

Curriculum vitae

Surname: Artale

First Name: Vincenzo

Born in Italy 1954,

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[Google Scholar page](#)

Education

Laurea in Physics at the University of Rome (date 3/29/1979), with a thesis in physical oceanography: "A model of Messina Strait" with the grade 110 over 110;

Research interests

Vincenzo Artale has over 30 years' experience of a wide range of ocean and climate research, he is specializes in ocean circulation and impact studies of climate change in the ocean, in particular in the Mediterranean Sea, his research interest cover in particular the following research area:

- Develop of Regional Climate Modeling to study the mechanism of climate variability, and projected scenarios analysis;
- Numerical modeling: Ocean General Circulation Model and Ocean Regional Model of the Mediterranean Sea;
- Development of analytical linear and non-linear model of the stratified flow, in order to study the generation and evolution of the internal waves, solitons, overflow and the physics of the straits;
- Data analysis and modeling of buoys trajectories and Lagrangian diffusion.

Work Position at ENEA

- 2010-today: Director of the Technical Unit Energy and Environment Modeling,
- 2002-2010: Head of the Oceanographic Modelling Unit of ENEA,
- 1999 to 2001: Head of the Climate Section of ENEA,
- 1994 to 1999: Director's Assistant of the ENEA Climate Division ,
- 1984: Had a permanent position at ENEA, as expert in physical oceanography.

Work experience outside Italy

- 1991-1993, visiting scientist at NCAR (Boulder, CO, USA), host of the Oceanography section, involved in the MECCA Project collaborating with W.R.Holland.
- 1983, visiting scientist at the University of Grenoble (France), Laboratoire de Mecanique des Fluid, host of the Prof. P.Germain;

Responsibility at international level

- 2012, today Chairman of the Evaluation Board of the H-SAF, UMETSAT Satellite Application Facilities (SAFs), Continuous Development and Operational Phase (CDOP-2);
- 2011, Member of the Evaluation Board of the UMETSAT Satellite Application Facilities (SAFs), Continuous Development and Operational Phase (CDOP-2);
- 2011-2012: Expert Reviewers of the AR5 (Fifth Assessment Report) IPCC (Intergovernmental Panel on Climate Change) WG1 (Working Group 1: The Scientific Basis) Report;
- 2009 Co-Chair of the LCS-RNet (International Research Network for Low Carbon Society) established on the initiative of the G8 Environment;
- 2007 to 2010, Co-Convener, with Rixen, M and Levitus, S, of Ocean Session "Temporal variability of ocean temperature (heat content) and salinity (freshwater content)", within EGU (European Geosciences Union) General Assembly, Vienna, Austria,
- 2004-2007: Lead Authors of Chapter 5: Observations: Oceanic Climate Change and Sea Level of the AR4 (Fourth Assessment Report) IPCC (Intergovernmental Panel on Climate Change) WG1 (Working Group 1: The Scientific Basis) Report, IPCC in 2007 were awarded of the Nobel Peace Prize;
- 1995-1997, Chairman of the ESF (European Science Foundation)-TAO programme (Transport processes in the atmosphere and oceans);
- 1995-1999, ENEA representative of the European Science Foundation (ESF) Marine Board previously known as European Marine & Polar Science (EMaPS) Marine Board;
- Referee of several international scientific journal (Nature, Journal of Geophysical Research, Geophysical Research Letters, Deep Sea Research, Journal of Climate, Climate Dynamics, Ocean Science and many others),

national agency of research (CNR, OGS, INGV) or international organizations (e.g. European Science Foundation (ESF), National Science Foundation (NSF, USA), l'Agence Nationale de la Recherche (ANR, France)).

