

# CURRICULUM VITAE

## **1. PERSONAL DATA**

**Name** Francesco Floris      **Marital Status** Married      **Children** 1 son 1 daughter  
**Birthplace and date** Spoleto (Perugia) Italy 5 March 1947  
**Nationality** Italian  
**Diploma obtained:** Chemical Sciences      **Date:** June 1971      **Mark:** 110/110 cum laude

## **2. INSTITUTION WITH WHICH ASSOCIATED**

### **a. Name and address of Institution**

DIPARTIMENTO DI INGEGNERIA MECCANICA  
PIAZZA D'ARMI 09123 CAGLIARI  
**Email** [floris@risc.unica.it](mailto:floris@risc.unica.it), [floris@dimeca.unica.it](mailto:floris@dimeca.unica.it)

### **b. Position and Title**

ASSOCIATE PROFESSOR

## **3. TEACHING ACTIVITY**

On November 1971 Mr. Floris receives a two-years "Ministry of Education" fellowship to perform researches in internal reciprocating engines and gas turbine combustion processes. He co-operates with the "turbomachinery design" full professor in the student education program.

On October 1974 he competes to obtain the course "Steam Generating Units and Combustion Technology" and obtains the seat of Lecturer.

As "Ministry of Education" fellow and as Lecturer he suggests many thesis on the following topics:

- physical and mathematical models of pulverised coal flames
- radiative heat transfer zone method to solve the heat flux in utility furnaces
- "entrainment" gasification associated with steam and gas turbine combined plants: chemical-kinetic and thermodynamic modelling
- evaluation of convective heat transfer coefficients in fluidized beds for steam production
- Computational Fluid Dynamic Modelling of valves, incinerators, burners and after-burners
- experiments in the area of industrial combustion

## **4. RESEARCH ACTIVITY**

Since November 1971, Mr. Floris works on gas turbine corrosion phenomena due to heavy fuel oil and studies ways to modify the combustion process and the fuel itself in order to reduce the sulphidation effect [1, 2, 3, 4] <sup>(1)</sup>

On 1973/74 he prepares computer codes to evaluate the performances and efficiency of reciprocating internal combustion engines. The Otto and Diesel Cycles are assumed on the On 1973/74 he prepares computer codes to evaluate the performances and efficiency of reciprocating internal combustion engines. The Otto and Diesel Cycles are assumed on the hypothesis of chemical equilibrium.

A program subcode is written to minimise the Gibbs and Helmholtz thermodynamic potentials in order to get the flue gas composition (modelled as a 13 chemical species mixture), final temperature, maximum pressure, mean pressure, work, efficiency and pollution data [6, 7, 8]

On 1977 he works in collaboration with the National Italian Electric Board (ENEL) to evaluate experimentally the heat flux due to radiation in steam generating units furnaces with tangential combustion. On field is mounted a measurement train with suction thermocouples and all relevant data on the ENEL furnace of S.Gilla (Cagliari) are recorded. A radiative heat transfer model and the computer code are developed independently. Computer outputs and experimental data were in good agreement [2, 9]. The research target was to elaborate computer programs to be used in the furnace design in order to avoid hot spots and film boiling.

Since 1977 he works on the design of combustion facilities to burn pulverised coal under vitiated air conditions for applications to steam and gas turbine combined plants [10, 11, 12, 13, 14, 15].

Since 1980 Mr. Floris in collaboration with the Italian electro-mechanical company Ansaldo S.p.A. works on the design of a fluidized bed combustion boiler to be installed in the Sardinian coal mines area. The boiler is designed to burn an high-sulphur content domestic coal of subbituminous rank [16, 17, 18].

In 1985 he designs a Combustion Test Rig Facility which is installed at the S.Gilla Power Station. This facility is used for many years to study the formation of pollutants in flames and mechanisms of reduction of nitrogen oxide formation [20, 21, 22, 27].

