

**LORENZO SENES**

**CURRICULUM VITAE ET STUDIORUM**

**LORENZO SENES** – Costa Edutainment Spa. Acquario di Genova, Area Porto Antico – Ponte Spinola, 16128

tel. +39 010 54 11 22

e-mail:

**PERSONAL INFORMATION**

Citizenship:

Place of birth:

Degree in Biological Sciences.

Good knowledge of English, basic French and Spanish.

Good knowledge of the use of PC (Microsoft Office and AUTOCAD) and of the OS Windows, Linux and Android.

**Current Position**

**COSTA EDUTAINMENT s.p.a.:** Project Manager.

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**Relevant work experience**

- **1995 to present: COSTA EDUTAINMENT s.p.a**  
Since 1995 I have been working for Costa Edutainment s.p.a. The company manages several museums in Italy and all major public aquariums in the country. In 26 years, I covered several roles gaining extensive experience across a wide range of expertise in the aquarium industry.  
Follows a list of significant roles and achievements during my long-term employment:
- **February 2015 to present: Acquario di Genova. Project Manager.**  
In the position of Project Manager, I oversee several feasibility studies and projects, among which:
  - Feasibility study of the Aquarium de Buenos Aires
  - Project for the new Acquario di Napoli
  - Project for the new Acquario di Trieste
  - Project for the Marseille Aquarium
  - Feasibility study of the Aquarium of La Spezia
  - Feasibility study of the Aquarium of Salerno
  - Feasibility study of the Cogne Mine Museum (AO)
  - Renovation projects of the Acquario di Genova
- **2011 to present: Acquario di Genova, Aquarium Curator.**  
In the position of Aquarium curator, I was in charge of
  - Managing the animal collection.
  - Supervising exhibits and LSS.
  - Aquariological operations.
  - Animal acquisition.
  - Water quality laboratory.
  - Managing the aquariological budget (about 1million euros per year).
  - Development of all the new aquariological projects.
  - Acting manager of **Marine Mammals and Birds Section**
  - Acting manager of **Fresh Water Fishes, Amphibians and Reptiles Section**

In my daily operation I managed a team of 39 staff, 24 of which reporting directly.

- **2014** International advisor for the project of a New Aquarium in Lima (Peru)
- **2011 – 2012: Acquario di Livorno, Aquarium Curator.**  
In year 2011 Costa Edutainment added Acquario di Livorno to the portfolio of its managed companies. For two years I acted curator in Livorno as well as in Genova, ensuring the flow of know how to the new staff. My role was pivotal to pass on the industry best practices and make sure that Genoa's quality standards were matched by the new structure.
- **October 2009 to August 2010: Acquario di Cala Gonone, Director of the Start Up:**  
Aquario di Genova carried out the start up of the Aquarium in Cala Gonone as third-party service provider. I managed the full operation for the company, from the collection campaign to the training and the LSS.
- **2000 – 2010: Acquario di Genova. Coordinator of the Aquarium development service.**  
In charge of both the internal exhibit design and the contract work for external clients. During the long period of time, I was part of the designing team for several projects and feasibility studies. I also travelled for work purposes across the world of the public aquariums industry, gaining extensive and thorough knowledge of the international scene. Appendix 1 is the list of the jobs carried out during my time in aquarium development.
- **2002: Head of the "Unità Operativa Acquario" in the project "Pescivivi" in collaboration with PNRA (National Program for the Antarctic Research).**  
Design of new systems for the transport of live Antarctic marine organisms.  
Design of the Antarctic Exhibits of Genoa Aquarium: display tanks, holding facilities and Life Support Systems.
- **February 2002: Site manager during the relocation of exhibits and livestock from Planet Aquarium (Aix-Marseille, France) to Genoa and Cattolica aquariums.**
- **1999 – 2000:** In 1999 Costa Edutainment became the managing company for the newly built Acquario di Cattolica (Rimini, Italy). During the aquarium start up I was the site manager and curator in charge.
- **1995 – 1999: Acquario di Genova.** Head of both "Invertebrates Section" and "Mediterranean Exhibits Section".
- **1995 - 2006: American Elasmobranch Society: Regional Coordinator (Italy and Western Mediterranean) of the "Captive Elasmobranch Census".**
- **1993 POLO TECNOLOGICO MARINO MARITTIMO srl: Acquario di Genova.** Head of the "Invertebrates Section".
- **1993 MONTEREY BAY AQUARIUM.** Stage on jellyfish rearing.
- **1993 ZOO BELIN AQUARIUM.** Stage on jellyfish rearing.
- **1992 IDEA Inc. (Boston, Massachusetts – USA), Acquario di Genova:** Aquarist during the Start up and the first operation of the aquarium.