Education's Responsibility

a) PhD Advisor

- Alessandro Anav, PhD student, Storage of carbon in the Mediterranean region, In collaboration with Prof. Riccardo Valentini, University of Tuscia (Viterbo, Italy), 2008;
- Gianmaria Sannino, Dottorando XIX ciclo, The role of the interface layer in exchange and hydraulics in the Strait of Gibraltar: a 3D numerical modeling study (2007);
- Sandro Calmanti, Dottorando XVI ciclo: Effects of the Mediterranean Outflow on the Meridional Overturning Circulation of the North Atlantic. From Box-Model to GCM's, in collaboration with Prof Antonello Provenzale (2004);
- Roberto Conversano, Dottorando XI ciclo: studio degli effetti termohalini nella generazione di un sistema a due strati in topografie complesse: il caso dello Stretto di Gibilterra, (Impact of the Gibraltar Strait physic on the Mediterranean thermohaline circulation) in collaboration with Prof. Alfonso Sutera (2001);

b) Tutor of Fellowships and Assegni di ricerca

- February-August 2008, Marine Hermann, Analysis and numerical simulation, using a regional coupled climate model, for the Mediterranean region;
- 2003-2005, Sandro Calmanti, Modelling the North Atlantic-Mediterranean System;
- 1998-1999, Emanuela Ciatti, Numerical modeling to study the ocean circulation;
- 1998-1999, Bruno Buongiorno Nardelli, simplified model to study the ocean circulation;
- 1997-1998, Vittorio Rago, Simulation and analysis of the Mediterranean circulation (simplified model);
- 1997-1998, Gianmaria Sannino, High resolution model of the Strait of Gibraltar;
- 1997, Massimo Cencini, High resolution ocean model running on parallel machine;
- 1995-1996, Donatella Faggioli, Wind stress and Mediterranean circulation;
- 1995: Volfango Rupolo : develop of lagrangian ocean model.

c) Advisor of Tesi di Laurea

- 2003-2004, Alberico Bruno: Analisi idrologica e simulazione numerica degli scambi di acque marine nello Stretto di Gibilterra, in collaborazione con il Prof. Ettore Salusti (Università Roma 1 "La Sapienza");
- 1998-1999 : Tesista Sandro Calmanti: Circolazione termohalina, in collaborazione con il Prof. Alfonso Sutera, (Università Roma 1 "La Sapienza");
- 1991-1992: Tesista Volfango Rupolo: Studio delle caratteristiche principali della circolazione del Mar Tirreno, in collaborazione con il Prof. Ettore Salusti (Università Roma 1 "La Sapienza");
- 1986-1987, Tesista Enrico Zambianchi, Correnti Profonde di acque dense nel Mar Adriatico e loro influenza nel fondale, in collaborazione con il Prof. Ettore Salusti (Università Roma 1 "La Sapienza").

Honor

- Geneva, 20 March 2008, copy of the award certificate for the Nobel Peace Prize which was bestowed on the IPCC 2007, since has contributed substantially to the work of the IPCC;
- October 25th 2007 was received by the Italian Prime Ministry Romano Prodi and Ministry of Environment to recognize his contribution, as the Italian's IPCC AR4 authors, to the Nobel Peace Prize to IPCC.
- March 2008, highlight personal interview from the official Journal of the MIUR (Ministry for University and Scientific Research), see ATENEI, Le Monnier- Firenze 2-3, 2008.

Member of University Final Commission or Exam Commission (last 7 years)

- July 2013, member Commission for the nomination of the Director of the Institute of Atmospheric Sciences and Climate (ISAC) of the Italian National Research Council (CNR);
- December, 2011, member Commission Ecole Doctorale de l'Ecole Polytechnique Département de Mécanique Spécialité Physique; ENSTA ParisTech Chemine de la Hunière, France ;
- April, 2011, University of Trieste, President Commission PHD in Environmental and industrial fluid mechanics ;
- October 2010, member Commission primo ricercatore OGS (Istituto Nazionale di Oceanografia e Geofisica Sperimentale);
- July, 2010, CNR, Concorso per profilo professionale di primo ricercatore presso il CNR;
- September 2010 Chair of commission for the tecnologo OGS (Istituto Nazionale di Oceanografia e Geofisica Sperimentale);
- February 2009, University of Naples Federico II, Commissione Esame per conferimento titolo di Dottore di Ricerca in Scienze ed Ingegneria del Mare (XXI cycle);
- March, 2008, CNR, member Commission for the Concorso Ricercatore Institute of Atmospheric Sciences and Climate (ISAC) of the Italian National Research Council (CNR);