In 1987 he starts a research on modelling fluid flow combustion and heat transfer and co-operates with the software house Fluent.Inc in US and in Great Britain. This subject of interest will continue up to now and will give rise to many papers and contracts with companies interested to the design of new brand of burners for industrial applications [19, 25, 28, 34, 36, 37]. An industrial patent for a dual fuel burner with multiple annular jets is enforced in Italy, Europe and North America.

In the mean time the co-operation with ENEL and Ansaldo continues all over the years 1986 - 95 in the area of fouling and slagging in boilers which use low grade coals for electric power generation, and a few papers are written on this matter, beside classified reports [23, 26] not published.

Mr. Floris starts also a new research project in the area of design of batch incinerators for industrial waste disposal. Aspects of self-regulation and control by means of PID regulators are studied on real plants operating in Italy and on small scale test rigs [29, 30, 31, 32, 33, 35].

New research projects in the area of design of butterfly and slide valves started in 1989 and still continue to day, since there are in Sardinia companies in the area of electro-mechanical manufacturing which compete with very few firms in the manufacturing of such valves for Fluidized Cracking Plants in petrochemical industry [36, 41, 42, 46, 48, 49].

In the 1990 Mr. Floris has also launched a research project on the production of glass fibers for telecommunication through the design of new burners apt to perform the reaction of silicon tetrachloride and oxygen, via the high temperature generated by flames of methan/oxygen. The research has been financed by the north italian producers of optical guides, as Pirelli Cavi and has brought to the development of new combustion devices.

In the last five years (1994-99) Mr. Floris has been involved in the development of new technologies for the thermal-chemical treatment of industrial and municipal wastes. He is co-operating with manufactures of indirect fired pyrolysis plants aimed at the recovery of fuels and at the generation of electrical power. The main activity is devoted to the design of new sealings, reactors of slow pyrolysis and treatment train of pyro-gas. A patent is then submitted that introduces many innovation in the technology [39, 45, 46, 47, 51].

In the 2000 Mr. Floris moves on to the development of new technologies in the alternative energy area. The large extension of salt works around Cagliari suggests to investigate ways to produce distillate water out of the main process. The solar irradiation on Oceans is well known as the main means of water cycle on Earth. Conventional solar stills are built in a very simple

way as transparent solar farms over brackish water surfaces. Efficiency is low, less than 30% of irradiation is converted to evaporation latent heat and water condensation. A new design is proposed and patented that makes use of a double effect: condensation in the inner glazing of solar farm plus condensation inside a heat exchanger placed below the water surface. Efficiency rises to 60% [50, 52, 53, 54, 57, 58, 61].

In the years 2004-2008 the use of solar irradiation is then investigated by Mr Floris, in cooperation with the Academy of Science in Budapest, as a means in helping the purification of water containing chlorinated aromatics. The tests in laboratory confirm that even the small amount of UV irradiation plus the warming effect of IR in sun rays may trigger the cut of chemical bonds Cl-C of chlorinated compounds in presence of catalyst. In this way a technique is opened to the purification of polluted waters that cannot be treated with bacteria. The cost of the technology is reduced due to the UV and IR sun natural radiation, otherwise necessary to be produced artificially to break the chemical bonds. The studies on the matter give rise to a patent on photocatalysis [55, 56, 60, 62] related to the construction of a mobile treatment train to bring around in the fields where it is needed in order to purify deep waters with aromatic chlorinated compounds.

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(1)

Numbers in brackets refer to author's bibliography at the last paragraph of this curriculum

## **5. FOREIGN INSTITUTIONS OR LABORATORIES WITH WHICH ASSOCIATED DURING THE CAGLIARI UNIVERSITY TENURE**

Mr. Floris is member of the international organisation Combustion Institute.

On September 1973 he spends two weeks in Sheffield to follow formal technical sessions of the International Combustion Symposium on the subject Turbulent Flames, High Intensity Combustion and Furnace Flames. It is the starting point of a co-operation that last in time.

