**Dino Antonelli**

**Ph.D Aeronautical Engineer. Software developer learner.**

**Riglos 746 Apartment 2 Alta Gracia (5186). Cordoba. Argentina. +(54) (3547)-457867** [*antonelli@fadeasa.com.ar*](mailto:antonelli@fadeasa.com.ar) *;*[*dinoantonelli@hotmail.com*](mailto:dinoantonelli@hotmail.com)

**35 years**

**PROFILE**

***Extensive experience in engineering development and research allow to carry out tasks with a high level of professionalism. The knowledge acquired in graduate studies allow deeply understand of engineering problems, being able to model mathematically and computational aerodynamic mechanical and structural problems. In addition, experience in the industries of motorsports and aviation have given the opportunity to learn to working in team, leading projects, preparing reports and meeting deadlines. The aim is to provide the qualities and experience, learn, work hard to make the company bigger. Now, looking for new challenges to enter the world of software development and grow professionally.***

**PROFESSIONAL EXPERIENCE**



**Software Developer Learner 2022**

- Java 8, 11 Programming .OOP, Swing, JAR, Exceptions, debugging, Swing, Stream, Serialization, Collections, Sockets.

- Database. MySQL and phpMyAdmin.

- MVC: Java CRUD. Servlets. BBDD. JSP. HTML (Basic). SQL (Basic).

- Spring Framework: Annotations, Singleton and Prototype, injection of dependencies, Forms Validations, Hibernate, Spring CRUD (MVC), AOP.

- Maven Projects.

- Git. Version Control. Online Repositories. GitHub.

- Linux.

- Learning. (APIs, Spring boot, Spring Batch, Spring Rest, Testing).

**Engineer. CFD and Flight Sciences. 2019-2022**

*Fábrica Argentina de Aviones "Brigadier San Martin" S.A. Córdoba. Argentina.*  [*www.fadeasa.com.ar*](about:blank)*.*

-Development and simulation of civil and combat aircraft in the area of ​​Flight Sciences. CFD Fluent-Ansys simulation. Mesh and surface preparation via CATIA and Spaceclaim. CFD-post and Ensigth post-processing. Performance calculations for military aircraft.

-Tests and post-process of flight tests via IADS symvionics software and Matlab-Simulinc of military aircraft. Software implementation of image recognition of instruments in flight testing.

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**Engineer. Renault Sport Super TC 2000 and TC 2000 2017-2019**

*Renault Sport. Super TC 2000. Ambrogio Racing. Pro-Racing. Villa Carlos Paz. Cordoba. Argentina.*  [*www.renaultsport.com.ar*](about:blank)*.*

Interacting and work in team of development of Renault fluence *Super TC 2000* and *TC 2000* race cars. Design of components (CATIA V5. Modules: Assembly, CAT Part, Generative Design, Structural Analysis, Surfacing). Management of providers, external manufacterers and car components. Design and 3D printing parts. Aerodynamics (CFD STAR CMM+, Ensight and track testing). Data acquisition and post-processesing (Motec i2 Pro and Motec Dash Manager).

**CONICET Engineer Researcher 2012-2016**

*School of Exact, Physical and Natural Sciences, National University of Cordoba, Velez Sardfield 1611 AVE., (5000) Cordoba, Argentina. CONICET (National Scientific and Technical Research Council). www.conicet.gov.ar*

Work in Ph.D thesis development in Aeronautical department. Computational Mechanics (CFD) and modelling of engineering problems. Development of a computational program of aerodynamics, structures, and fluid-structure interaction through finite element method to micro-air vehicles applications and research. Work in parallel scientific programming, handling of academic cluster, meeting deadlines, writing reports and academic tasks. Journal reviser of the Schoolar of Exact, Physical and Natural Sciences.

**Argentinian Air Force Engineer**   **2012**

*Research Institute. Argentinian Air Force. Defence Ministry. Fza. Aerea Ave. 6 and 1/2 Km. Cordoba. Argentina. www.ait.org.ar*

Development of a computer program for estimating the aerodynamic heating of a rocket throughout Fortran language and Air Force database. Interacting and work in team with systems analyst and programmer to development a global code of rockets. Participation and research in the wind tunnel Aerodynamics of Space Vehicles area of Argentinian Air Force.