- February 2008, member Commission for the nomination of the Directors of the Institute of Marine Science (ISMAR) and Institute for coastal marine environment (IAMC) of the Italian National Research Council (CNR).
- November 2006, Università Degli Studi di Napoli Federico II, member Commission for the Dottorato di Ricerca in Scienze ed Ingegneria del Mare (XVII Ciclo).

Member of Steering committee

- MedClivar (Mediterranean CLImate VARIability and Predictability);
- GNOO, Gruppo Nazionale Oceanografia Operativa (National Operational Oceanography Group).
- co-organizer of the workshop ESF-TAO on "Heat, salinity and tracer transport in the Mediterranean Sea", Torino, 1999;
- co-organizer of the International MedCLIVAR-ICTP-ENEA Summer School on the Mediterranean Climate System and Regional Climate Change, 13-22 September 2010;

Member of the following Geophysical Association

- Member of AGU (American Geophysical Union since 1989);
- Member EGU (European Geosciences Union);
- Member AIOL (Associazione Italiana di Oceanologia e Limnologia).

Participation to Oceanographic cruises

- November 2011, participation to oceanographic campaign organized by CNR in the Ionian sea;
- 16 November-2 December 1985: Channel of Sicily, Objectives: Thermocline erosion, mixed layer and internal waves, during the NILDEX experiment;
- 1983-1985, several cruise in the Gulf of Taranto and Adriatic Sea, Objectives: hydrological and dynamical studies;
- 12-25 November 1979: Ligurian Sea, R/V L.F. Marsili, Objectives: air-sea interaction and evolution of the thermocline.

Scientific coordinator/participation in the following EU projects:

- 2007-2011, responsible of WP2.2: "Climate evolution scenarios from regional models for the Mediterranean area" of the Project Circe (Climate Change and Impact Research: the Mediterranean Environment) in the European Sixth Framework Programme Priority 1.1.6.3 Global Change and Ecosystem;
- 2006-2009, responsible of the WP 7 "ocean modelling", EU funded NEST project - GO (Geophysical Oceanography, The GO project is funded under the New and emerging science and technology (NEST) initiative of the European Union, Framework 6 programme;
- 2003-2005, participation to the MFSTEP (Mediterranean Forecasting System: Toward Environmental Predictions); V Framework Program;
- 1998-2001, participation to the TRACMASS (TRACing water MASSes in the North Atlantic and the Mediterranean), MAST contract: MAS3-CT97-0142;
- 1996-1999, Mast3, project Clivamp (CLImatic VARIability of Mediterranean Paleo-circulation), responsible subtask Thermoaline circulation simplified model;
- 1996-1999, MTP II- project MATER, responsible subtask: physical of the straits, Numerical study of the tidal fluxes at Gibraltar Strait;
- 1992-1995, MTPI, project MERMAIDS, responsible subtask numerical modelling of the Mediterranean Sea,
- 1989-1991, Mast I, project TEMPO: "Upper ocean structure and circulation and its response to atmospheric forcing", responsible subtask buoys data analysis.

Scientific coordinator in the following national projects:

- 2012, today, ENEA representative in the RITMARE Project (Flagship Project funded by the Italian Ministry of University and coordinated by National Research Programmes);
- 2012, today, ENEA representative in the NEXDATA Project (Project of Interest funded by the Italian Ministry of University and coordinated by National Research Programmes);
- 2004-2006, CANOPO (ruolo del settore Atlantico dell'Oceano Australe nel sequestro di CO₂), Ministero dell'Istruzione dell'Università e della Ricerca, Programma Nazionale di Ricerche in Antartide
- 1997-2003, AMBIENTE MEDITERRANEO, responsible subtask B: Analysis and modelling assessment,
- 1999-2004, SINAPSI (Seasonal INTERannual and decAdal variability of the atmosPhere, oceanS and related marlne ecosystems); responsible subtask B: climate variability in the Mediterranean area.

