at the Chinese University of Hong Kong

□ "From Forming to Transforming: the architecture design approach", lecture at School of Architecture of Tongji University, **Shanghai**, China

□ "Generative Architectural Design and Advanced Technologies", lecture at China Building Technology Development Center, **Beijing**, China

□ "Generative approach in Architecture and Industrial Design", lecture at Tsing Hua University, Department of Architecture, **Beijing**, China

□ "Generative Design, Generative Games", talk at Sony SCEA R&D, **San Francisco** 

 $\hfill\square$  "Generative Art and Dynamic Systems", talk at Art & Science Lab, Santa Fe', US

□ "Generative Art and Design", lecture at Virginia Tech, Virginia Polytechnic Institute & State University, **Blacksburg**, US

- □ "Generative Art", lecture at Art Institute of Chicago, US
- Generative Art", Lecture at New York University, New York, US
- "Generative Art, from forming to transforming", lecture at Volen Center, Brandeis University, Boston, US
- Generative Design approach", talk at CDI, Harvard University, **Boston**, US
- Generative Design", lecture at Kassel University, Germany
- Generative Design", lecture at Interactive Design Institute, Ivrea, Italy
- Generative Design", lecture and exhibition at School of Design of Shawbish Gmuend, Germany
- Generative Design", lecture at MOM, Copenhagen
- Generative Art", lecture and exhibition at Massenzio Arte, Roma
- □ "Generative Natural Flux", opening lecture at Generative Art Conference, Milano

#### 2002

□ "Generative Art, Visionary variations", "Generative Architecture", "Generative Design and Intelligent Production", Lectures and exhibition at Lecture Theatre, Visual Art Centre, **Hong Kong** Museum.

• "Generative Architectural Design", lecture at School of Architecture of the Chinese University of **Hong Kong**.

□ workshop with students of the Chinese University of **Hong Kong** at Visual Art Centre, HK.

□ "Generative Architectural Design", lecture at the Faculty of Architecture, University of **Naples** 

□ Generative Art and Architectural Design", lecture to the students and professors of LAIAD, Los Angeles Institute of Architecture and Design, at his exhibition at MF Gallery, **Los Angeles**.

□ "Philosophy of Generative Design in Europe-China exchange" in the conference "Progetti di cooperazione scientifica e tecnologica tra Italia e Cina", **Milan** Polytechnic University.

□ "Genesis of Unicum and New Naturality", invited lecture to the international conference: The genesis of forms in the sciences and the arts. **Urbino**, Italy

Generative Art, preludi, Natural Mirrors", Isea2002, Nagoya, Japan

□ "Designing and managing the Urban Identity with Generative Approach in Architecture and Town Design", invited speaker in **Macau** Cultural Centre.

□ "Clarity, Complexity, Harmony and Safety: Generative Identity's codes build livable cities", invited speaker at Cities Asia Summit 2002, **Singapore** 

□ "Ideal Cities", opening lecture at 5<sup>th</sup> Generative Art Conference, Milano

□ "Generative Design", workshop at International Nonlinear Sciences Conference, Vienna

2003

□ "Generative Art, visionary variations of Washington DC", lecture to present his personal exhibition at IDB Cultural Center, **Washington DC** 

 $\hfill\square$  "Generative Design", lecture at Alexandria Architecture Center, Alexandria Va.

□ "Generative Design approach", lecture at Ball State Univ., **Muncie**, Indiana

 $\hfill\square$  "Generative Design", lecture at School of Design, UCLA, Los Angeles Ca.

□ "Morphogenetic Visionary Architecture", personal exhibition and lecture at Pacific Design Center, Los Angeles.

□ The Politecnico di Milano University, center of Cultural Activities and Scientific movies, realizes the movie "Talents of Politecnico di Milano: Celestino Soddu"

□ He presents in Macau of the project of the Master IDEAS, Identity and Dynamic Evolutions of Artificial Systems.

 $\hfill\square$  Coordinator of the Asialink workshop in  $\mbox{Shanghai},$  Tongji University.

lecture at Tongji University, Shanghai

Coordinator of the Asialink workshop in Tianjin University, China

□ Lecture at Tsing Hua University, **Beijing** 

□ Invited lecture at "Technology and Forms of Art and Science" conf., Univ. of Salerno.

 $\hfill\square$  Lecture at University of Trento and High School Apeiron

 $\hfill\square$  Lecture about Gen Architectural Projects at the University of Tel Aviv.

Chair of the international annual conference GA2003 at Politecnico di Milano University.

## 2004

□ " Visionary Variations and Generative Approach", Exhibition and Lecture at the Gallery of the 1st Faculty of Architecture of **Rome** University La Sapienza.

□ Presentation of "Visionary Variations" at the workshop "Simulation, Cognition and VR: a new configuration in the study of complex artificial environments", **Venezia**.

□ lecture at **Xi'an** University, China. In the same occasion, he received the title of honorary professorship of Xi'an University of Architecture and Technology.

