

# Curriculum Vitae



## Personal Info

Stefano Giovanzana

born in Milano the 14th December 1982

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## Work Experiences

- (April 2011 - current) Work stage at *Centro produzione e applicazione lenti a contatto* di Mario Giovanzana, Milano, Italy, where are designed, produced and fitted contact lenses (<http://www.lentigiovanzana.it>).
- (February 2018 – current) Member of UNI/CT 044/GL 06 Optics and photonics, member of UNI/CT 044 Biomedical and diagnostic technologies, member of ISO/TC 172/SC7/WG9 contact lenses for A.N.C.LE.CO. (National association of contact lenses constructors).
- (September 2016 – June 2018) Contract lecturer at University of Milano-Bicocca for the course of *Laboratory of contact lenses*.
- (February 2017 – February 2018) UNI Observer for A.N.C.LE.CO. (National association of contact lenses constructors)
- (February 2016 – June 2016) Contract lecturer at University of Milano-Bicocca for the course of *Laboratory of optical and ophthalmic instruments*.
- (December 2006, 2007, 2008, 2009, 2010, 2011, 2012) Customer service during the Christmas time in the store *Città del Sole* in via Orefici, 13 Milano, Italy.
- (15 May - 03 August 2006) Thesis stage at optical laboratories of *SAES Getters S.p.A.* in Lainate, Italy, where Mg-doped LiNbO<sub>3</sub> crystals are created and characterized.
- (05 - 16 July 1999) Work stage at *City Crown Ltd.* in Aylesbury, England, where are produced mechanical lathes for contact lenses production.

## Education and Training

*School and University*

- (2011 - 2013) Bachelor Degree in *Optics and Optometry*, University of Milano-Bicocca, mark 100/110.

- (18 July 2013) Bachelor Thesis: *Modellazione e analisi di occhi di prova* (trd. *Modelisation and analysis of customised eye models*), internal supervisor: S. Tavazzi, PhD, external supervisor: P.G. Gobbi, Eng.
- (2008 - 2011) Doctorate in *Industrial Engineering* major in Mechanical Project and Motorcycling Engineering, University of Padova.
- (25 March 2011) Doctorate Thesis: *A virtual environment for modeling and analysis of human eye*, internal supervisor: Prof. G. Concheri.
- (2004 - 2007) Master Degree in *Physics Engineering* major in Nano-optic and Photonics, Polytechnic of Milano, mark 103/110.
- (20 April 2007) Master Thesis: *Caratterizzazione del Niobato di Litio drogato al magnesio* (trd. *Characterization Process of Mg-doped Lithium Niobate*), internal supervisor: Prof. R. Ramponi, external supervisor: D. Callejo Munoz, PhD.
- (2001 - 2004) Bachelor Degree in *Physics Engineering* major in Nano-Technology and Physics Technology, Polytechnic of Milano, mark 99/110.
- (22 July 2004) Bachelor Thesis: *Elementi Ottici per Radiazione X* (trd. *Optical Elements for X-Rays*), internal supervisor: Prof. C. Dallerà.
- (1996 - 2001) Certificates of Education, Liceo Statale F. Severi, mark 80/100.

### Stages and Courses

- (25 - 27 April 2015) *Cornea irregolare e lenti a contatto (Saroch II)* (trd. *Irregular cornea and contact lenses II*), Pula, Italy.
- (24 March and 5 May 2014) *L'esame visivo e i criteri di prescrizione* (trd. *Visual examination and prescription criteria*) by Nikon Instruments, Cusago, Italy.
- (2 - 3 February 2014) *I Congresso Nazionale ALOeO*, Lecce, Italy.
- (7 - 8 September 2013) *Cornea irregolare e lenti a contatto* (trd. *Irregular cornea and contact lenses*), Saroch, Italy.
- (20 - 21 March 2013) *Materiali delle LaC e tecniche applicative* (trd. *Contact lens materials and fitting techniques*), The Vision Care Institute of Johnson & Johnson Medical S.p.A., Milano, Italy
- (5 - 6 April 2013) *Spring Workshop on Eye Research*, Institute of Physics, Wrocław University of Technology, Wrocław, Poland.
- (September 2009 - February 2010) *Disegno tecnico industriale* (trd. *Technical Industrial Design*), Prof. C. Giroto, Aerospace engineering course, University of Padova, Padova, Italy.
- (4-5-12-13 November 2008) *Algoritmi e software per il calcolo scientifico* (trd. *Algorithm and Software for Scientific Calculus*), Prof. M. Redivo Zaglia, Applied Mathematic Department, University of Padova, Padova, Italy.
- (23 June - 07 July 2008) *Statistica applicata al calcolo scientifico* (trd. *Statistics Applied on Scientific Experiments*), Prof. L. Salmaso, Statistics Department, University of Padova, Vicenza, Italy.
- (16 - 18 June 2008) *Correspondence Analysis*, Prof. M. Greenacre, Statistics Department, University of Padova, Padova, Italy.
- (1-2-3 October 2003) *Stage for Auditor for Quality Systems*, CSI S.p.A., Bollate, Italy.

