Huy Hoang Nguyen

Houston, TX, USA

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hhnmaths@gmail.com, hoangnguyen@smu.edu

https://www.linkedin.com/in/hhnmaths/

http://www.hoangnguyen.us

FORMAL EDUCATION

2009 Qualified by the Scientific Committee of the *French Ministry for Higher Education and Scientific Research* as an Assistant Professor
(Maître de conférences, in France) in eligibility campaign 2009.

Oct 2004 – Nov 2008

PhD in Mathematics

Université de Pau et des Pays de l'Adour (UPPA), France | ***Mention: Highest honors***
Thesis: "Equations de Navier-Stokes equations in three-dimensional unbounded domains and elliptic problems with L^1 data." | Advisor: Chérif Amrouche

Sep 2019 – May 2021

Master of Science in Data Science

Southern Methodist University (SMU), USA
Major: Machine Learning Specialization | Minor: Business Analytics Specialization

Sep 2003 – Jun 2004

Master of Science in Applied Mathematics for Physics and Mechanics - Petroleum Industry

Université de Pau et des Pays de l'Adour (UPPA), France
Thesis: "Equations de Navier-Stokes en domaine extérieur." | Advisor: Chérif Amrouche

Sep 2003 – Jul 2004

Bachelor of Science in Mathematics

Ho Chi Minh City University of Education (HCMUE), Vietnam
Agence Universitaire de la Francophonie (AUF), France/Canada
Thesis: "Enseignement de notion de dérivée au lycée au Vietnam et en France." | Advisor: Tien Le

PROFESSIONAL DEVELOPMENT

Sep 2019 – May 2021

Master of Science in Data Science

Southern Methodist University
11 courses and Capstone Projects (33.5-credit program: 24 core credits, 6 elective credits, 1.5 immersion experience credits, 2 capstone credits): Statistical Foundations for Data Science, Doing Data Science, On-Campus Immersion, Applied Statistics: Inference and Modeling, File Organization and Database Management, Visualization of Information, Quantifying the World, Natural Language Processing, Machine Learning 1 and 2 , Business Analytics, Capstone Projects

2019

IBM Data Science Professional Certificate

IBM | Coursera Professional Certificate (around 100 hours)
("This Professional Certificate from IBM is intended for anyone interested in developing skills and experience to pursue a career in Data Science or Machine Learning." - IBM)
9 Courses: What is Data Science (June 2019), Open Source tools for Data Science (June 2019), Data Science Methodology(July 2019), Python for Data Science (July 2019), Databases and SQL for Data Science (August 2019), Data Analysis with Python, Data Visualization with Python, Machine Learning with Python, Applied Data Science Capstone

IBM Digital Credentials:

- Data Science Orientation (June 2019)
- Open Source Tools for Data Science (June 2019)
- Data Science Methodology (July 2019)
- Python for Applied Data Science (July 2019)
- Databases and SQL for Data Science (August 2019)

PROFESSIONAL EXPERIENCE

Nov 2019 – Present

Member - Board of Directors

DataReady DFW

(Dallas - TX - USA)

Work Experience/Achievements:

- The mission of DataReady is to help grow data and data science knowledge among DFW area residents, especially minorities, women, and low income individuals. We work with individuals of all ages including K-12 and adults through both long term hands on project based training as well as individual events.
- We aim to teach area residents' all about data, including data science and data literacy, and provide skills to high school students and adults that are potentially immediately transferable to salaried careers upon program completion.

