Serafeim Loukas

Nationality: *Greek*
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Education

2017– May 2021 **PhD in Electrical Engineering** Swiss Federal Institute of Technology Lausanne, Lausanne, Switzerland.
-Dissertation title: "Methods for functional connectivity and morphometry in neonatal neuroimaging to study neurodevelopment". Supervision: Prof. Dimitri Van De Ville, Prof. Petra Hüppi.

2015–2017 **Master in Neuroscience (M.Sc.)** University of Geneva, Geneva, Switzerland
-Thesis title: "Effective connectivity analysis of brain networks in preterm infants". Supervision: Prof. Dimitri Van De Ville, Prof. Petra Hüppi.

2010–2015 **Diploma in Electrical and Computer Engineering** Five years program at National Technical University of Athens, Athens, Greece
-Thesis title: "Analysis of biochemical phenotypes of the carotid atherosclerosis: Correlations with image-based and clinical indicators using clustering methods". Supervision: Prof. Konstantina Nikita.

2007–2010 **General Lyceum Certificate** Aristotelian General Lyceum, Corinth, Greece
-Participation to the Pan-Hellenic Exams 2009-2010, (19.242/20.000 points).

Awards and distinctions

- **Summa Cum Laude Merit Award** at the International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM) 2020.
- **Best poster presentation award**, Neuroscience Day (2016) at Campus Biotech, Geneva

  Best poster award among 30 neuroscience posters

Research Experience

2017 - 2021	**Doctoral Candidate** - Swiss Federal Institute of Technology Lausanne & University of Geneva Lausanne & Geneva, Switzerland *-Responsibilities: Research, scientific writing, project management, supervision of students, teaching activities.* *-Dissertation Title: "Brain connectomics: multivariate and predictive models for neurodevelopment".*
2015–2017	**Master Thesis** - University of Geneva, Geneva, Switzerland *-Thesis title: "Effective connectivity analysis of brain networks in preterm infants".*
2010–2015	**Bachelor Thesis** - National Technical University of Athens, Athens, Greece *-Thesis title: "Analysis of biochemical phenotypes of the carotid atherosclerosis: Correlations with image-based and clinical indicators using clustering methods".*

Teaching activities

2017 - 2021

- Image Processing I (MICRO-511)* & Image Processing II (MICRO-512)*
- Signal processing for functional brain imaging (MICRO-513)*

  ** Master courses at the Swiss Federal Institute of Technology Lausanne (EPFL)*

Professional experience

2020 - Present	**Official author at Medium** *Objective*: Publishing high-quality scientific articles for Towards Data Science & AI In Plain English publications
2017 - Present	**Ambassador of the E3 – EPFL Excellence in Engineering Summer internship program** EPFL, Geneva, Switzerland *Responsibilities*: *Contact and motivate students to apply for the E3 program. Promotion of the engineering school and research activities*

Foreign Languages

Greek	**Native**
English	**Proficient User: C2**
French	**Intermediate User: B1**

List of Publications & Presentations

Journal Papers

- **Loukas, S.***, Lordier, L.*, Grouiller, F., Vollenweider, A., Vasung, L., Meskaldji, D.-E., Lejeune, F., Pittet, M.P., Borradori-Tolsa, C., Lazeyras, F., Grandjean, D., Van De Ville, D., Hüppi, P.S., 2019. Music processing in preterm and full-term newborns: A psychophysiological interaction (PPI) approach in neonatal fMRI. NeuroImage 185, 857–864.
DOI: https://doi.org/10.1016/j.neuroimage.2018.03.078

- **Loukas, S.***, Lordier, L.*, Meskaldji, D.-E., Filippa, M., Sa de Almeida, J., Van De Ville, D., Hüppi, P.S., 2020. Musical memories in newborns: A resting-state functional connectivity study (Submitted to Human Brain Mapping Journal, 2021)

- Gui, L., **Loukas, S***., Lazeyras, F., Hüppi, P.S., Meskaldji, D.-E., Borradori Tolsa, C., 2019. Longitudinal study of neonatal brain tissue volumes in preterm infants and their ability to predict neurodevelopmental outcome. NeuroImage 185, 728–741.
DOI: https://doi.org/10.1016/j.neuroimage.2018.06.034

Oral Presentations

- **Loukas, S.,** (2017).*"Music training enhances functional connectivity in preterm newborns"*, CIBM/BBL day 2017, Geneva, Switzerland

- **Loukas, S.,** (2019). *"Investigating the effects of an early intervention in preterm newborns: A resting-state functional connectivity study"*, ISMRM Annual Meeting 2019, Montreal, Canada

Conference Abstracts Presentations

- **Loukas, S.**, et al., (2020). "*Resting State Functional Connectivity and Angiogenesis-related Gene Co-Expression Networks in early brain development*", Proc. Intl. Soc. Mag. Reson. Med. 28, ISMRM, Virtual conference.
(Link: `https://index.mirasmart.com/ISMRM2020/PDFfiles/4588.html`)

- **Loukas, S.**, et al., (2019). "*Investigating the effects of an early intervention in preterm newborns: A resting-state functional connectivity study*", Proc. Intl. Soc. Mag. Reson. Med. 27, ISMRM, Montreal, Canada.
(Link: `https://index.mirasmart.com/ISMRM2019/PDFfiles/0045.html`)

- **Loukas, S.,** et al., (2018). "*Adaptive linear discriminant analysis for complex networks to study extreme prematurity and intrauterine growth restriction effects at school age*", Proc. Intl. Soc. Mag. Reson. Med. 26, ISMRM, Paris, France.
(Link: `https://index.mirasmart.com/ISMRM2018/PDFfiles/5214.html`)

- **Loukas, S.**, et al., (2017). "*Music training enhances functional connectivity in preterm newborns*", Proc. Intl. Soc. Mag. Reson. Med. 25 (2017), ISMRM, Hawaii, USA.
(Link: `https://cds.ismrm.org/protected/17MProceedings/PDFfiles/4103.html`)