**EDUCATION**



**Ph.D Engineering Sciences 2012-2016**

*National University of Cordoba.* Official career duration: 5 years *.* Average of career: 9/10. Thesis title: *Steady and unsteady analysis of rigid and flexible aerodynamics wing sections at ultra-low Reynolds numbers (Re <10000).*

**Master of Science in Aerospace Engineering** **(Hons)**  **2011-2014**

*National University of Cordoba - Aeronautical University Institute.* Official career duration: 2 years without thesis project. Average of career: 8,81. Master Thesis title: *Steady and unsteady analysis of aerodynamics wing sections at ultra-low Reynolds numbers (Re <10000).*

**BSc-MSc Aeronautical Engineer Class (2:1) 2004-2010**

*National University of Cordoba.* Official *c*areer duration: 5 years without thesis project. Average of career: 7,8

Thesis title: *Computational tool to aerodynamic pre-design for transport aircraft.*

**PERSONAL SKILLS**



*Languages:*  -Spanish (native) -English (advanced) -Portuguese (basic)

*Socials* : Great willingness to learn. Excellent Communication skills and teamwork acquired in companies and institutions referenced. Capacity to public dissertation. Writing and editing reports. Flexibility and a high level of operational readiness. Team ability, initiative and loyalty. Proactive.

*Informatics*: Operating systems: Linux, Windows. Computational Languages: Fortran, Visual basic, GNU Octave, Matlab, Java (Microservices, Spring & Spring Batch), Git. Software (CFD): Ansys Fluent, Elmer, OPENFOAM. Measurements Softwares: Labview, Motec, IADS Symvionics. Scientific applications: Matlab-Simulink, Maple, Maxima. Parallel programming: OPENMP, MPI, Lapack. Technical drawing: CATIA V5, AutoCAD, 3DsMax, Photoshop, GIMP. Pre and post-processors: GiD, Tecplot, Gmesh. Text: Latex, Lyx, Microsoft Office (Exel, Word, Power Point).

*Technical:* Strong technical ability to solve engineering problems. Ability to plan and manage own workload/projects. Mathematical modelling of dynamic and fluid-dynamic problems through numerical methods. Simulation of physics problems (fluid, structures, interaction etc.) (CFD). Skillfull with calculus computational tools (freeware-licenced).

**Ph.D COURSES**



**(1)** Aerodynamics of portant surfaces and bodies **(2)** Advanced fluid mechanics  **(3)** Numerical Methods **(4)** Advanced material mechanics **(5)** Dynamics of mechanical systems **(6)** Parallel scientific programming **(7)** Advanced gas dynamics **(8)** Dynamics of space vehicles **(9)** Non-linear dynamics and Chaos **(10)** Compounds materials analysis through finite element method

**AWARDS**



-"CONICET (National Scientific and Technical Research Council) Internal Postgraduate Scholarship TIPO 1".Duration: 36 months from April 1, 2012. In March 2014 it was uniﬁed with Scholarship TIPO 2 with 24 months of extension.

-"Defence Ministry Scholarship". Research Institute. PIDDEF 35/11/FAA project. Duration: 1 year. Department of aerodynamic and space vehicles.

-"Completion Career Scholarship". National University of Cordoba. Improvement Program Engineering Education, PROMEI, from March 1, 2008 to December 31, 2008. Resolution 838-H.C.D-2007.

-"Single Fund Scholarship". National University of Cordoba, from April 1, 2007 to November 30, 2007.

**PUBLICATIONS, PRESENTATIONS AND REVISIONS**



Antonelli, D., Sacco, C. and Tamagno, J. *Simulaciones inestacionarias de perfiles aerodinámicos rígidos y flexibles a números de Reynolds ultra-bajos (RE<10000).* "XXII Congreso de Métodos numéricos y sus aplicaciones - ENIEF 2016", Cordoba, Argentina.

Antonelli, D., Sacco, C. and Tamagno, J. *Flow simulations with ultra-low Reynolds numbers over rigid and flexible airfoils subject to heaving and flapping motions*. "Journal of Applied Fluid Mechanics" (2016).

Antonelli, D., Sacco, C. and Tamagno, J*. Steady and unsteady analysis of aerodynamics wing sections at ultra-low Reynolds numbers (Re < 10000).* "1st Pan-American Congress on Computational Mechanics - PANACM 2015 " and "XI Argentine Congress on Computational Mechanics - MECOM 2015 ", Buenos Aires, Argentina.

Antonelli, D., Sacco, C. and Tamagno, J. *Aerodinámica del vuelo a números de Reynolds ultra-bajos (Re < 10000)*. "XX Congreso de Métodos numéricos y sus aplicaciones - ENIEF 2013", Mendoza, Argentina.

**REFERENCES**



B.S. Lucas Astrada

Principal Software developer………

Eng. José Vitulich

Principal Engineer Estructural calculus and Flight Sciences Area. Fábrica Argentina de Aviones Brigadier San Martín. *vitulich@fadeasa.com.ar*

MSc Eng. Oscar Falcinelli

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Ph.D Eng. Sergio Elaskar

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