**Appendix 1. Projects for internal development and external clients.**

- **2010** Feasibility study of the Aquarium of Tunisi. Customer: Garaventa S.p.a
- **2009** Design of the tanks, and the LSS of the Aquarium of the AMP di Capo Rizzuto. Customer: Provincia di Crotona.
- **2008** Feasibility study of the Aquarium of the Bioparco di Roma. Customer: Bioparco, Roma.
- **2008** Design of the LSS of the dolphin tank of the Acquario di Genova (4.6 millions liters) (in collaboration with Coral Design, Townsville. QLD, Australia).
- **2008** Feasibility study for a tourist attraction for the Irpinia area. Customer: Camera di Commercio di Avellino.
- **2007** Feasibility study for the Aquarium of Tianjin, China. Customer: Tianjin Port (Group) Co., LTD
- **2007** Feasibility study of the Nuovo Acquario di Trieste, Italy. Customer: Camera di Commercio di Trieste.
- **2007** Business plan and project review of the Acquario di Cala Gonone, Italy. Customer: Comune di Dorgali
- **2006** Tank and LSS design of the Acquario dell'Area Marina Protetta Plemmirio (Siracusa) (Architect: Salvatore Guarino - Siracusa, Italy). Customer: Area Marina Protetta Plemmirio
- **2005-06** Preliminary project of the New Naples Aquarium (Architects: Michael Oleksak (coestudi) - Rochester, Massachusetts). Customer: Costa Edutainment SPA
- **2005-06** Acquario di Genova, Feasibility study and preliminary project of the Acquario di La Maddalena (Olbia). Customer: Euroimpianti srl.
- **2005** Feasibility study of the new Dolphin Tank of the Acquario di Genova (in collaboration with Renzo Piano Building Workshop - Genova, Italy and Coral Design, Townsville. QLD, Australia)
- **2005** LSS design of the new Penguin Tank of the Acquario di Genova. (Architect: Michael Oleksak - Rochester, Massachusetts)
- **2004** Concept design of the Acquario dell'Area Marina Protetta di Capo Gallo (Palermo) Customer: Comune di Palermo
- **2004** Design of the LSS and of the tanks of the new Acquario di Milano (Architect: Piero De Amicis - Milan, Italy). Customer: IMG SPA
- **2003** Feasibility study of the Aquarium of Pizzo Calabro. Customer: Plumeria S.r.l.
- **2002-03** Preliminary project of the Aquarium of the Moscow City Aquapark (Moscow, Russia) Customer Arch. Giovanni Corradetti - Florence, Italy.
- **2002** Concept study of the "Nuevo Acuario de Valencia", Venezuela (Architect: Lucio Donatini - Riva del Garda, Italy). Customer: Alcaldia de Valencia
- **2001** Tanks and LSS Design of the Volos Aquarium (Greece) (Architect: Pietro Macchi-Cassia - Milan, Italy).
- **2000-2001** Project manager and LSS Designer of the Project "La Grande Scogliera Mediterranea" (Architect: Michael Oleksak - IDEA Inc. Boston, Massachusetts).
- **1999-2000** Tank and LSS Design and project managing of the Cattolica Aquarium (Parco Le Navi) (Architect: Hernando Suarez -Rome, Italy). Customer: Parco Navi SPA
- **1999** Design and project managing of the projects: "The New Jellyfish Tank", "The Moon jelly Life Cycle Tanks", "The Mediterranean room tanks", "The new Posidonia Tank", "The new Moluccas Tank".
- **1998** Life Support System Designer and Supervisor of the installation of the LSS and of the rockwork in the "Nave Blu" project.
- **1997** Supervision of work in the projects: "The Cylinder of the Jellyfish" and "The New Red Sea Tank".
- **1994** **Mundo Submarino (Barcelona, Spain)**. Design of the Red Coral tank of the "l'Aquarium" in Barcelona.