### Articles

1. S. Giovanzana, T. Evans, B. Pierscionek *Lens internal curvature effects on age-related eye model and lens paradox*. Biomedical Optics Express, 8(11), 4827-4837, 2017. (JIP = 3.337)
2. S. Stach, Ș. Țălu, S. Trabattoni, S. Tavazzi, A. Głuchaczka, P. Siek, J. Zajęc, S. Giovanzana *Morphological Properties Of Siloxane-Hydrogel Contact Lens Surfaces*. Current Eye Research, 42(4), 498-505, 2017. (JIP = 2.238)
3. S. Stach, D. Dallaeva, Ș. Țălu, P. Kaspar, P. Tománek, S. Giovanzana, L. Grmela *Morphological features in aluminum nitride epilayers prepared by magnetron sputtering*. Materials Science-Poland, 33(1), 175-184, 2015. (JIP = 0.327)
4. Ș. Țălu, S. Stach, J. Zaharieva, M. Milanova, D. Todorovsky, S. Giovanzana *Surface roughness characterization of Poly(Methylmethacrylate) films with immobilized Eu(III)  $\beta$ -Diketonates by fractal analysis*. International Journal of Polymer Analysis and Characterization, 19(5), 404-421. 2014. (JIP = 1.412)

5. S. Giovanzana, H. Kasprzak, B. Pałucki, Ș. Țălu *Non-rotational, aspherical models of the human optical system*. Journal of Modern Optics, 60 (21), 1-7, 2013. (JIP = 1.170)
6. S. Giovanzana, R.A. Schachar, Ș. Țălu, R.D. Kirby, E. Yan, B.K. Pierscionek *Evaluation of equations for describing the human crystalline lens*. Journal of Modern Optics 60 (5), 406-413, 2013. (JIP = 1.170)
7. C. Bischin, Ș. Țălu, R. Silaghi-Dumitrescu, M. Țălu, S. Giovanzana, C.A. Lupașcu *Computerized morphometric assessment of the human red blood cells treated with cisplatin*. Annals of the Romanian Society for Cell Biology 17 (2), 105-110, 2012.
8. S. Giovanzana, Ș. Țălu *Mathematical models for the shape analysis of human crystalline lens*. Journal of Modern Optics 59 (1), 26-34, 2012. (JIP = 1.170)
9. Ș. Țălu, S. Giovanzana *Image analysis of the normal human retinal vasculature using fractal geometry*. Human & Veterinary Medicine 4 (1), 14-18, 2012.
10. Ș. Țălu, S. Giovanzana, M. Țălu *Representation and mathematical analysis of human crystalline lens*. Oftalmologia 55 (2), 70-74, 2011.
11. Ș. Țălu, M. Țălu, S. Giovanzana *Representation and mathematical analysis of human corneal surface*. Oftalmologia 55 (2), 75-81, 2011.
12. Ș. Țălu, M. Țălu, S. Giovanzana, R. Shah *The history and use of optical coherence tomography in ophthalmology*. Human & Veterinary Medicine 3 (1), 19-32, 2011.
13. Ș. Țălu, M. Țălu, S. Giovanzana, R. Shah *A brief history of contact lenses*. Human & Veterinary Medicine 3 (1), 33-37, 2011.
14. Ș. Țălu, S. Giovanzana *Fractal and multifractal analysis of human retinal vascular network: a review*. Human & Veterinary Medicine 3 (3), 205-212, 2011.
15. S. Giovanzana, G. Savio, R. Meneghello, G. Concheri *Shape analysis of a parametric human lens model based on geometrical constraints*. Journal of Modern Optics 58 (19-20), 1770-1780, 2011. (JIP = 0.988)