On 1974 he attends a course offered by Prof. Derek Bradley in Milan, ENI S.Donato Milanese, on the Reaction Mechanism of Rich Air-Gasoline Mixtures.

On December 1973 he spends a few days at Ijmuiden (Amsterdam) at the International Research Centre of IFRF host of Prof. J.E. de Graaf, M.P. Heap and T.M. Lowes. On that occasion he learns how to evaluate on an experimental test rig links between the emissions, flame temperature and flow field in the flame. The research is sponsored by the US Energy Research and Development Agency (ERDA).

On November 1974 in Zagreb he participates as instructor and lecturer to a course offered by an Italian-Yugoslavian co-operation board to technicians and engineers of the Yugoslavia Electric Energy Agency.

On April 1978 he participates to a summer course at the Von Karman Institute (Brussels) on Combined Cycles for Power Generation.

On July 1980 on his way to present a paper before the International Combustion Symposium in Canada, he is invited to spend a few weeks at the Lawrence Berkeley Laboratories of the Department of Mechanical Engineering in Berkeley California.

On July 1981 he is invited to attend a summer course on fluidization at the Department of Mechanical Engineering of M.I.T., Cambridge Massachusetts USA, under the direction of Prof. Béer, Sarofim and Glicksman. Since then he starts a research collaboration with Prof. Glicksman on the evaluation of surface resistance heat transfer coefficients in fluidized bed boilers.

On July 1982 he wins two CONSIGLIO NAZIONALE DELLE RICERCHE awards and live Italy to work for more than one year until the end of December 1983 at the Department of Mechanical Engineering of the Massachusetts Institute of Technology, Cambridge USA.

During fellowship tenure at MIT he designs an experimental apparatus to evaluate under very fast transient conditions (a few milliseconds) the values of Nusselt Number in a cold fluidized bed of glass and sand particles of different size distribution and sphericity. The signals were digitised and the files were manipulated with a computer in order to obtain the heat balance in the bed and the overall heat transfer coefficient values. The results of the research were presented before the XVI International Centre for Heat and Mass Transfer Symposium in Dubrovnik, Yugoslavia [18].

On April and May 1984 he again is at MIT to conclude his work on fluidized bed surface heat transfer.

On August September 1985 he again is at MIT to continue his research on hydrodynamic of fluidized beds and in 1986 he wins a grant NATO Senior to work at MIT on mechanisms of formation and growth of bubble phase in fluidized beds. He spends the first semester in 1987 at MIT to conclude his work which is presented before the International Congress UIT [24] in Florence.

In September 1987 he starts a co-operation with the Department of Mechanical and Process Engineering of Sheffield University which continues also to-day and has many different aspects which run from research co-operation in the area of industrial combustion and fluid flow modelling to the exchange of students in the area of chemical and mechanical engineering.

In the year 1990/1991 he is guest of the Department of Mechanical and Process Engineering in Sheffield to teach an advanced Heat and Mass Transfer Course to chemical and mechanical engineering graduates.

As consequence of this collaboration with Sheffield University in April 1991, April 1992, May 1994 are organised in Cagliari three day seminars in Fluid Flow Modelling with the participation of experts from the US, Belgium, Italy and UK - Prof. Hirsch, Swithenbank, Subbiah.

In the years from 1995 to 2008 Mr. Floris is heavily involved in promoting the International Programs in student and staff mobility that bring in new connections with many European Institutions in the Mechanical Engineering area (see international academics).

In the mean time a research cooperation is established with the Academy of Science in Budapest under the sponsorship of the Joint Ministers of International Affairs in Hungary and Italy. That cooperation has brought many results in the area of heat and mass transfer applied to energy saving and still is alive. Under the project Mr Floris has moved to Budapest frequently to perform research and monitoring, and staff of the Hungarian Academy moved to Cagliari for the same aim. Students of the PhD Master level spent semesters in both Institutions.