Appendix 2. SCIENTIFIC AND EDUCATIONAL EXPERIENCES

- **2017 – 2019 UNIVERSITY OF GENOA. Faculty of Environmental Sciences. Adjunct professor of “Aquatological Design”.**
- **2006 – 2010 UNIVERSITY OF GENOA. Faculty of Environmental Sciences. Adjunct professor of “Design of Artificial Aquatic System”.**
- **2010 UNIVERSITY OF GENOA. Faculty of Environmental Sciences.** Supervisor of the thesis (II degree) of Enrico Cantamessa. Title of the thesis: Sea Water Garden
- **2009 UNIVERSITY OF GENOA. Faculty of Environmental Sciences.** Supervisor of the thesis of Vanessa Bracali. Title of the thesis “L’Acquario di Vittoria” Studio di fattibilità Tecnico-economico per un grande Acquario in Sicilia.
- **2008 UNIVERSITY OF GENOA. Faculty of Environmental Sciences** Supervisor of the thesis of Enrico Cantamessa. Title of the thesis: “The Denitrification, History and State of the Art”
- **2006 UNIVERSITY POLITECNICO DI MILANO. Faculty of Architecture.** Supervisor of the thesis in architecture of Dr. Lisa Arrigo, Dr. Donatella Novi, Dr. Marisa Salinardi. Thesis titled “Acquario Panormus in Palermo”.
- **2006 UNIVERSITY OF ROME LA SAPIENZA, Faculty of Architecture.** Supervisor of the thesis of Dr. Raffaella Macera. Thesis titled: “L’Acquario di Gaeta.”
- **2003 UNIVERSITY OF VENICE, Faculty of Architecture.** Supervisor of the thesis in architecture of Dr. Irene Polese and Dr. Elena Ricci. Thesis titled: “L’Acquario di Jesolo”
- **1995 ACQUARIO DI GENOVA.** Scientific advisor for the exhibition “Profondo Rosso - Tesori di corallo”
- **1995 UNIVERSITY OF GENOA. Faculty of Biological Sciences** Supervisor of the thesis of Dr. Barbara Santarelli at the Acquario di Genova titled “Ritmi di attività di *Corallium rubrum* (Cnidaria, Gorgonacea) in condizioni sperimentali controllate”.
- **1994** Author and Responsible of the project “Census of the Red Corals (*Corallium rubrum*) in the water of the Portofino Promontory”, in cooperation with University of Genoa.
- **1993/94 and 1994/95 UNIVERSITY OF GENOA. Faculty of Biological Sciences** Organization and realization of the laboratory classes of the Ecology course.
- **1992** February-March: Marine Biology course at the Alimatha (Maldives) holiday camp.
- **1991/92: Professional Institute ENDFORM Liguria** Classes on plant rearing for Down syndrome students.
- **1991/92 UNIVERSITY OF GENOA. Faculty of Biological Sciences** “Reef Ecology Lectures” for the Ecology course.
- **1991 UNIVERSITY OF GENOA. Institute of Zoology.** Participation to the research campaign at the Island of Gallinara (Alassio - Ligurian Sea). Underwater prospecting of topographic data and benthos samples collection.
- **1991 UNIVERSITY OF GENOA. Institute of Zoology.** Scholarship of the Adriano Buzzati-Traverso Foundation. Title “Role of the sessile fauna of the coastal benthos”.
- **1991** member of the research groups “Ecology, morphology and population structures” and “Red coral transplantation” in an international project financed by FAO.
- **1991 DEPECO SRL.**  
Participation to three environmental monitoring campaigns (collection of water samples and hydrological data) for organized by the Ministry of Environment:
  - ❖ **February-March:** A/H VARAZZE and S/V CASTALIA VERDE, Ionian Sea and Southern Adriatic Sea.
  - ❖ **April:** S/V PUNTA SCARIO, Ligurian Sea - during the sinking of the Haven oil tanker.
  - ❖ **June:** S/V VIR SERVICE, Ligurian Sea - after the sinking of the Haven oil tanker.
- **1990/91 and 1991/92:** Collaboration for the organization and the realization of indoor and outdoor classes of Experimental Biology course (University of Genoa).
- **1990 UNIVERSITY OF GENOA.** Degree in Biological Sciences.  
Thesis titled “Study of the population of *Corallium rubrum* along the Portofino Promontory (Ligurian Sea) and experiences of red coral rearing”. (Supervisors prof. M. Sarà and prof. R. Cattaneo-Vietti).