□ Chair of the seminar "Identity&Design" at the Italian Embassy in **Beijing**. Personal exhibition of Architectural projects at the Italian Cultural Institute.

Lecture at the School of Design of Hunan University, Changsha

Lecture at Shanghai University, Shanghai.

" "Visionary Variations of Milan", a personal exhibition at IFC International Finance center of Hong Kong.

□ Chair of the seminar "De Identitate" at **CRUI** in **Rome**.

□ Workshop on European and Chinese cultural identity in **Rome**, as coordinator of "EuroChina exchange"

□ lecture "Arte Generativa e Variazioni Visionarie" for the "Notte Bianca di Roma".

 $\hfill\square$  Wuxi, talk about generative design at the Design Week.

□ he gets the professorship at **Shanghai** University.

□ lecture "Genetic algorithms in design" at the School of Engineering of the University of Campinas, **Sao Paulo**.

□ lecture "Generative Creative Processes" at the auditorium of the Art Institute of Campinas, Sao Paulo.

□ Key Speech "Argenìa, Artificial DNA and Visionary Variations", for SIGRADI, VII congreso igeroamericano de grafica digital, Unisisos, Sao Leopoldo, **Porto Alegre**.

Chair of the VII Generative Art International Conference, GA 2004 in Milano.

## 2005

□ His personal exhibition "Milan Visionary variations" start up at Commerce Chamber of **Milano**. The catalog is printed by Gangemi Publisher in Europe and US.

□ invited speaker at "Mathematics, Art and Cultural Industries", International conf. at Calabria University, **Cetraro**.

□ Invited lecturer at the Technical University of **Eindhoven**, Faculty of Architecture.

□ invited keynote speaker at "Art+Math=X", University of Colorado, **Boulder**.

□ invited speaker at "Precedents and Identity", Technical University of Delft.

□ Chair of the VIII Generative Art International Conference, GA 2005 in Milano.

# 2006

□ He was invited to **Delhi** for presenting his Asialink program.

Lecture at Shanghai University

□ Chair of the IX Generative Art International Conference, GA 2006 in Milano.

## 2007

□ invited as keynote speaker in **Daugavpils** University, Latvia

□ invited speaker at Shanghai University

□ invited speaker at **ChongQing** University.

Chair of the X Generative Art International Conference, GA 2007 in Milano.

## 2008

□ speaker at Bratislava University, Slovakia

□ invited lecturer at Bandung by Indonesian Ministery

□ invited speaker at Lviv Polytechnic, Ukraine

" "western" consulting in **Shanghai** for the China Pavillion exhibition at Expo2010.

□ invited at HKPolyU, **Hong Kong**, for a 14 days workshop.

 $\hfill\square$  Chair of the XI Generative Art International Conference, GA 2008 in **Milano.** 

□ invited teaching professor for an HKPolyU students trip in **Yunnan – Tibet** with the topic of how to use own cultural heritage for improving design identity.

# 2009

□ Organizes the Generative Art Visionary Evening in Lecco at the public platform on the lake

□ Invited paper at proceedings of NP: Daugavpils University, Latvia

Chair of the XII Generative Art International Conference, GA 2009 in Milano.

#### Exhibition of Visionary Architectural Projects at Domus Argenia Gallery, Serramanna, Cagliari 2010

Organizes the Generative Art Visionary Evenings in Lecco at SalaDonTicozzi and in Garibaldi square
organizes the roundtable "Contrapunctus" at Nexus2010, Porto, Portugal

□ Chair of the XIII Generative Art International Conference, GA 2010 in **Milano**.

Presentation of "Visionary Cagliari" at Cagliari University.

## 2011

□ Invited speaker at 1<sup>st</sup> International Conference "Art, Science, and Technology: Interaction between Three Cultures", ORT Braude College, **Karmiel, Israel,** 2011

□ keynote speaker at 1<sup>st</sup> International conference of Sustainable Intelligent Manufacturing, Leiria, Portugal,

Solo Exhibition "D'apres Borromini" at Vaso Vanvitellianum, Biblioteca Angelica, Roma (December 2011)
Chair of the XIV Generative Art International Conference, GA 2011 in Rome, Conference of the rectors of Italian Universities, Frescos Hall.

# 2012

□ Director and founder, with E.Colabella, of GASATHJ, Generative Art Science and Technology hard Journal. The 1<sup>st</sup> issue published on May 2012 as e-book and as <u>http://www.gasathj.com</u>

Chair of the XV Generative Art International Conference, GA 2012 in Lucca, San Micheletto Foundation.
2013

□ Professor of Generative Design at the Master School of Design of Politecnico di Milano University.

□ Invited External Examiner of Ph.D. Thesis at Hong Kong Polytechnic University.

□ Solo exhibition in **Porlezza**, invited by the municipal management.

□ Invited speaker at S. Lukas School of Arts, Brussels

Chair of the XVI Generative Art International Conference, GA 2013 in **Milan**, Triennale di Milano, 2013

## 2014

□ Professor of Generative Design at the Master School of Design of Politecnico di Milano University. 2013/2014

□ Invited External Examiner of Ph.D. Thesis at Hong Kong Polytechnic University.