## BIBLIOGRAPHY

- /1/ L.Bignardi, F.Floris: *“Il deposito e la corrosione nelle turbine a gas funzionanti con olio combustibile pesante”* – Atti della Facoltà di Ingegneria di Cagliari n.2, anno II, N.1 Maggio 1974, pagg. 241-277
- /2/ F.Floris, R.Vallascas: *“Collaudo di un forno per prove di combustione: considerazioni sul calcolo del flusso termico perduto”* – Istituto di Meccanica IM-4-MA, Marzo 1975, pagg. 1-22, Cagliari
- /3/ F.Floris, R.Vallascas: *“Prospettive di utilizzazione del carbone in impianti con turbine a gas”* – Critica Tecnica, anno V N.4, pagg. 1-12, Cagliari 1976

- /4/ F.Floris, E.Muttoni: "*Untersuchungen der Korrosion von GasTurbinenWerkstoffen durch LaserMikroSpectralanalyse*" – Jenaer Rundschau, Heft 5, 1977 pagg. 230-233, Berlino Est
- /5/ F.Floris, E.Muttoni: "*Laboratory Evaluation of an Organic Additive for the Reduction of the High Temperature Corrosion of Gas Turbine Superalloys by Gases of Residual Oils*" – XII International Congress C.I.M.A.C. paper C-17, Maggio 1977, pagg. 2595-2619, Tokyo
- /6/ F.Floris: "*The use of the Organic Additive Kryda for Prevention of High Temperature Oxidation of Gas Turbine Nichel Alloys by Gases of Fuel Oils*" – VGB Konferenz, 1-2 June 1977, pagg. 1-12, Essen West Germany
- /7/ F.Floris, R.Vallascas: "*Utilizzazione dei potenziali termodinamici nel calcolo della composizione d'equilibrio nelle reazioni di combustione*" – XXXII Congresso Nazionale A.T.I., Roma 20-23 Settembre 1977 pagg. 1300-1315
- /8/ F.Floris, R.Vallascas: "*Un'applicazione degli elementi finiti alla determinazione delle isoterme nella canna dei M.C.I.*" – Rivista A.T.A. N.2, Febbraio 1978, pagg. 89-93, Torino
- /9/ F.Floris, G.Pisu: "*A Generalized Calculation Procedure for a Theoretical Engine Process Analysis*" – XXXIV Congresso Nazionale A.T.I., Palermo 8-12 Ottobre 1979, pagg. 189-202
- /10/ F.Floris, F.Sau: "*Calcolo della distribuzione di temperatura e flusso termico in un generatore di vapore ad olio combustibile: confronto con i dati sperimentali*" – Atti della Facoltà di Ingegneria di Cagliari Vol.9, anno V N.1, Ottobre 1977, pagg. 241-269
- /11/ F.Floris: "*Studio sulla possibilità di alimentazione diretta, con carbone polverizzato, di turbine a gas terrestri a combustione interna*" – Relazione Scientifica C.N.R., pagg. 1-67, Cagliari
- /12/ F.Floris, E.Mascia: "*Impianto sperimentale per lo studio della combustione in aria viziata di polverino di carbone*" – Atti della Facoltà di Ingegneria di Cagliari Vol.13, anno VIII N.1, Maggio 1980, pagg. 413-430
- /13/ F.Floris: "*La combustione di oli pesanti e carbone in difetto di ossigeno nelle applicazioni ad impianti combinati turbina a gas / turbina a vapore*" – Giornate Italiane delle Fiamme, Cervia 17-21 giugno 1980, pagg. 453-461
- /14/ F.Floris: "*The Effect of Vitiated Air on the Combustion of Pulverized Coal for Applications to Coal-Fired Combined Cycle Steam Generators*" – XVIII International Symposium on Combustion, Paper N.129, Waterloo Canada, 17-22 Agosto 1980
- /15/ F.Floris: "*Combinazione degli impianti di potenza e gassificazione delle ligniti del Sulcis*" – Symposium sulla Carbonizzazione del Carbone sotto Pressione di Idrogeno, Cagliari 28 Aprile 1982
- /16/ F.Floris, R.Melis: "*Modello matematico di combustione del carbone in letto fluidizzato per caldaie a pressione atmosferica*" – Atti della Facoltà di Ingegneria di Cagliari, Vol.18, anno X N.1, Maggio 1982, pagg.31-53