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- **1989 NATURAL HISTORY MUSEUM OF GENOA.** Conferences titled "Australia: nature and cities" and "Australia: treasures between corals and mangroves" at the Natural History Museum of Genoa.
- **1989 August:** Marine Biology course at the Favignana (Sicily) holiday camp.
- **1989 UNIVERSITY OF GENOA. Institute of Zoology.** Participation to an experiment in rearing red coral *in situ* in the marine park in Monte Carlo (collaboration between the Institute of Zoology and the Association Monégasque pour la Protection de la Nature).
- **1989 FIPS-CMAS** scuba diver license.
- **1988 AUSTRALIAN INSTITUTE OF MARINE SCIENCES** (Townsville, Australia). Internship (3 months). Research on the morphology of the starfish *Acanthaster planci* (Supervisor Prof. John Benzie). Participation to two research cruises on the Great Barrier Reef: research on the growth of hard corals, gastropods (genus *Trochus*) and Parrot fish biology.
- **1987 UNIVERSITY OF GENOA. ISTITUTE OF ENVIRONMENTAL SCIENCES.** Participation to three oceanographic cruises:
  - ❖ **May:** M/N MAGNAGHI, collection of hydrological data in collaboration with Hydrographical Institute of the Italian Navy, Sicilian Channel.
  - ❖ **August:** M/N MINERVA, collection of benthos specimens in deep waters, Northern Sardinia.
  - ❖ **November:** M/N BANNOCK, collection of Zooplankton samples, Northern Tyrrhenian Sea.

**Appendix 3. International meetings and conferences**

- **1988** 6<sup>th</sup> International Coral Reef Symposium (Townsville, Australia).
- **1990** 53<sup>o</sup> Congresso dell'Unione Zoologica Italiana (Palermo, Italy).
- **1990** Congresso A.I.O.L. (Santa Margherita Ligure, Italy).
- **1991** XXII Congresso della Società Italiana di Biologia Marina (Cagliari, Italy).
- **1991** I Convegno Speleomar (Palinuro, Italy).
- **1992** XXIII Congresso della Società Italiana di Biologia Marina (Ravenna, Italy).
- **1994** E.U.A.C. (European Union of the Aquarium Curators) Meeting (Leipzig, Germany).
- **1996** Covegno "Profondo Rosso, tesori di corallo" (Genova, Italy).
- **1997** Tavola rotonda "Il Corallo Rosso del Mediterraneo tra Ricerca e Norma" (Torre del Greco, Italy).
- **1997** Convegno "Il Corallo Mediterraneo Arte e Storia" (Santa Margherita Ligure, Italy).
- **1998** E.U.A.C. Meeting (Barcelona, Spain).
- **1999** E.U.A.C. Workshop (Hirstshals, Denmark).
- **1999** R.A.W. (Regional Aquatic Workshop) Minneapolis, USA.
- **2000** R.A.W. New Orleans, USA.
- **2000** 5<sup>th</sup> IAC (International Aquarium Congress) Montecarlo, Monaco.
- **2001** E.U.A.C. Meeting (Rotterdam, Holland).
- **2002** E.U.A.C. Meeting (La Rochelle, France).
- **2004** 1<sup>st</sup> Aquality (International Symposium of Water Quality and Treatment in Aquaria and Zoological Park) Lisbon, Portugal.
- **2005** E.U.A.C. Meeting (Lisbon, Portugal).
- **2006** E.U.A.C. Meeting (Brest, France).
- **2007** E.U.A.C. Meeting (Salisburgo, Austria)
- **2008** 7<sup>th</sup> IAC (International Aquarium Congress) Shanghai, Cina
- **2009** Primer Foro de Cooperación Transfronteriza Argentina-Brasil-Paraguay (Ciudad del Este, Paraguay)
- **2009** E.U.A.C. Meeting (Valencia, Spain)
- **2010** E.U.A.C. Meeting (Creete, Greece)
- **2011** E.U.A.C. Meeting (Stralsund, Germany)
- **2013** E.U.A.C Meeting (Billund, Denmark)
- **2014** 2<sup>nd</sup> Aquality (International Symposium of Water Quality and Treatment in Aquaria and Zoological Park) Nassau, Bahamas.
- **2014** E.U.A.C Meeting (Genova, Italy)