More relevant invited talks and lectures

2011

1. April 13, 2011, lecture on "Technologies for Critical Infrastructure and Environment protection post event analysis, crisis management, polluting and radioactive substances propagation, critical infrastructures resiliency and interdependencies", Finmeccanica Workshop on Autonomy and Platforms for Security, Italy, Rome;
2. May 29, 2011, lecture on "La modellistica ambientale ed energetica per i servizi integrati territoriali, il caso Sicilia", MareAmico, XXII Rassegna del Mare Strategia di tutela e gestione del mare: il ruolo della Sicilia, Italy, Siracusa, May 26-29, 2011;

2010

3. May 6-9, 2010, lecture on "Circulation of the Mediterranean sea", MareAmico, XXI Rassegna del Mare Scenari e prospettive di salvaguardia e sviluppo ambientale, Italy, Alghero, May 6-9, 2010;
4. June 7-8, 2010, lecture on "Sea level scenarios for Venice in 2100";
5. July 28, 2010, lecture on "Experiencia del ENEA en la simulaci3n con modelos num3ricos acoplados de escenario clim3ticos a escala regional", Conference on Oceanografia: Acciones preventivas contra las catastrophes naturales – politicas de formaci3n en ciencias del mar, Colombia. Cartagena de Indias, July 27-30, 2010;
6. September 13, 2010, lecture on "Intro: Introduction to Mediterranean circulation and climate", September 17, lecture on "AO GCM Modeling the Mediterranean Sea general circulation and the interaction with the Atlantic", International MedCLIVAR-ICTP-ENEA Summer Scholl on the Mediterranean Climate System and Regional Climate Change, Italy, Trieste, September 13-22, 2010;
7. September 23-25, 2010, lecture on Mediterranean Circulation, ICTP and MedCLIVAR Workshop on Scenarios of Mediterranean Climate Change under Increased Radiative Active Gas Concentration and the Role of Aerosols;
8. October 22, 2010, lecture on "Seminario Erosione e Ambiente", Conference Regione Sicilia on Verso una nuova politica di gestione delle coste, Italy, Taormina, October 22-23, 2010;
9. November 22-23, 2010, lecture on "The Mediterranean", UNESCO and ISMAR-CNR Scientific Workshop From Global to Regional: Local Sea Level Rise Scenarios – Focus on the Mediterranean Sea and the Adriatic Sea, Italy, Venice

2009

10. March 12, 2009, lecture on " Global and regional warming: the Mediterranean case from observation and modeling" Conference on Climate change, Global risks, Challenges and Decisions, Denmark, Copenhagen , March 10-12, 2009;
11. September 3, 2009, lecture on "From the global to the regional warming: the Mediterranean case from observations of the last century" HMAP International Summer School "When humanities meet ecology", Italy, Trieste, August31 -September 4, 2009;
12. September 10, 2009, lecture on "Numerical trajectories in forecasting models", September 11, 2009, two lectures on "Mediterranean ocean variability over recent centuries inferred from observations and climate modelling" and "Multi decadal variability of the North Atlantic and Mediterranean SST", Geitalia 2009, VII Forum Italiano di Scienze della Terra, Rimini, September 9-11, 2009;
13. October 1, 2009, lecture on "Variabilit3 climatic del Mediterraneo e scenari future", Societ3 Italiana di Fisica, XCV Italian Congress, Italy, Bari, September 28 –October 3, 2009;
14. October 6, 2009, lecture on "An atmosphere-ocean regional climate model for the Mediterranean area: present climate and XXI scenario simulations", October 7, 2011, lecture on "Variabilit3 del livello del mare nel Mediterraneo Orientale negli anni 90", October 9, 2011, lecture on "Recenti progressi nello studio dei processi fisici nello stretto di Gibiltera e loro impatto sulla circolazione dell'intero bacino Mediterraneo", Conference on Environmental including Global Change, Italy, Palermo October 5-9, 2009
15. November 12, 2009, lecture on "La strategia dell'Unione Europea nella lotta contro i cambiamenti climatici", Conferenza sui Cambiamenti Climatici ed Agricoltura: le politiche europee e la realt3 abruzzese, Italy, Avezzano, Novembre 12, 2009;

