

# Curriculum Vitae

## Personal information

First name/ Surname

First name: Antonio

Surname: Cucchiaro

Address

Telephone

E-mail

Nationality

Date of birth

Gender

Work experience

Dates

From 2010 to 2018

Occupational field

Coordinator of the ENEA technical activities of the Project JT-60SA in the frame of the Broader Approach agreement.

Occupation or position held

Responsible of the ENEA Task Force formed by 18 members for the procurement arrangement for the design and manufacture of the Magnet for the JT-60SA Tokamak sharing with F4E and CEA the adopted technical solutions.

Main activities and responsibilities

Preparation of technical and management specifications; tender documents; selection of Industrial Supplier and tendering; KOM of contract; supervision, managing, monitoring of contracts; keep informed and.

Appointed by ENEA Commissioner (May 2011) as coordinator of the technical activities of JT-60SA in the framework of the broader approach collaboration; kept in staff of Fusion Technical Unit. Appointed member of Technical Coordination Meeting of JT-60 project.

Total value of the procurements amounting to about 43.000.000 Euro.

Name and address of employer

ENEA-Italian National Agency for New Technologies, Energy and Sustainable Economic Development- Via E. Fermi 45-Frascati-Roma.

Type of business or sector

Research, innovation technology and advanced services in the fields of energy - especially nuclear.

Dates

From 1998 to 2010

Occupation or position held

Assistant to deputy director of the Fusion technology department. Appointed by director of the Fusion technology department.

Main activities and responsibilities

Involved in the design review of the JT-60SA machine in the frame of the Broader Approach agreement between Japan and Europe. The review covered: optimization of the TF conductor design on the base of NbTi strand critical current results; comparison for electrical joint configuration; reduction of the magnet mechanical structure and new solution for cooling; analyses of Nuclear Heating at superconducting coils; analyses of conductor instabilities for sudden quench.

As a member of the design team of the FTU-D responsible for: mechanical design; electromagnetic loads; stress analysis; poloidal coil systems; cooling system; planning of procurement and assembly, cost and time evaluations. Talk to the Ad-hoc-Group Phase I for Euratom preferential support (2000).

Responsible officer of the IGNITOR design Contract with CITIF (Value 2.521 MLire) and with Ansaldo Ricerche (Value=2.015.731 Euro). Critical assessment of IGNITOR, ITER, FIRE (2002).

Involved as technological expertise in the Mechanical Engineering Design of PROTO-SPHERA machine for: vacuum vessel, poloidal field coil system, internal support, anode and cathode, divertor

Working as responsible for FAST (Fusion advanced studies torus) load assembly covering: preliminary structural analysis, 3D of TF ripple, plasma-wall interaction and divertor design, cooling system, assembly, schedule and cost.

Name and address of employer

ENEA-Italian National Agency for New Technologies, Energy and Sustainable Economic Development- Via E. Fermi 45-Frascati-Roma.

Type of business or sector

Research, innovation technology and advanced services in the fields of energy - especially nuclear.

Dates

From 1994 to 1998

Occupation or position held

Responsible of the Mechanical Design and Engineering Service. Appointed by Director of Fusion technology department