**MEETING ORGANIZATION**

- **30<sup>th</sup> EUAC Meeting** at the Acquario di Genova

Appendix 4. Publications.

4.1 PAPERS

- 1) CATTANEO-VIETTI R., M. BARBIERI, G. BAVESTRELLO & L. SENES, 1989. Analisi quantitativa di una facies a *Corallium rubrum* nel Mar Ligure. *Atti XXI Congresso SIBM, Fano. Nova Thalassia*, 10: 575-578.
- 2) CATTANEO-VIETTI R., M. BARBIERI, G. BAVESTRELLO & L. SENES, 1990. Expérience de culture de corail en mer. *Comp.-Rend. Ass. Monégasque Prof. Nat. Monaco*: 19-20.
- 3) CATTANEO-VIETTI R. & L. SENES, 1991. Alcune considerazioni sulla dieta di *Pleurobranchaea meckelii* (Opisthobranchia: Notaspidea) nel Mar Ligure. *Atti XXII Congresso SIBM, Cagliari 20-24 Maggio 1991*: 155.
- 4) CATTANEO-VIETTI R., M. BARBIERI, G. BAVESTRELLO & L. SENES, 1992. Premières expériences d'élevage de corail rouge dans la réserve sous-marine de Monaco. *Comp. - Rend. Ass. Monégasque Prof. Nat., Monaco*: 10-17.
- 5) CATTANEO-VIETTI R., L. SENES & F. CICOGLIA, 1992 Is the Red Coral a threatened species? *Atti 53 ° Congresso UZI, Palermo 1-5 ottobre 1990. Boll. Mus. Ist. Biol. Genova*.
- 6) BAVESTRELLO G., L. SENES & R. CATTANEO-VIETTI, 1993. Differenze morfologiche in *Corallium rubrum* all'interno ed esterno di una grotta sottomarina. *Atti I Convegno Speleomar, Palinuro (SA), 25/5 - 2/6 1991. Memorie dell'Istituto Italiano di Speleologia*.
- 7) CATTANEO-VIETTI R., B. BURLANDO & L. SENES, 1992. Life history and diet of *Pleurobranchaea meckelii*. *Journal of Molluscan Studies*: 59, 309-313.
- 8) CATTANEO-VIETTI R., G. BAVESTRELLO, S. ANGELINI & L. SENES, 1992. Spicules in *Discodoris atromaculata* (Mollusca: Nudibranchia): a morphometric approach. *Abstr. 11<sup>th</sup> International Malacological Congress, Siena 1992*.
- 9) SENES L., G. BAVESTRELLO & CATTANEO-VIETTI R., 1993. La facies a *Corallium rubrum* lungo la falesia del promontorio di Portofino (Mar Ligure). *Biologia Marina*, 1: 281-284.
- 10) CATTANEO-VIETTI R., BAVESTRELLO G. & L. SENES, 1993. Il popolamento a corallo rosso del Promontorio di Portofino (Mar Ligure). In *Il corallo rosso in Mediterraneo: Arte Storia e Scienza. F. Cicogna & R. Cattaneo-Vietti (Eds). Min. Ris. Agr. Al. For. Roma*, 109-130.
- 11) BALDUZZI A., C.N. BIANCHI, R. CATTANEO-VIETTI, C. CERRANO, S. COCITO, S. COTTA, G. DIVIACCO, F. DEGL'INNOCENTI, M. MORGIGNI, C. MORRI, M. PANSINI, L. SALVATORI, L. SENES, S. SGORBINI, 1994. Primi lineamenti di bionomia bentica dell'isola Gallinaria. *Atti X Congresso AIOL*: 603-617.