- /17/ F.Floris, G.Piras: “*Il problema dei fanghi di risulta: studio comparativo sulle strategie di desolfurazione dei fumi di caldaia*” – Atti della Facoltà di Ingegneria di Cagliari, Vol 18, anno X N.1, Maggio 1982, pagg. 221-244
- /18/ F.Floris, L.Glicksman: “*Investigation of Contact Resistance in a Fluidized Bed with Rough and Smooth Particles*” – presented before the XVI ICHMT Symposium in Dubrovnik Yugoslavia September 4, 1984
- /19/ F.Floris: “*Il package ADINA ed il programma ADINAT*” – Giornate di Informatica, Cagliari 11-14 giugno 1985
- /20/ F.Floris: “*Gas Recirculation and Preheating for Control of Oxides of Nitrogen in Gas Fuel Combustion*” – Meeting of French and Italian Sections of the Combustion Institute, Amalfi June 16-19 1987
- /21/ F.Floris: “*Impianto sperimentale di combustione per prove su bruciatori a gas, olio e carbone polverizzato*” – Convegno della Sezione Francese ed Italiana del Combustion Institute, Amalfi 16-19 Giugno 1987
- /22/ F.Floris, C.Partesotti: “*Small Scale Burner for Pulverized Coal Combustion*” – International Symposium on Coal Combustion (ISCC), Beijing China, 6-10 September 1987
- /23/ F.Floris, C.Partesotti, S.Pasini, G.Quattroni: “*A Laboratory-Scale Furnace to Study Ash Deposition and Fouling Due to Pulverized Coal Combustion*” – A.F.R.C. 1988 Fall International Symposium, October 4-6 1988 Pittsburgh PA Stati Uniti
- /24/ E.Caddeo, F.Floris: “*Apparato sperimentale a trasduttori ottici per lo studio del moto a bolle in letti fluidizzati di particelle solide*” – VII Congresso Nazionale UIT Firenze 15-17 Giugno 1989
- /25/ M.Agus, F.Floris, C.Garbarino: “*Characterization of Mineral Matter in Coal, Transformation in Combustion and Deposition*” – Joint Meeting of the German and Italian Sections of the Combustion Institute, Ravello Italy, September 11-14 1989
- /26/ A.Bianchi, F.Floris: “*Calcolo delle prestazioni di un generatore di vapore nella trasformazione da olio a gas combustibile sintetico*” – XLIV Congresso Nazionale A.T.I. 12-15 Settembre 1989 Cosenza
- /27/ F.Floris, C.Partesotti: “*Sviluppo, progetto e realizzazione di un bruciatore per RDF e combustibili solidi*” – Congresso Internazionale Energia, Ambiente e Innovazione Tecnologica, Caracas 22-26 Ottobre 1989
- /28/ V.Cadoni, F.Floris, C.Partesotti: “*Sulla progettazione, assistita al calcolatore, delle camere di postcombustione per inceneritori di rifiuti industriali*” – 45° Congresso Nazionale A.T.I., S. Margherita di Pula, 18-21 Settembre 1990
- /29/ F.Floris, C.Partesotti, Q.Tomè: “*Impianto pilota per la sverniciatura mediante termodistruzione: miglioramento in campo gestionale e di controllo*” – 45° Congresso Nazionale A.T.I., S. Margherita di Pula, 18-21 Settembre 1990