Sep 2019 – May 2021

Master of Science in Data Science

Southern Methodist University

(Dallas - TX - USA)

Experience/Achievements:

- Jan 2020 - Apr 2020:

- DS 7330 File Organization and Database Management:
* Learn about data management in the context of databases (relational database systems with an emphasis on the fundamental topics including data modeling, query optimization, and transactions, NoSQL databases and the XML and JSON data communication languages)
* Use Python for database access with the use of MySQL and MongoDB databases. Course work and examples utilize Python, Jupyter Notebook, MySQL, MySQL Workbench, and MongoDB.
* Project: Apache Spark Ecosystem for Big Data Analytics (will be updated on April 26 2020)
Project link: https://www.hoangnguyen.us/data-science-projects

-DS 6372 Applied Statistics: Inference & Modeling:
* Gain understanding and confidence statistical methods and concepts that complement their knowledge from DS 6371.
* Demonstrate understanding of the advantages and disadvantages of a given experimental design, particularly with respect to the type of conclusions that can be made.
* Appropriately apply the methods discussed in the course to numerical and categorical data, including multivariate responses, correlated responses, and explanatory variables.
* Communicate the findings of a statistical analysis from these new methods in a clear, concise, and scientific manner. This includes learning various structures of professional journal and statistical report writing.
* Use R and SAS in this course.
* Project 1: Modeling Beer Advocate Reviews
Project link: https://hnguye01.github.io/DS6372/Stats2Pr1.pdf
* Project 2: Bank Marketing Data Analysis (will be updated on April 26 2020)
Project link: https://www.hoangnguyen.us/data-science-projects

- Sep 2019 - Dec 2019:

- DS 6110 Immersion:
* Being designed to offer additional learning, networking and relationship-building opportunities.
* Attend a conference and have the chance to meet in person with classmates, faculty, industry leaders and employers for hands-on workshops, panels, lectures and informational sessions.

- DS 6306 Doing Data Science:
* Get a practical hands-on overview of the end-to-end data science process using industry standard tools and techniques
* Use tools such as R, RStudio, knitr, R Markdown, and GitHub to organize and document research so that others can reproduce and/or continue your work
* Use the principles of "tidy data" to create clean data sets from messy ones using R
* Conduct exploratory data analysis (EDA) to understand, summarize, and extract insights from data sets
* Learn and apply basic machine learning and time-series modeling techniques
* Learn how to deploy models with GitHub Pages and ShinyApps.io
* Gain the ability to analyze very large data sets with Amazon Web Services Elastic Cloud Compute (AWS EC 2) and S3
* Communicate the findings of a project in a clear, concise, and scientific manner
* Midterm project - Beer Analysis: The focus of the project was to use the given data sets in order to advise our company (Budweiser) on how to compete with the growing microbrewery industry by tailoring new beer releases by region with the most common styles, mean ABVs, and median IBUs in the market.
Github link: https://github.com/hnguye01/6306one
Presentation slides: https://hnguye01.github.io/Pre01.html
Beer Shiny Apps: https://hnguye01.shinyapps.io/beerapp/
* Data Science News Presentation: Snake oil and Artificial Intelligence
Presentation slides: https://hnguye01.github.io/DS6306NEw.pdf
* Final term project - Attrition Analysis: DDSAnalytics is an analytics company that specializes in talent management solutions for Fortune 100 companies. Talent management is defined as the iterative process of developing and retaining employees. It may include workforce planning, employee training programs, identifying high-potential employees and reducing/preventing voluntary employee turnover (attrition). To gain a competitive edge over its competition, DDSAnalytics is planning to leverage data science for talent management. The executive leadership has identified predicting employee turnover as its first application of data science for talent management.
Github link: Github Link: https://github.com/hnguye01/6306two
Presentation slides: https://hnguye01.github.io/DS6306/html/Presentation.pdf
Data Visualization App: https://hnguye01.shinyapps.io/DDSAnalyticsApp/

