

# Quoc-Hung Nguyen

École Polytechnique Fédérale de Lausanne  
Postal address: EPFL SB MATHAA CAMA  
MA C1 632 (Bâtiment MA), Station 8,  
CH-1015 Lausanne, Switzerland  
Phone: +41 21 69 37730  
E-mail: quoc-hung.nguyen@epfl.ch  
Homepage: <http://people.epfl.ch/quoc-hung.nguyen>

## EDUCATION

- October, 2011- September, 2014: Ph.D. of Laboratoire de Mathématiques et Physique Théorique, Université François-Rabelais, Tours, France.  
Thesis title: *Nonlinear potential theory and quasilinear equations with measure data.*  
Distinction awarded: Très Honorable avec Félicitations du Jury (Highly Honorable with Praises of the Jury).  
Advisors: Professors Marie-Françoise Bidaut-Véron and Laurent Véron.  
Referees: Professors Carlos Kenig, Giuseppe Mingione and Augusto Ponce.  
Examiners: Professors Fabrice Bethuel, Marie-Françoise Bidaut-Véron, Petru Mironescu, Augusto Ponce, Philippe Souplet, Étienne Sandier and Laurent Véron.
- 2010 - 2011: Master of Science in Applied Mathematics, University of Orléans.  
Advisors: Prof. Marie-Françoise Bidaut-Véron and Prof. Laurent Véron.
- 2006 - 2010: B.S in Faculty of Mathematics and Computer Science, University of Science, Hochiminh City National University.

## EMPLOYMENT

- December, 2014-August, 2016: Postdoctoral fellow, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland.
- September, 2016-August, 2018: Junior research position, the Centro di Ricerca Matematica Ennio De Giorgi, the Scuola Normale Superiore di Pisa, Italy.

## RESEARCH INTERESTS

Partial Differential Equations, Harmonic Analysis, Nonlinear Potential Theory, Calculus of Variations and Inverse Scattering.

## PUBLICATIONS

1. M. F. Bidaut-Véron, Quoc-Hung Nguyen, L. Véron; *Quasilinear Lane-Emden equations with absorption and measure data*, Journal des Mathématiques Pures et Appliquées **102**, 315-337 (2014).
2. Quoc-Hung Nguyen, L. Véron; *Quasilinear and Hessian type equations with exponential reaction and measure data*, Archive for Rational Mechanics and Analysis **214**, 235-267 (2014).
3. Quoc-Hung Nguyen, L. Véron; *Wiener criteria for existence of large solutions*

- of quasilinear elliptic equations with absorption,* Potential Analysis **42**, 681-697 (2015).
4. M. F. Bidaut-Véron, Quoc-Hung Nguyen; *Stability properties for quasilinear parabolic equations with measure data,* Journal of the European Mathematical Society , **17**, 2103–2135 (2015).
  5. M. F. Bidaut-Véron, Quoc-Hung Nguyen; *Evolution equations of  $p$ -Laplace type with absorption or source terms and measure data,* Communications in Contemporary Mathematics, **17**, 1550006, (2015).
  6. Quoc-Hung Nguyen; *Global estimates for quasilinear parabolic equations on Reifenberg flat domains and its applications to Riccati type parabolic equations with distributional data,* Calculus of Variations and Partial Differential Equations, **54**, 3927-3948 (2015).
  7. M.F. Bidaut-Veron, Giang Hoang, Quoc-Hung Nguyen, L. Veron; *An elliptic semilinear equation with source term and boundary measure data,* Journal of Functional Analysis , **269**, 1995–2017 (2015).
  8. Quoc-Hung Nguyen, L. Véron; *Wiener criteria for existence of large solutions of nonlinear parabolic equations with absorption in a non-cylindrical domain,* 29 pages, Journal of Differential Equations, **260**, 4805–4844 (2016).
  9. M. F. Bidaut-Véron, Quoc-Hung Nguyen; *Pointwise estimates and existence of solutions of porous medium and  $p$ -Laplace evolution equations with absorption and measure data,* to appear in Annali della Scuola Normale Superiore di Pisa, Classe di Scienze (arXiv:1407.2218 ).
  10. Quoc-Hung Nguyen; *Potential estimates and quasilinear parabolic equations with measure data,* 120 pages, submitted. (hal-00989464).
  11. Hoai-Minh Nguyen, Quoc-Hung Nguyen; *Discreteness of interior transmission eigenvalues revisited,* submitted.