- /30/ F.Floris, C.Partesotti, G.M.Piga, Q.Tomè: *“Recupero, come combustibile, di polveri di scarto da un impianto di verniciatura: fattibilità tecnico economica e valutazione dell’impatto ambientale”* – 45° Congresso Nazionale A.T.I., S. Margherita di Pula, 18-21 Settembre 1990
- /31/ F.Floris, C.Partesotti: *“Pilot-Scale Incineration Plant of Paint Residues: Automatic Control and Operation”* – TOTEM 5 WASTE INCINERATION TECHNOLOGY 1-3 October 1991 Bari Italy
- /32/ F.Floris: *“Design of Burner for RDF and Solid Fuels”* – Proceedings of the Second International Conference on Environmental Issues and Management of Waste in Energy and Mineral Production, Calgary 2-4 September 1992
- /33/ F.Floris, G.Piras: *“Incineration and Energy Saving in a Dry Painting”* – Energy, Environment and Technological Innovation, October 12-16 1992 Rome Second International Congress
- /34/ F.Floris: *“Fluid Flow and Combustion Modeling in a Multi Inlet Afterburner”* – FLUENT 1993 European Users' Group Meeting, Edinburgh Scotland 17-18 June 1993
- /35/ F.Floris: *“La pirolisi dei pneumatici di scarto: produzione di combustibili eterogenei per applicazioni energetiche”* – Potenzialità e Prospettive della Produzione Combinata di Energia Elettrica e Termica in Sardegna, A.T.I. & Università di Cagliari, Cagliari 20 Maggio 1994
- /36/ M.Bertolo, F.Floris *“Modellazione fisica ed analisi termofluidodinamica di valvola per impianto di cracking catalitico Cold Shell”* – FCC Slide Valve Seminar, Cagliari 13-14 Dicembre 1994
- /37/ M.Bertolo, F.Floris: *“Flow Modeling of Fluidized Catalytic Cracking Slide-Valve for Oil Refinery Systems.”* – presented at III International Congress: Energy, Environment and Technological Innovations, Caracas Venezuela November 6-11 1995
- /38/ F.Floris, A.M.Aloi: *“Qualitative Evaluation of the ERASMUS Programme 1987-1995: The Italian Experience”* – European Conference Lyon France February 1997
- /39/ M.Bertolo, F.Floris: *“Study and Design of a Batch Incinerator for Toxic Wastes”* – presented at the XIV Brazilian Congress of Mechanical Engineering, Bauru SP Brazil December 8-12 1997
- /40/ F.Floris: *“Pedagogia del sistema europeo di trasferimento dei crediti accademici”* – Notiziario Università Ricerca, Roma, Numero 1 Anno 1998
- /41/ F.Floris, G.Seu, M.Porcu: *“Calcolo del flusso 3-D in valvole a farfalla per applicazioni in impianti petrolchimici”* – FLUENT User Meeting, Como Italy September 14-15 1998
- /42/ F.Floris, G.Seu: *“Simulazione 2-D del campo di moto in valvole a farfalla in differenti condizioni di apertura”* – 53° Congresso Nazionale A.T.I. Firenze Italy September 14-18 1998