- 12) BAVESTRELLO G., R. CATTANEO-VIETTI & L. SENES, 1994. Micro and macro differences in Mediterranean red coral colonies in and outside a cave. *Boll. Mus. Ist. Biol. Univ. Genova*.
- 13) BAVESTRELLO G., R. CATTANEO-VIETTI & L. SENES, 1994. Problemi attuali nell'allevamento e nella gestione del corallo rosso in Italia. In: *L'acquacoltura. Accademia Internazionale di Scienze e Tecniche subacquee. Ustica. Quaderno n. 14*: 25-39.
- 14) SENES L., S. ANGELINI & E. BARILARO, 1996. The role of the Aquarium related to the problem of the environment care. *EUAC Meeting. Mem. Ist. Océano. P. Richard, 1996*: 49-54.
- 15) SENES L., B. SANTARELLI & G. BARSOTTI, 2000. Il corallo rosso a Portofino. *Boll. Mus. Ist. Biol. Univ. Genova*, 64-65: 87-94.
- 16) BAVESTRELLO G., S. PUCE, C. CERRANO & L. SENES, 2000. Strobilation in a species of *Bougainvillioidea* (Cnidaria, Hydrozoa). *SCI. MAR.*, 64 (Supl.1): 147-150.
- 17) SANTARELLI B., R. PRONZATO, C. CERRANO, F. CICOGLIA, L. SENES, F. GOBETTO & G. BAVESTRELLO, 2000. Studi sperimentali sui ritmi di attività dei polipi i *Corallium rubrum* (Cnidaria: Gorgonacea). *Min. Ris. Agr. Alim. For.- CLEM.94-111*.
- 18) A. SEVERATI, L. SENES, 2000. A new Aquarium in Cattolica (Italy). *5<sup>th</sup> IAC proceedings*.
- 19) L. LORENZO SENES *et al*, 2002. Transport and Husbandry of Antarctic Animals. *EUAC Meeting 2002 proceedings*.
- 20) P. MACCHI CASSIA, L. SENES, A. SEVERATI & D. STEFFENINI, 2002. Volos Aquarium: a new project in Greece. *EUAC Meeting 2002 proceedings*.
- 21) G. SCHIMMENTI, C. GILI, M. SIGNORELLI, L. SENES, C. PEREGO & D. ZANZI, 2002. The Hummingbirds Forest at Genoa Aquarium, a Different Exhibit Design Approach. *EUAC Meeting 2002 proceedings*.
- 22) LORENZO SENES, *et al*. 2005. The "Acquario Civico di Milano": 100 years of history. *EUAC Meeting 2005 proceedings*.
- 23) LORENZO SENES *et al*. 2010. Acquario Cala Gonone: a New Aquarium in Sardinia (Italy) *EUAC Meeting 2010 proceedings*.

**4.2 BOOKS**

- A.A.V.V.: "Il corallo rosso in Mediterraneo: Arte Storia e Scienza." F. Cicogna & R. Cattaneo-Vietti (Eds).  
Min. Ris. Agr. Al. For. Roma, 1993.
- A.A.V.V.: "Il corallo rosso in Mediterraneo: Arte Storia e Scienza." Vol.II F. Cicogna & R. Cattaneo-Vietti  
(Eds). Min. Ris. Agr. Al. For. Roma, 2000.
- PARODI & SENES: "Acquario marino" De Vecchi Editore. 1996. (Translated into Spanish)

Genova, 31 gennaio 2023

Lorenzo Senes