□ Invited speaker at "Uno (nessuno) centomila prototipi in movimento. Trasformazioni dinamiche del disegno e nuove tecnologie per il design", School of Design, **Milan** 

□ Chair of the XVII Generative Art International Conference, GA 2014 in **Roma**, Adrian Temple and Angelica Library, 2014

Professor of Generative Design at the Master School of Design of Politecnico di Milano University. 2014/2015

# 2015

□ Invited Keynote Speaker at eCAADe, Milan May 2015.

Chair of the XVIII Generative Art International Conference, GA 2015 in Venice, Foundation Bevilacqua La masa, 2015

Professor of Generative Design at the Master School of Design of Politecnico di Milano University. 2015/2017

## 2016

□ Chair of the XIX Generative Art International Conference, GA 2016 in **Florence**, Foundation CRF, 2016 **2017** 

 $\hfill\square$  Professor of Generative Design workshop in the University of Cagliari, 2017

Exhibition at Vitrina, Holon Institute of Technology, Tel Aviv, 2017

□ Chair of the XX Generative Art International Conference, GA 2017 in **Ravenna**, Museum of Art and Classense Library, 2017

□ Partner, as scientific director of Argenia Association, to @postasis, a European Commission program with Italy, **Greece, France, and Netherlands**. 2017-2019

#### 2018

Exhibition in Lima, Artware Biennal of Digital Art, at the British Cultural Center, 2018

Chair of the XXI Generative Art International Conference, GA 2018 in Verona, Museum of Natural History, 2019

□ Organizes "Generative Art Futuring Past" at the "House of Literatures", June 2019 in **Rome**, linked to the Rome Cultural Festival 2019. The proceedings are printed in the book "<u>Generative Art Futuring Past</u>" ISBN 9788896610374. His paper is "Baroque Algorithms, a vision toward the future".

□ Organizes, with ARGENIA Association, the 4<sup>th</sup> Multiplier event of @postasis Erasmus\* program in **Rome**, September 2019 at the 1<sup>st</sup> School of Architecture "Valle Giulia", The proceedings are in the book "<u>Digital</u> <u>Civilization, where trees move</u>", ISBN 9788896610381, His paper, in English and Italian, is "Generative Art. Generational Transmission and phemeral Digiral Ware"

□ Chair of the XXII Generative Art International Conference, National Museum of Vill Giulia, **Rome**, December 2019. The proceedings are printed in the book "Generative Art 2019", Domus Argenia publisher, 2019.

## 2020-2024

□ Remote lecture at Núcleo Interdisciplinar de Comunicação Sonora, Brazil. Title: Creativity in Generative Approach to Art, Music and Design. July 15, 2020

□ Chair of the XXIII Generative Art International Conference, December 2020, online conference based on Politecnico di Milano University. The proceedings are printed in the book "<u>Generative Art 2020</u>", Domus Argenia publisher, 2020.

□ Chair of the XXIV Generative Art International Conference, National Archeological Museum, Cagliari, December 2021. The proceedings are printed in the book "<u>Generative Art 2021</u>", Domus Argenia publisher, 2021.

□ Chair of the XXV Generative Art International Conference, Vallicelliana Library, Borromini Hall, **Rome**, December 2022. The proceedings are printed in the book "<u>Generative Art 2022</u>", Domus Argenia publisher, 2022.

□ Chair of the XXVI Generative Art International Conference, Vallicelliana Library, Borromini Hall, **Rome**, December 2023. The proceedings are printed in the book "<u>Generative Art 2023</u>", Domus Argenia publisher, 2023.

Remote lecture at University Paris 8, lagan program, title: "Generative Art, a vision science from the past toward the future. From the Renaissance point of view to Author's Generative Al', Paris 2024
Chair of the XXVII Generative Art International Conference, UNESCO Office, Venice, December 2024.

The proceedings are printed in the book "Generative Art 2024", Domus Argenia publisher, 2024.

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C.Soddu, "*Nuovi metodi di rappresentazione della configurazione urbana: la specie", in the proceedings of the conference* "La rivalutazione dell'immagine storica della citta", Acireale 1989, then published in the book "La Configurazione dell'Immagine Urbana", Gangemi publisher 1991.

C.Soddu, "*Citta' Aleatorie*", (unpredicatable cities), Masson Publisher. 1989 (book in Italian) C.Soddu, "*Citta' Aleatorie: strumenti di rappresentazione della dinamiche dell'immagine urbana*", (random cities, the representation tool of town shape dynamics), in the magazine "Territorio" n.3 1989 C.Soddu, "*Citta' Aleatorie*", in "Computer and Art", Exhibition 1990, Lugano, Dalle Molle Foundation for the quality of life, George Mason University.

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*nell'architettura e nel design*<sup>"</sup>, (the design of species. The creative tool to increase the possibility of using steel in architecture and industrial design), in the magazine "Acciao", April 1990.

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