- /43/ F.Floris “*Univesities as International Institutions for Training of Public and Semi-public Administrators*” DAAD Conference Dresda 12-13 Aprile 1999
- /44/ F.Floris “*The New Role of Universities and the Non-academic Sector in Institution Building*” TEMPUS Conference Kiev 23-24 Aprile 1999
- /45/ F.Floris “*Impianto trattamento rifiuti, a tecnologia pirolitica con produzione di gas combustibili puliti*” – Conferenza “Ricicla” Rimini Italy October 21-24 1999
- /46/ F.Floris, D.Deidda “*Analisi termofluidodinamica di una tenuta meccanica per forno di pirolisi*”, FLUENT User Group Meeting, Castello di san Gaudenzio Voghera 3-4 Ottobre 2000
- /47/ F.Floris, N.Dessalvi, P.Tuveri “*La pirolisi lenta dei rifiuti ospedalieri: analisi del processo e simulazione termodinamica*”, III Convegno Nazionale ATI –Utilizzazione Termica dei Rifiuti- Abano Terme Italy 31 Maggio 1 Giugno 2001
- /48/ F.Floris, D.Deidda “*Applicazione della teoria del Bluff Body nella frittura industriale del pani guttiau*” FLUENT User Group Meeting, Politecnico di Milano – Milano 24-25 Settembre 2001
- /49/ F.Floris, M.Lai “*Analisi delle prestazioni di una pompa per piombo fuso*” FLUENT User Group Meeting, Politecnico di Milano – Milano 24-25 Settembre 2001
- /50/ F.Floris, G.Scarpa, G.Mink, L.Horvath “*Solar Still Distillation of Shallow Waters with an Air Blown, All Plastic Module*” Energia e Acqua nelle Isole, Sassari Italy 22-23-24 Novembre 2001
- /51/ F.Floris, P.P.Tuveri “*Evaluation of Pyrolysis of Municipal and Industrial Solid wastes*” International Symposium Energy and Environment 2002 Capri Italy June 6-8 2002
- /52/ F.Floris, G.Scarpa, G. Mink, Orvath “*Low cost, all plastic solar still, designed to operate on shallow saline ponds*” 4<sup>th</sup> ISES Europe Solar Congress EUROSUN 2002 Bologna Italy 24-26 June 2002
- /53/ F.Floris, G.Mink, Scarpa, Orvath “*Development of a low cost, floating type, multi-effect solar still module*” Energy and Environment Congress Opatija Croatia October 2002
- /54/ F. Floris and G Mink, L Horvath “*construction of and preliminary test results on the plant module of A floating type solar still*” Energy and Environment Congress Opatija Croatia 22 October 2004
- /55/ F.Floris, G. Mink et al. “*Integrated solar photocatalytic and stripping reactor for the purification of water containing chlorinated aromatics*” ESTEC International Conference 20 June 2005 Freiburg Germany
- /56/ F.Floris, G. Mink et al. “*Purification of Groundwater by Chlorobenzenes Using a Combined Solar Photocatalytic/Stripping Reactor*” ENERGY, WATER AND ENVIRONMENT SYSTEMS Dubrovnik Croatia June 2005



/57/ E.Colombo, F.Floris, F.Inzoli, R.Mereu “*Modellazione CFD di un dissalatore ad energia solare e confronto con I dati sperimentali*” FLUENT FORUM 2005 POSTER SESSION MILANO 11 OTTOBRE 2005

/58/ E.Colombo, F.Floris, F.Inzoli, R.Mereu “*Modellazione Numerica della Evaporazione e Condensazione in un Dissalatore ad Energia Solare*” XXIV CONGRESSO NAZIONALE UIT SULLA TRASMISSIONE DEL CALORE, Napoli Italy 21-23 Giugno 2006

/59/ F.Floris, G. Ibba “*Determinazione del campo di temperatura in una pala di turbina esposta a flussi termici non simmetrici, e parzialmente refrigerata al contorno*” 61° Congresso Nazionale A.T.I. Perugia Italy September 11-15 2006

/60/ L Horvath\*, G Mink, F Floris<sup>A</sup>, P Mulas<sup>B</sup>, G Méder<sup>C</sup>, K Welther<sup>D</sup>, I Házi<sup>E</sup> “*Design and Optimization of a 50 m<sup>3</sup>/d Capacity Solar Photocatalytic/Stripping Reactor for Water Purification*” International Congress on Energy and Environment Opatija Croatia October 25-27 2006

/61/ F.Floris, G.Mink, L.Orvath, R.Mereu “*Performance Testing and CFD Analysis of a New Design Multi-Effect Solar Still for Salt Water Distillation*” International Congress on Energy and Environment Opatija Croatia October 25-27 2006

/62/ F.Floris “*Applicability of Multi-Effect Solar Still for salt Water Distillation and Purification of Water Contaminated by Chlorobenzene by means of Solar Radiation*” 9<sup>th</sup> International Symposium of Young Engineers, PG Students Engineering and Technological Researches for Sustainable Development 21-23 November 2007 Moscow Russia