2008

16. October 15, 2008, lecture on "The Gibraltar Strait: the tipping point of the Mediterranean thermohaline circulation", ESF-MedCLIVAR Workshop Climate Change Modeling for the Mediterranean Region, Italy, Trieste, October 13-15, 2008;
17. June 20, 2008, lecture on "The climate change in the Mediterranean Region in the XXI century" at workshop Impatti del cambio climatico sul settore della pesca nel Mediterraneo, Parco Archeologico di Capo Colonna, Crotone, June 20, 2008 organized by H2O European project at Isola Capo Rizzuto (Crotone Province, Italy);
18. June 13, 2008, Roma Vittoriano, lecture on the " The characteristic of the Mediterranean Sea in the framework of the climate change" at climate workshop organized by province (Lazio, Italy);
19. May 24, 2008, Two lectures on the 1) The coastal area and the warming world (physical point of view) and 2) Model improvement and the new numerical tools for the marine process representation (application in physical oceanography), ICTP Regional Course, Cuba
20. May 8, 2008, Sala delle Colonne al Parlamento, Rome, lecture on "Impact of the climate variability on the Mediterranean Region" at the workshop organized by EMA (European Medical Association);
21. April 24-25, 2008, Beijing, lecture on "Mediterranean Climate Variability" in the "Forum on Climate Change and Science & Technology Innovation", Beijing, China, organized by the Chinese National Climate Centre and the China Meteorological Administration and other international organization.
22. April 23, 2008, lecture at Chinese National Climate Centre;
23. March 26-27, 2008, Buenos Aires lectures on the "Modelos y efectos economicos para el cambio climatico" at the workshop on Impacto del cambio clim3tico sobre el territorio y la econom3a (impact of climatic change on territories and economy) Promoted by Italian Embassy in Argentina Facultad de Ciencias Econ3micas, UBA - Universidad de Buenos Aires, Buenos Aires, Argentina,