#### PREPRINTS

- 12 Quoc-Hung Nguyen; *Nonstationary Navier-Stokes equations with singular time dependent external forces,* preprint.
- 13 M.F. Bidaut-Veron, Quoc-Hung Nguyen, L. Veron; *Quasilinear elliptic equations with source mixed term and measure data,* preprint.
- 14 M.F. Bidaut-Veron, Quoc-Hung Nguyen, L. Veron; *Quasilinear and Hessian systems of Lane-Emden type,* preprint.
- 15 Quoc-Hung Nguyen; *Potential estimates for quasilinear elliptic and parabolic equations with distributional data,* preprint.
- 16 Quoc-Hung Nguyen; *Global and pointwise estimates for solutions of the stationary Stokes equations and applications to the Navier-Stokes equations,* preprint.

#### WORK

##### EXPERIENCE

- Fall 2010 : Teaching Assistant for Analysis 1 at Faculty of Mathematics And Computer Science, University of Sciences, Hochiminh City National University, Vietnam.
- Spring 2016: Teaching Assistant for Analysis 4 at EPFL, Switzerland.

##### SERVICE

Referee for the journals: Advances in Mathematics (1), Journal of Differential

Equations (2), Potential Analysis (1), Journal of Elliptic and Parabolic Equations (1), Communications in Contemporary Mathematics (1), Nonlinear analysis series A: Theory, Methods & Applications (2).

## ACTIVITIES

- June 2012: **Participant**, Quasilinear equations and singular problems: a conference of Fronts and InteRfaces in Science and Technology, LMPT, Tours, France.
- November 2013: **Speaker**, Analysis Seminar, EPFL, Lausanne, Switzerland.
- June 2014: **Participant**, A conference in honor of Haïm Brezis: Partial differential equations and nonlinearities at IHP, Paris, France.
- June 2015: **Participant**, Geometric non-linear analysis: conference on the occasion of Michael Struwe's 60th birthday, ETH, Zurich, Switzerland.
- July 2015: **Speaker**, Analysis seminar, Faculty of Mathematics and Computer Science, University of Science, Hochiminh City National University, VietNam.
- December 2015: **Speaker**, Workshop on Regularity Theory on Elliptic and Parabolic Equations at Department of Mathematical Sciences, Seoul National University, Seoul, Kroea.
- April 2016: **Participant**, Recent Trends in Nonlinear Evolution Equations, Marseille, France.

## REFERENCES

### **Professor Marie-Françoise Bidaut-Véron**

Laboratoire de Mathématiques et Physique Théorique  
CNRS UMR 6083 Faculté des Sciences et Techniques  
Parc de Grandmont, 37200 Tours France.  
Email address: [veronmf@math.univ-tours.fr](mailto:veronmf@math.univ-tours.fr)  
Website: <http://www.lmpt.univ-tours.fr/> veronmf/

### **Professor Laurent Véron**

Laboratoire de Mathématiques et Physique Théorique  
CNRS UMR 6083 Faculté des Sciences et Techniques  
Parc de Grandmont, 37200 Tours France.  
Email address: [Laurent.Veron@lmpt.univ-tours.fr](mailto:Laurent.Veron@lmpt.univ-tours.fr)  
Website: <http://www.lmpt.univ-tours.fr/> veronl/

### **Professor Hoai Minh Nguyen**

Chair of Analysis and Applied Mathematics  
EPFL SB CAMA  
MA B2 535 (Bâtiment MA)  
Station 8, CH-1015 Lausanne, Switzerland  
Email address: [hoai-minh.nguyen@epfl.ch](mailto:hoai-minh.nguyen@epfl.ch)  
Website: <http://cama.epfl.ch/page-102466-en.html>

### **Professor Giuseppe Mingione**

Dipartimento di Matematica e Informatica,  
Università di Parma,

Parco Area delle Scienze 53/a, Campus,

43100 Parma, Italy

Email address: [giuseppe.mingione@unipr.it](mailto:giuseppe.mingione@unipr.it)

Website: <https://sites.google.com/site/giuseppemingionemath/>