- DS 6371 Statistical Foundations for Data Science:
* Gain a better understanding of basic statistical methods covered in introductory statistics courses and problems that arise when these analytic methods are applied to real-life research problems
* Demonstrate understanding of the advantages and disadvantages of a given experimental design, particularly with respect to the type of conclusions that can be made
* Appropriately apply the methods discussed in the course to numerical and categorical data
* Communicate the findings of a statistical analysis in a clear, concise, and scientific manner
* Use SAS, R and Microsoft Excel in this course.
* Kaggle project - House Prices: In this project, we will use 79 explanatory variables describing (almost) every aspect of residential homes in Ames, Iowa, to predict the final price of each home by using different methods in order to choose the best model. We will practice feature engineering and regression algorithms to achieve the lowest prediction error.
Kaggle project Description: https://hnguye01.github.io/6371Description.html
Github link: https://github.com/hnguye01/6371Kaggle
Final Report: https://hnguye01.github.io/DS6371/Kaggle_ReportMSDS6371.pdf

Aug 2019 – Present

Adjunct Faculty

North American University

(Stafford - TX - USA)

Work Experience/Achievements:

- Teaching Math courses (Undergraduate and Graduate courses)

Aug 2019 – Present

Adjunct Faculty

University of Houston-Clear Lake

(Houston - TX - USA)

Work Experience/Achievements:

- Teaching Math courses (Departments of Mathematics and Statistics - College of Science and Engineering)

Oct 2017 – Present

Associate Researcher

Laboratoire de Mathématiques et de leurs Applications | UMR E2S-UPPA CNRS 5142
Université de Pau et des Pays de l'Adour | Centre National de la Recherche Scientifique

(Pau - France)

Work Experience/Achievements:

- Conducting variety of research projects in collaborating with other institutional researchers in Partial Differential Equations and Fluid Mechanics

Nov 2011 – Present (on leave)

Professor

Universidade Federal do Rio de Janeiro | Undergraduate and Graduate Programs

(Rio de Janeiro - Brazil)

Work Experience/Achievements:

- Teaching 2-3 undergraduate and graduate mathematics courses per semester, approximately 8-10 hours per week at university level
- Advising and mentoring graduate students
- Conducting and maintaining an active role in research, grant funding, and international scholar review
- Performing departmental duties such as participating in hiring committees, master and Ph.D juries for student candidates; serving as an institutional mathematical coordinator; coordinating PDE seminars at Institute of Mathematics and other extension activities

Sep 2017 – Dec 2018

Collaborator Professor

Universidade Federal do Pará | Graduate Programs in Mathematics

(Belém - Brazil)

Work Experience/Achievements:

- Collaborating in PhD Program in Mathematics and co-advising PhD candidates

Sep 2009 – Aug 2011

Post-Doctorate

Universidade Estadual de Campinas

(Campinas - Brazil)

Work Experience/Achievements:

- Conducting variety of research projects in collaborating with other institutional researchers in Partial Differential Equations and Fluid Mechanics

ACADEMIC AND INDUSTRIAL FIELDS OF INTEREST

- Partial Differential Equations
- Fluid Mechanics
- Quantum Mechanics
- Biological Sciences
- Computer Science
- Data Science
- Business Analytics
- Statistics
- Machine Learning

GRANTS AND AWARDS

2018 **Universidade Federal de São João del-Rei (UFSJ)(Brazil)** and
Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Brazil)
(*National Council for Scientific and Technological Development*)
Purpose:

- 1^o Workshop em Matemática Aplicada
  (Fisrt Workshop in Applied Mathematics - UFSJ - Brazil)

2018 **Universidade Federal do Pará (UFPA)(Brazil)** and
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) (Brazil)
(*Coordination for the Improvement of Higher Level Personnel*)
Project:

- Coupled system of wave equations with fractional damping and sources terms
  Collaborators:
  Maurício da Silva Vinhote (UFPA - Brazil) (PhD student)
  Mauro de Lima Santos (UFPA - Brazil)

2018 **Université Paris-Est (France)**
Project:

- Mathematical derivation of models using the singular limits
  Collaborators:
  Bernard Ducomet (Université Paris-Est - France)
  Sárka Neccasová (The Academy of Sciences - Czech Republic)

2018 **Université de Bordeaux (France)** and **INRIA Sud-Ouest (France)**
Project:

- DG-method for Oseen problem
  Collaborators:
  Afaf Bouharguane (Université de Bordeaux - France)
  Nour Seloula (Université de Caen - France)

2018 **Université de Rennes 1 (France)**
Purpose:

- Journées Louis Antoine - Rennes 2018

2018 **The Academy of Sciences of Czech Republic (Czech Republic)**
Project:

- Singular limits and resolvent estimates
  Collaborators:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Bernard Ducomet (Université Paris-Est - France)
  Sárka Neccasová (The Academy of Sciences - Czech Republic)
  Stanislav Kracmar (Czech Technical University - Czech Republic)
  Milan Pokorny (Charles University - Czech Republic)

2017 **Université de Caen (UNICAEN) (France)**
Purpose:

- To support my visit to UNICAEN - France in 12/2017

Project:

- Darcy-Forchheimer model
  Collaborator:
  Nour Seloula (Université de Caen Normandie - France)

2017 **Universidade Federal do Rio de Janeiro (UFRJ) (Brazil)** and
Université de Pau et des Pays de l'Adour (UPPA) (France)
Purpose:

- To support my visit to UPPA - France from 10/2017-03/2018

2017 **Universidade Federal do Rio de Janeiro (UFRJ) - Brazil**
Purpose:
- To support my invited talk at "VII International Symposium of Applied Mathematics" (organised by Universidad Nacional Mayor de San Marcos - Peru)

2017 **Projet Exploratoire Premier Soutien (PEPS - CNRS) (France)**
Purpose:
- To support the visits of A. Bouharguane and N. Seloula to UFRJ - Brazil and my visit to Université de Caen - France

2017 **Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) (Brazil)**
(Coordination for the Improvement of Higher Level Personnel) and
Graduate Programs of Mathematics - Institute of Mathematics - UFRJ (Brazil)
Purpose:
- A. Bouharguane's visit (Université de Bordeaux - France) and N. Seloula's visit (Université de Caen - France) to Universidade Federal do Rio de Janeiro (Brazil)

2017 **Centre National de la Recherche Scientifique (CNRS) (France)**
(National Centre for Scientific Research) and
Université de Pau et des Pays de l'Adour (UPPA) (France)
Project:
- Research book "Elliptic problems in unbounded domains"
- Continuation of the project "Boundary value problems with singular data"

  Collaborators:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Mohand Moussaoui (Ecole Centrale de Lyon - France and Ecole Normale Superieure, Kouba - Algeria)
  Yves Raudin (Université de Pau et des Pays de l'Adour - France)

2016 **Universidade Federal do Rio de Janeiro (UFRJ) (Brazil)**
Purpose:
- To support my invited talk at the Workshop "Fluids under Pressure" (organised by Czech Academy of Sciences)

2016 **The Academy of Sciences of Czech Republic (Czech Republic)**
Project:
- Singular limits and resolvent estimates

  Collaborators:
  Hind Al Baba (The Academy of Sciences - Czech Republic)
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Sárka Neccasová (The Academy of Sciences - Czech Republic)

2016 **Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Brazil)**
(National Council for Scientific and Technological Development) and
Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro (FAPERJ) (Brazil)
(Research Support Foundation of the State of Rio de Janeiro)
Project:
- Pronex (Support Program for Excellence Centers)
  (IMPA - National Institute for Pure and Applied Mathematics - Brazil)

2015 **Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) (Brazil)**
(Coordination for the Improvement of Higher Level Personnel) and
Graduate Programs of Mathematics - Institute of Mathematics - UFRJ (Brazil)
Purpose:
- Chérif Amrouche's visit (Université de Pau et des Pays de l'Adour - France) to Universidade Federal do Rio de Janeiro (Brazil)

2015 **The Academy of Sciences of Czech Republic (Czech Republic)**
Project:
- Fluid mechanics