24. March 4th, 2008, lecture "Impatti dei cambiamenti climatici Novità dell'ipcc-AR4 at the University of Rome "Sapienza", Physics Dept;
 25. February 11th, 2008, lectures at Istituto Superiore della Sanità (the Italian National Health Service);
- 2007
26. November 27th, 2007, Venice (Italy), lecture at climate workshop organized by Science Academy of Venice (the Istituto Veneto di Scienze, Lettere ed Arti),
 27. September 8-9th, 2007, Mantova (Italy), two lectures at Mantova International Literature Festival: 8 September, and 9 September, Salone Mantegnesco - Università di Mantova;
 28. July 6th, 2007, Bruxelles, lecture on the climate change at workshop on Climate change organized by Commission on Climate Change of the European Parliament;
 29. May 24th, 2007, Savona, Italy, two lectures for PhD students organized by the University of Savona (CIMA);
 30. April 30 - May 11, 2007, Two lectures on the "Sensitivity of the thermohaline circulation to the intermediate water anomaly (Mediterranean Outflow Water)" and on "The internal natural variability of the Mediterranean Sea as the result of combined causes", in "2007 Advanced School on Oceanography (ASO)", International Centre for Theoretical Physics (ICTP), Trieste.
 31. February 7th 2007, at Genoa 's Aquarium (Italy), lecture on "The results of the IPCC AR4" for scientists and local communities including two radio interviews;
- 2006
32. May 24th, 2006, two lectures for PhD students organized by the University of Savona (CIMA);
- 2005
33. Artale, V.: Some advances to understand what Mediterranean Sea circulation processes are relevant for climate variability; EGU General Assembly, Vienna 24-29 April 2005;
- 2004
34. XC Congresso Nazionale della SIF (Società Italiana della Fisica), Brescia, 20-25 Settembre 2004, Artale, V., Recent advances in modelling the straits dynamics and its effects on the Mediterranean general circulation and climate.
- 2003
35. World Climate Change Conference September 29 - October 3, Moscow, Russia, 2003: Artale, V., Recent advances in modelling the Mediterranean circulation and its effects on climate.
- 2001
36. International Summer School on Atmospheric and Ocean Sciences (ISSAOS), September 10-14, 2001: Artale, V. Variability of Mediterranean thermohaline circulation,
- 1998
37. Summer School on "Dynamical Systems' Aspects of Transport and Diffusion in the Atmosphere and the Ocean" Bornö, Sweden, July 27 - August 1, 1998: Artale, V, Study of Lagrange data in the Mediterranean sea;
 38. Artale, V, " Ruolo dell'oceano e del Mediterraneo nel clima globale: conveyor belt oceanica globale e del Mediterraneo"; giornata di studio "Il sistema climatico terrestre alle soglie del 2000" Accademia Ligure di Scienze e Lettere, Genova 9 novembre 1998;
- 1997
39. Artale ,V., "Lagrangian diffusion in the Ocean", in "Course on shallow water shelf sea dynamics", ICTP-UNESCO, Trieste, 7-25 April 1997.
- 1991
40. Artale, V, "Problems in the use of satellite data for the study of the sea circulation. A comparison between remotely sensed and in situ data" in Training Programme on the Management and conservation of marine resources in the Mediterranean, April 29, 1991.

Refereed Journal Publications

1. V. Artale, D. Levi, E. Salusti, F. Zirilli: "On the generation of internal solitary marine waves", *Il Nuovo Cimento*, 7C, 1984, 365-377 ;
2. V. Artale, E. Salusti: "Hydrodynamic stability of rotational gravity waves", *Physical Review A*, 29, 1984, 2787-2788
3. Erratum: "Hydrodynamic stability of rotational gravity waves", *Physical Review A*, 30, 1984, 3322-3323;
4. V. Artale, E. Salusti, R. Santoleri: "Lyapunov stability of solitary rotational water waves", *Geophys. Astrophys. Fluid Dynamics*, 37, 1986, 237-251;
5. V. Artale, D. Levi: "Nonlinear internal waves in one-dimensional channel", *Il Nuovo Cimento*, 10C, 1987, 61-76;
6. V. Artale, A. Provenzale, R. Santoleri: "A process of thermocline erosion on the Sicilian Continental Shelf", *Il Nuovo Cimento*, 11C, 1988, 653-665.
7. V. Artale, A. Provenzale, R. Santoleri: "Analysis of Internal Temperature oscillations on the Sicilian Continental Shelf", *Continental Shelf Research*, 9, 1989, 867-888.
8. V. Artale, G.P. Gasparini: "Simultaneous temperature and velocity measurements of internal wave field in the Corsica Channel (Eastern Ligurian Sea)", *Journal of Geophysical Research*, 95, C2, 1635-1646, 1990.