Main activities and responsibilities	<p>IGNITOR tokamak procurement full size prototypes and interactions with ANPA (Agenzia Nazionale per la Protezione dell'Ambiente) the nuclear safety authority.</p> <p>Coordination of the design, procurement, installation, commissioning of the ECRH transmission lines system on FTU machine. Three gyrotron support structures equipped with mirror sets to mach the beam were assembled.</p> <p>Tasks for: planning, cost evaluation, construction, tests, assembly, commissioning for the completion of the additional heating system (LH, IBW, ECRH) on FTU Machine. Responsible for the procurement of 9 antennae for lower hybrid (Contract value 4.875.000 Lire). Responsible Officer for FTU Shut down for new toroidal limiter insertion and reviewing of Central Solenoid and cryostat. These tasks have required fabrication procedures, tender and contract for fabrication.</p> <p>Appointed member of Ad-hoc Group (Phase II) for engineering assessment of MAST.</p> <p>Coordination for: drawing and assistance at installation phase on FTU of Collecting Thomson Scattering; FTU pellet injector mechanical design; installation on FTU the outboard molybdenum poloidal limiter system; modification of the FTU hall framework to allocate LH and IBW around the machine; development of the European helium-cooled ceramic breeder in tube (BIT) blanket concept for DEMO.</p> <p>IGNITOR tokamak procurement full size prototypes and interactions with ANPA (Agenzia Nazionale per la Protezione dell'Ambiente) the nuclear safety authority.</p> <p>Coordination of the design, procurement, installation, commissioning of the ECRH transmission lines system on FTU machine. Three gyrotron support structures equipped with mirror sets to mach the beam were assembled.</p>
Name and address of employer	ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development-VIA e. Fermi 45 – Frascati - Roma.
Type of business or sector	Research, innovation technology and advanced services in the fields of energy - especially nuclear.
Dates	From 1994 to 1988
Occupation or position held	Fusion Technology Researcher
Main activities and responsibilities	<p>In quality of assistant of the Joint Assessment Group established by the JET-SC an engineering analysis was performed to review the JET reliability aspects with failures analysis of the main components and feasibility of machine interventions by remote handling.</p> <p>As a leader of the design team I was carried out detail design of the additional heating system of the FTU. I was Responsible officer for the procurement (SMA-GALILEO; Value 4.875 ML) and commissioning of 9 antennae for lower hybrid 8 GHz additional heating system on FTU Tokamak, including transmission lines with related microwave components, launching system and cooling system.</p> <p>As a Project Manager of a collaboration among ENEA-CIEMAT-ANSALDO for the construction of TJ-II heliac project I was responsible for: planning and organize the technical activities, coordination, checking the results, reporting progress, technical support. As one of the proponent I presented a talk to the Ad-hoc-Group Phase II for Euratom preferential support (Madrid-12-14 September 1989).</p>
Name and address of employer	ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development-VIA e. Fermi 45 – Frascati - Roma.
Type of business or sector	Research, innovation technology and advanced services in the fields of energy - especially nuclear.
Dates	From June 1983 to November 1988
Occupation or position held	Technology Researcher
Main activities and responsibilities	<p>Design and commissioning of test bed for assessment reliability of mechanical components for NH<sub>3</sub>/H<sub>2</sub>O absorption heat pump; the high performance pump has been patented by "Ufficio Brevetti Italiano".</p> <p>Development and tests (corrosion, cavitations, and tribology) on coating materials for pumps operating with NH<sub>3</sub>/H<sub>2</sub>O solution.</p> <p>Engineering and commissioning of test bed to qualify the performance of large electric or gasoline heat pumps; issue of standard procedure for performance (in liaison with Comitato Termotecnico Italiano).</p>
Name and address of employer	ENEA-Italian National Agency for New Technologies, Energy and Sustainable Economic Development-Via Anguillarese 301, 00123-S. Maria di Galeria-Roma
Type of business or sector	Research, innovation technology and advanced services in the fields of energy - especially nuclear.
Dates	From February 1979 to June 1983
Occupation or position held	Structural analyst engineer
Main activities and responsibilities	Structural analysis and mechanical design for nuclear fuel handling and post-irradiation testing plants of Fast Breeder Reactor PEC.

Name and address of employer

Type of business or sector

## Education and training

Dates

Title of qualification awarded

Name and type of organisation  
providing education and training

Dates

Title of qualification awarded

Name and type of organisation  
providing education and training

## Personal skills and competences

Mother tongue(s)

Other language(s)

Self-assessment

*European level (\*)*

### Language

Social skills and competences

Organisational skills and  
competences

Technical skills and competences

Computer skills and competences

Artistic skills and competences

Other skills and competences

Driving licence

## Additional information

## Annexes

SNIA-TECHINT, Via A. Bargoni n° 34-Roma.

Advanced Energy Technology

From November 1979 to March 1982

Doctor Degree in Mechanical Engineering

Università degli Studi di Roma "La Sapienza"

From November 1972 to July 1978

Doctor Degree in Nuclear Engineering

Università degli Studi di Roma "La Sapienza"

Italian

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	C1	Independent user

good communication skills due to my character and gained through my experience during working life;

good experience in project or team management (currently responsible for a team of 18 people);

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good command of Microsoft Office™ tools (Word™, Excel™ and PowerPoint™) and autocad and Project;

-

Sports;

Category B

65 publications at international Conference or symposia on Fusion.