  Collaborators:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Sárka Neccasová (The Academy of Sciences - Czech Republic)

2015 **Université de Caen Normandie (France)**
Project:
- Darcy-Forchheimer model

  Collaborator:
  Nour Seloula (Université de Caen Normandie - France)

2015 **Centre National de la Recherche Scientifique (CNRS) (France)**
(National Centre for Scientific Research) and
Université de Pau et des Pays de l'Adour (UPPA) (France)
Projects:
- Research book "Elliptic problems in unbounded domains"
- Continuation of the project "Boundary value problems with singular data"

  Collaborators:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Mohand Moussaoui (Ecole Centrale de Lyon - France and Ecole Normale Superieure, Kouba - Algeria)
  Yves Raudin (Université de Pau et des Pays de l'Adour - France)

2015 **Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Brazil)**
(National Council for Scientific and Technological Development) and
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) (Brazil)
(Coordination for the Improvement of Higher Level Personnel)
Purpose:
- Dung Le's visit (University of Texas at San Antonio (UTSA -USA) to Universidade Federal do Rio de Janeiro (Brazil)

2014 **Universidade Federal do Rio de Janeiro (UFRJ) (Brazil)**
Purpose:
- My visit to UTSA (invited by Dung Le) (Dec.2014 - Jan.2015)

2014 **Centre National de la Recherche Scientifique (CNRS) (France)**
(National Centre for Scientific Research) and
Université de Pau et des Pays de l'Adour (UPPA) (France)
Project:
- Boundary value problems with singular data

  Collaborators:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)
  Mohand Moussaoui (Ecole Centrale de Lyon - France and Ecole Normale Superieure, Kouba - Algeria)

2013 **Brazilian- French networks in Mathematics**
(CNPq - Brazil and CNRS - France)
Project:
- Laplace equation with data in Sobolev spaces

  Collaborator:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)

2013 **Brazilian- French networks in Mathematics**
(CNPq - Brazil and CNRS - France)
Project:
- Fluid mechanics in the prospecting of oil reservoirs

  Collaborator:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)

2013 **Universidade de Lisboa (Portugal)**
Project:
- A model of viscous fluids

  Collaborator:
  Nikolai Chemetov (Universidade de Lisboa - Portugal)

2012 - 2013 **Program for recent PhD ALV' 2012**
(Universidade Federal do Rio de Janeiro - Brazil)

2009 - 2011 **São Paulo Research Foundation ((FAPESP) (Brazil) (#09/11017-6))**
Project:
- Mathematical aspects of the dynamics of incompressible fluids

  Collaborators:
  Milton da Costa Lopes Filho (UNICAMP - Brazil)
  Helena Judith Nussenzveig Lopes (UNICAMP - Brazil)

2008 **PhD thesis with the highest honors**
(Université de Pau et des Pays de l'Adour - France)

2008 **Scientific Excellence Award**
(UPPA and Pyrénées Atlantiques Region - France)

2004 - 2008 **FormathVN** and **UPPA**
(Université de Paris 13 and UPPA - France)
Project:
- The stationary Navier-Stokes equations and elliptic problems

  Collaborator:
  Chérif Amrouche (Université de Pau et des Pays de l'Adour - France)

2003 **Congratulations of the President of HCMC University of Education (Vietnam)**

2002 **Outstanding Student Award of AUF**
Agence universitaire de la Francophonie - France/Canada

1999 **Scientific Baccalaureate with the excellent mention (the highest mention) (Vietnam)**

1999 **National Chemistry Olympiad for High school students (Vietnam)**

TEACHING

2019 - current **North American University (USA)**
Undergraduate courses:
- Math 2315 - Calculus 2
- Math 2316 - Linear Algebra
- Math 2317 - Discrete Mathematics

Graduate courses:
- Math 3320 - Differential Equations

2019 - current **University of Houston-Clear Lake (USA)**
Undergraduate courses:
- Math 2318 02 - Linear Algebra