9. V. Artale, D. Levi: "Nonlinear surface and internal waves in stratified shear flow", *Geophys. Astrophys. Fluid Dynamics*, 54, 35-48, 1990.
10. V. Artale, D. Levi, S. Marullo, R. Santoleri: "Analysis of nonlinear internal waves observed by Landsat-TM" *Journal of Geophysical Research*, 95, C9, 16065-16074, 1990.
11. V. Artale, M. Astraldi, G. Buffoni, G.P. Gasparini: "Seasonal variability of gyre-scale circulation in the North Tyrrhenian sea", *Journal of Geophysical Research*, 99, NO.C7, 14127-14137, 1994.
12. V. Roussenov, E. Stanev, V. Artale and N. Pinardi: "A seasonal model of the Mediterranean Sea General Circulation", *Journal of Geophysical Research ocean*, vol. 100, no. C7, 13515-13538, July 15, 1995.
13. V. Rupolo, B.L. Hua, A. Provenzale and V. Artale : " Lagrangian velocity spectra at 700m in the western North Atlantic", *J. Phys.Oceanography* , 26,8,1591-1607, 1996;
14. Artale V., G. Boffetta, A. Celani, M. Cencini and A. Vulpiani; Dispersion of passive tracers in closed basins: beyond the diffusion coefficient, *Phys. of Fluids*, 9, 3162. (1997)
15. Artale V., S. Calmanti and A. Sutera; North Atlantic THC sensitivity to Mediterranean waters, *Tellus, Series A*, Vol.54, Issue 2, 159-174. (2002)
16. V. Artale, D. Iudicone, R. Santoleri, V. Rupolo, S. Marullo, F. D'Ortenzio The role of surface fluxes in OGCM using satellite SST. Validation and sensitivity to forcing frequency of the Mediterranean thermohaline circulation, *J. Geophys. Res C*, Vol. 107, no. C8, 10.1029/2000JC000452, 2002.
17. Sannino, G.M., A. Bargagli, and V. Artale; Numerical modeling of the mean exchange through the Strait of Gibraltar, *J. Geophys. Res C*, Vol. 107, no. C8, 10.1029/2001JC000929, 2002.
18. Rupolo V., A. Babiano, V. Artale and D. Iudicone (2003); New space-time tracer diffusivity field for an OGCM. The Mediterranean Sea case, *Il Nuovo Cimento C*, 26 (4): 387-415, JUL-AUG 2003.
19. Napolitano E., G. Sannino, V. Artale and S. Marullo; Modelling the baroclinic circulation in the area of the Sicily Channel: the role of stratification and energy diagnostics, *J. Geophys. Res.*, VOL. 108, NO. C7, 3230, doi:10.1029/2002JC001502, 2003;
20. Sannino, G.M., A. Bargagli, and V. Artale; Numerical modeling of the semidiurnal tidal exchange through the Strait of Gibraltar, *J. Geophys. Res.*, Vol.109,No.C5, C05011, 10.1029/2003JC002057, 2004.
21. Lucarini V., S. Calmanti and V. Artale; Destabilization of the thermohaline circulation by transient perturbations to the hydrological cycle, *Climate Dynamics* 24 (2-3): 253-262 FEB 2005.
22. Sannino G.; A. Carillo, V. Artale, V. Ruggiero and P. Lanucara; Flow regimes study within the Strait of Gibraltar using an high performance numerical model, *Il Nuovo Cimento C*, Vol. 28 C, N.2, 97-104, DOI 10.1393/ncc/i/2005-10177-2, 2005;
23. Calmanti S., Artale V and A. Sutera. North Atlantic MOC variability and the Mediterranean outflow: a box-model study; *TELLUS A* , 58A, 416-423, 2006;
24. Pisacane G., V. Artale, S. Calmanti and V. Rupolo; Decadal Oscillations in the Mediterranean Sea: A Result of the Overturning Circulation Variability in the Eastern Basin? *Climate Research*, Vol. 31, N. 2-3, July 27, 2006;
25. Sannino G., A. Carillo, V. Artale; Three-layer view of transports and hydraulics in the Strait of Gibraltar: A three-dimensional model study; *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS* 112 (C3): Art. No. C03010 MAR 16 2007;
26. Lucarini V, Calmanti S, Artale V: Experimental mathematics: Dependence of the stability properties of a two-dimensional model of the Atlantic ocean circulation on the boundary conditions ; *RUSSIAN JOURNAL OF MATHEMATICAL PHYSICS* 14 (2): 224-231 JUN 2007;
27. Fusco, G., Artale V., Cotroneo Y.; Thermohaline variability of Mediterranean Water in the Gulf of Cadiz over the last decades (1948-1999), *Deep Sea Research Part I: Oceanographic Research Papers*, Volume 55, Issue 12, Pages 1624-1638, 2008;
28. Annarita Mariotti, Ning Zeng, Jin-Ho Yoon, Vincenzo Artale, Antonio Navarra, Pinhas Alpert and Laurent Z X Li , Mediterranean water cycle changes: transition to drier 21st century conditions in observations and CMIP3 simulations, *Environ. Res. Lett.* 3 044001, doi: 10.1088/1748-9326/3/4/044001, 2008;
29. G. Sannino, M. Herrmann, A. Carillo, V. Rupolo, V. Ruggiero, V. Artale and P. Heimbach; An eddy-permitting model of the Mediterranean Sea with a two-way grid refinement at the Strait of Gibraltar; *Ocean Modelling*, Volume 30, Issue 1, Pages 56-72, 2009;
30. Artale, V. Calmanti, S., Carillo, A., Dell'Aquila, A., Hermann, M., Pisacane, G., Ruti, P., Sannino, G., Struglia, M., Giorgi, F., Bi, X. and Pal, J., and Rauscher, S.: An atmosphere-ocean regional climate model for the Mediterranean area: assessment of a present climate simulation, *Clim. Dyn.*, doi:10.1007/s00382-009-0691-8, 2010;
31. Anav A, Ruti PM, Artale V, Valentini R, 2010: Modelling the effects of land-cover changes on surface climate in the Mediterranean region. *Clim Res* 41:91-104;
32. Marullo, S, V. Artale and R. Santoleri. The SST multidecadal variability in the Atlantic-Mediterranean region and its relation to AMO, *J. of Climate*, 2011, doi:10.1175/2011JCLI3884.1;
33. Carillo A., G Sannino, V Artale, PM Ruti, S Calmanti, A Dell'Aquila; Steric sea level rise over the Mediterranean Sea: present climate and scenario simulations, *Climate Dynamics*, 39, Vol. 9-10, Pages 2167-2184, Publisher Springer-Verlag, 2012;