#### *Proceedings*

1. S. Giovanzana *Lens Core Radius Curvature*. 9<sup>th</sup> European Meeting on Visual and Physiological Optics (VPO 2018), 29 - 31 August 2018, University of Athens, Athens, Greece.
2. S. Giovanzana, Ș. Țălu *Curvature Continuous Geometry Invariant Gradient Refractive Index Lens*. 8<sup>th</sup> European Meeting on Visual and Physiological Optics (VPO 2016), 22 - 24 August 2016, University of Antwerp, Antwerp, Belgium.
3. C.V. Longoni, Ș. Țălu, S. Giovanzana *Shape of the anterior and posterior surface of human cornea*. 7<sup>th</sup> EOS Topical Meeting coinciding with the 1<sup>st</sup> World Meeting on Visual and Physiological Optics (VPO 2014), 25 - 27 August 2014, Wrocław University of Technology, Wrocław, Poland.
4. S. Giovanzana, Ș. Țălu, A. Juszczak *Biconic surface eye model*. 7<sup>th</sup> EOS Topical Meeting coinciding with the 1<sup>st</sup> World Meeting on Visual and Physiological Optics (VPO 2014), 25 - 27 August 2014, Wrocław University of Technology, Wrocław, Poland.
5. Ș. Țălu, Z. Fazekas, M. Țălu, S. Giovanzana *Multifractal analysis of human peripapillary atrophy*. 8<sup>th</sup> International Symposium on Image and Signal Processing and Analysis (ISPA 2013), 4 - 6 September 2013, Trieste, Italy.
6. Ș. Țălu, Z. Fazekas, M. Țălu, S. Giovanzana *Analysis of human peripapillary atrophy using computerised image analysis*. 9<sup>th</sup> Conference of the Hungarian Association for Image Processing and Pattern Recognition (KÉPAF 2013), 29 January - 1 February 2013, Bakonybél, Hungary.
7. S. Giovanzana, H.T. Kasprzak, Ș. Țălu *Non-rotational, aspherical models of the human optical system*. 6<sup>th</sup> EOS Topical Meeting on Visual and Physiological Optics (EMVPO 2012), 20 - 22 August 2012, University College Dublin, Dublin, Ireland.
8. Ș. Țălu, S. Giovanzana, M. Țălu, I.V. Petrescu-Mag *3D Modeling and reconstruction of human corneal surface using superellipsoids*. 6<sup>th</sup> EOS Topical Meeting on Visual and Physiological Optics (EMVPO 2012), 20 - 22 August 2012, Dublin, Ireland.
9. Ș. Țălu, S.D. Țălu, S. Giovanzana, M. Țălu, I.V. Petrescu-Mag *Monofractal and multifractal analysis in human retinal pathology*. 6<sup>th</sup> EOS Topical Meeting on Visual and Physiological Optics (EMVPO 2012), 20 - 22 August 2012, Dublin, Ireland.
10. Ș. Țălu, S. Giovanzana, S.D. Țălu, M. Țălu *An overview on mathematical models of human crystalline lens*. International Conference on Advancements of Medicine and Health Care through Technology (MEDITECH 2011), 29 August - 2 September 2011, Cluj-Napoca, Romania.

11. Ș. Țălu, S. Giovanzana, M. Țălu, S.D. Țălu *Mathematical analysis of the human crystalline lens in Giovanzana parametric model*. International Conference on Advancements of Medicine and Health Care through Technology (MEDITECH 2011), 29 August - 2 September 2011, Cluj-Napoca, Romania.
12. S. Giovanzana, G. Savio, R. Meneghello, G. Concheri *Shape modeling and analysis of a human eye based on individual experimental data*. Innovative Methods in Product Design (IMProVe 2011), 15-17 August 2011, Venezia, Italy.
13. S. Giovanzana, G. Savio, R. Meneghello, G. Concheri *A parametric human lens model based on geometrical constraints*. 5<sup>th</sup> EOS Topical Meeting on Visual and Physiological Optics (EMVPO 2010), 22 - 24 August 2010, Royal Institute of Technology, KTH, AlbaNova, Stockholm, Sweden.
14. G. Savio, S. Giovanzana, R. Meneghello, G. Concheri. *Curvature analysis in design and verification of ophthalmic lenses*. 21<sup>st</sup> International Conference on Graphic Engineering (INGEGRAF 2009) and 17<sup>th</sup> Conferenza dell'Associazione Disegno di Macchine (ADM 2009), 10 - 12 June 2009, Lugo, Spain.

## **Computer Knowledge**

### *Operating System*

Microsoft Windows: good knowledge of all the release versions.

### *Programs*

- G-code for machine movements
- Production of a program for the design of contact lenses (LensPlot)
- Mathcad, Parametric Technology Corporation
- Matlab, The Mathworks
- Rhinoceros, McNeel & Associates
- C / C++

### *Others*

good knowledge of Microsoft Office.

## **Languages**

### *English*

- PET achieved in June 1999, mark "Pass with Merit".
- TOEFL achieved in January 2003, mark 197/300.
- Good reading ability and comprehension of written English, reasonable listening ability.