2011 - 2018 **Universidade Federal do Rio de Janeiro (Brazil)**

Undergraduate courses:

- Calculus I
- Calculus II
- Calculus III
- Calculus IV
- Linear Algebra

Graduate courses:

- Partial Differential Equations (PhD course)
- Weighted Sobolev spaces - Elliptic problems in the half-space (Summer course)
- Real Analysis
- Research Topics of Partial Differential Equations
- Internship advisor (Graduate Students)

2010 **Universidade Estadual de Campinas (Brazil)**

Graduate course:

- The Incompressible Navier-Stokes Equations (Topic)

STUDENTS **PhD student:**

Adriano Pedreira Cattai (UFBA - Brazil)

- Scholarship: CAPES
- Project: "Existence and Stability of Solution for Partial Differential Equations of the p-Laplacian type"
- PhD Co-advisor with Carlos Alberto Raposo da Cunha (UFSJ) (starting in March 2019)

Master students:

Bruno Telch dos Santos (UFRJ - Brazil), (defended in August 2015)

- Scholarship: CNPq
- Project: "Study of some elliptic problems with Dirichlet boundary condition"

Alex David Hernández Maturrano (UFRJ - Brazil), (defended in June 2015)

- (Scholarship: CAPES)
- Project: "Weighted Sobolev Spaces - Applications to div-curl-grad operators in R^N"

TA supervisor:

Bruno Telch dos Santos (UFRJ - Brazil)

- Tutor for Calculus II, IV and his teaching training courses (2014, 2015, 2016)

Igor Tenorio Soares (UFRJ - Brazil)

- Monitor for Calculus II (2013)

PUBLICATION AND WORK IN PROGRESS

Submitted Papers

Exponential stability for a Timoshenko system with nonlocal delay.
(with C. Raposo and C. Nonato).

Global solution and exponential stability for a thermoelastic laminated beam with interfacial slip.
(with C. Raposo, J. A. D. Chuquipoma and J. O. Ribeiro).

Accepted Papers

Laminated Timoshenko beams with second sound.
(with C. Raposo, R. Lobato and O. Vera).

In Journals

On the solutions for the extensible beam equation with internal damping and source terms.
(with D. Pereira, C. Raposo and C. Maranhão)
Differential Equations & Applications, v. 11 (3), p.367-377, 2019.

Well-posedness and exponential stability for a wave equation with nonlocal time-delayed condition.
(with V. Barros, C. Raposo and J. Ribeiro)
Electronic Journal of Differential Equations, v.2017-279, p.1-11, 2017.

Asymptotic behavior of solutions to a system of Schrödinger equations.
(with X. Carvajal, P. Gamboa, S. Necasová and O. Vera)
Electronic Journal of Differential Equations, v.2017-171, p.1-23, 2017.

Vibrations modeled by the standard linear model of viscoelasticity with boundary dissipation.
(with P. Gamboa, V. Poblete and O. Vera)
Electronic Journal of Differential Equations, v.2017-163, p.1-10, 2017.

Incompressible and ideal 2D flow around a small obstacle with constant velocity at infinity.
(with M. C. Lopes Filho and H. J. Nussenzveig Lopes)
Quarterly of Applied Mathematics, v.71, p.679 - 687, 2013.

Elliptic problems with L^1-data in the half-space.
(with C. Amrouche)
Discrete and Continuous Dynamical Systems. Series S, v. 5, p. 369-397, 2012.

New estimates for the div, curl, grad operators and elliptic problems with L^1-data in the half-space.
(with C. Amrouche)
Applied Mathematics Letters, v. 24, p. 697-702, 2011.

New estimates for the div-curl-grad operators and elliptic problems with L^1-data in the whole space and in the half-space.
(with C. Amrouche)
Journal of Differential Equations (Print), v. 250, p. 3150-3195, 2011.