34. Gualdi, S., and Coauthors, 2013: The CIRCE Simulations: Regional Climate Change Projections with Realistic Representation of the Mediterranean Sea. *Bull. Amer. Meteor. Soc.*, 94, 65–81, doi: <http://dx.doi.org/10.1175/BAMS-D-11-00136.1>;
35. Iacono, R., E. Napolitano, S. Marullo, V. Artale, A. Vetrano, 2013: Seasonal Variability of the Tyrrhenian Sea Surface Geostrophic Circulation as Assessed by Altimeter Data. *J. Phys. Oceanogr.*, Vol. 43, No. 8, 1710–1732, doi: <http://dx.doi.org/10.1175/JPO-D-12-0112.1>;
36. Nilsson J. A. U., K. Döös, P.M. Ruti, V. Artale, A. Coward, L. Brodeau; Observed and modeled global-ocean turbulence regimes as deduced from surface trajectory data, *J. of Physical Oceanography*, Vol. 43, No. 11, 2249–2269, 2013, doi: 10.1175/JPO-D-12-0193.1;
37. P. Malanotte-Rizzoli, V. Artale, G.L. Borzelli-Eusebi, S. Brenner, G. Civitarese et al., 2014, Physical forcing and physical/biochemical variability of the Mediterranean Sea: a review of unresolved issues and directions for future research, *Ocean Science*, Vol.10, 281-322.

Book and Book chapters

38. V. Artale, D. Levi: Solitons in Stratified Shear Flow in "Nonlinear Phenomena in Physics of Fluids and Plasma", Editors G.Maino, L.Fronzoni and M. Pettini, World Scientific Ed., 1991.
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