

# Vassilis Apidopoulos

*Post-doctoral researcher*

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## Personal information

Birth 30/08/1991  
Nationality Greek  
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## Main research interests

- Convex analysis
- Optimization
- Algorithms
- Dynamical systems
- Inverse problems
- Machine learning

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## Education

- 2019–2020 **Post-doc: "Theory and algorithms for Machine learning".**  
Laboratory for Computational and Statistical Learning, Genoa  
Main collaborators : Lorenzo Rosasco, and Silvia Villa
- 2016–2019 **Ph.D. in Applied Mathematics.**  
Institut de Mathématiques de Bordeaux, Université de Bordeaux, France.  
Thesis : Inertial Gradient-Descent algorithms for convex minimization.  
Advisors : Charles Dossal, Jean-François Aujol.  
Date of Defense : 11th of October 2019.  
Comitee : Samir Adly, Hedy Attouch, Jérôme Bolte, Guillaume Garrigos, Aude Rondepierre, Silvia Villa.
- 2014–2016 **Master's Degree in theoretical and applied Mathematics, Parcours Équations aux dérivées partielles.**  
Université-Claude Bernard Lyon 1-École Normale Supérieure de Lyon, France.  
Master's thesis : Analysis of proximal algorithms.  
Advisors : Charles Dossal, Jean-François Aujol.
- 2012–2013 **Erasmus program.**  
Institut de Mathématiques de Jussieu, Université Pierre et Marie Curie (Paris 6), France.
- 2009–2014 **Degree in Mathematics.**  
Aristotle University of Thessaloniki, Greece.

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## Publications and preprints

### Publications

1. V. Apidopoulos, J.-F. Aujol, Ch. Dossal : The Differential Inclusion Modeling FISTA Algorithm and Optimality of Convergence Rate in the Case  $b < 3$ , SIAM Journal on Optimization, 2018, Vol. 28, No. 1 : pp. 551-574.
2. V. Apidopoulos, J.-F. Aujol, Ch. Dossal : Convergence rate of inertial Forward-Backward algorithm beyond Nesterov's rule, Mathematical programming, (2018), <https://doi.org/10.1007/s10107-018-1350-9>.
3. V. Apidopoulos, J.-F. Aujol, Ch. Dossal, A. Rondepierre : Convergence rates of an inertial gradient descent algorithm under growth and flatness conditions, Mathematical Programming (2020) <https://doi.org/10.1007/s10107-020-01476-3>.

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## Computer skills

Programs	Matlab, Scilab, Mathematica
Programming languages	Python
Others	L <sup>A</sup> T <sub>E</sub> X

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## Teaching

- 2018-2019 Introduction to numerical analysis, theoretical and coding exercises (Scilab), (2nd year Bachelor students).
- 2017-2018 Mathematical bases for sciences, lectures and exercise sessions, (1st year Bachelor students).
- 2013-2014 Algebraic structures, teaching assistant for exercises (2nd year Bachelor students).

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## Presentations in conferences

- February 2020 Séminaire Modélisation, Optimisation, Dynamique , Limoges, France.
- May 2019 Congrès SMAI 2019, Guidel, France.
- October 2018 Journées annuelles 2018 des GdR MOA et MIA, Pau, France.
- May 2018 Colloque Inter'Actions 18, Lyon, France.
- April 2018 Ph.D. Students Lambda Seminar, Bordeaux, France.
- June 2017 Signal Processing with Adaptive Sparse Structured Representations (SPARS), Lisbon, Portugal.
- October 2017 Journées annuelles 2017 des GdR MOA et MIA, Bordeaux, France.

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## Participation in conferences

- February 2019 Workshop "Variational methods and optimization in imaging" : The mathematics of Imaging, Paris, France.
- January 2019 CIRM winter-school : The mathematics of Imaging, Marseille, France.

- January 2018 Mathematics and Image Analysis (MIA), Berlin, Germany.  
October 2016 Workshop CAVALIERI on Optimal Transport and Optimization in Imaging, Paris, France.  
December 2015 Winter school "Nonlinear Function Spaces in Mathematics and Physical Sciences", Lyon, France.

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### Organization responsibilities

- 2018-2019 Organizer of the Ph.D. Students Seminar, IMB, Bordeaux, France.  
2018-2019 Co-organizer of Colloque Inter'Actions 19 in Bordeaux, for Ph.D. students in Mathematics in France.  
2019-2020 Organizer of the LCSL (Laboratory for Computational and Statistical Learning) weekly group meeting, LCSL, Genova, Italy.

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### Other

- 2018-2019 President of the Ph.D. students association in Bordeaux (Lambda).

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### Languages

- Greek Mother tongue  
French Fluent  
English Fluent  
Italian Intermediate

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### References

- Charles Dossal : [charles.dossal@insa-toulouse.fr](mailto:charles.dossal@insa-toulouse.fr)
- Jean François Aujol : [Jean-Francois.Aujol@math.u-bordeaux.fr](mailto:Jean-Francois.Aujol@math.u-bordeaux.fr)