L^p-Weighted Theory for Navier-Stokes Equations in Exterior Domains.
(with C. Amrouche)
Communications in Mathematical Analysis, v. 8, p. 41-69, 2010.

The stationary three-dimensional Navier-Stokes equations with a non-zero constant velocity at infinity.
(with C. Amrouche)
Mathematical Methods in the Applied Sciences, v. 31, p. 2147- 2171, 2008.

New characterization of the kernel of the n-dimensional Laplace operator in exterior domains.
(with C. Amrouche)
Comptes Rendus. Mathématique, p. 1257-1260, 2008.

Other Publications

Equations de Navier-Stokes dans des domaines non bornés en dimension trois et problèmes elliptiques à données dans L^1.
UPPA, 2008 (PhD thesis).

Equations de Navier-Stokes en domaine extérieur.
UPPA, 2004 (Master thesis).

Enseignement de notion de dérivée au lycée au Vietnam et en France.
HCMUE, 2003.

Works in progress

Elliptic problems in unbounded domains.
(with C. Amrouche and Y. Raudin)
(Research Book).

Mathematical derivation of models using the singular limits.
(with B. Ducomet, S. Necasová and M. Pokorny)
(paper).

System of coupled Schrödinger equations.
(with X. Carvajal, P. Gamboa)
(paper).

Existence and Stability of Solution for Partial Differential Equations of the p-Laplacian type.
(with Adriano P. Cattai and Carlos Raposo)
(PhD thesis).

Oseen resolvent problem in unbounded domains.
(with H. Al Baba, C. Amrouche and S. Necasová)
(paper).

Asymptotic behavior of weak solutions to the stationary three-dimensional incompressible Magnetohydrodynamics equations.
(with C. Amrouche and L. Hoang)
(paper).

Laplace equation with non regular data in bounded domains.
(with C. Amrouche and M. Moussaoui)
(paper).

Boundary value problems with singular data.
(with C. Amrouche and M. Moussaoui)
(paper).

Oseen operator with Navier-type boundary conditions on L^p.
(with C. Amrouche and S. Necasová)
(paper).

Study of the Stokes, Oseen and Navier-Stokes problems with different boundary conditions.
(with C. Amrouche, S. Kracmar and S. Necasová).

Study of elliptic problems with $L^{3/2}$-data.
(with C. Amrouche).

Theoretical and Numerical Brinkman-Forchheimer equations.
(with N. Seloula and A. Bouharguane).

Discussion - Future possibilities

Study of the Stability Navier-Stokes problem.
(with P. Varandas).

Study of some reaction - diffusion systems.
(with D. Le and S. Ahmad).

Some problems about Global Attractors for a Nonlocal Evolution Equations.
(with F. Bezerra).

Some non-homogeneous elliptic problems in unbounded domains. Fractional weighted Sobolev spaces.
(with Y. Raudin).

Study of Machine Learning.
(with H. V. Le).

COLLABORATION

Hind Al Baba - The Academy of Sciences of Czech Republic (Czech Republic).

Chérif Amrouche - Université de Pau et des Pays de l'Adour (France).

Vanessa Barros de Oliveira - Universidade Federal da Bahia (Brazil).

Flank David Morais Bezerra - Universidade Federal da Paraíba (Brazil).

Afaf Bouharguane - Université de Bordeaux (France).

Xavier Carvajal Paredes - Universidade Federal do Rio de Janeiro (Brazil).

Bernard Ducomet - Commissariat à l'énergie atomique et aux énergies alternatives (CEA) e Université Paris-Est-Créteil-Val-de-Marne/UMR CNRS 8050 (France).

Milton da Costa Lopes Filho - Universidade Federal do Rio de Janeiro (Brazil).

Pedro Gamboa Romero - Universidade Federal do Rio de Janeiro (Brazil).

Luan Thach Hoang - Texas Tech University (USA).

Stanislav Kracmar - Czech Technical University (Czech Republic).

Renato Fabrício Costa Lobato - Universidade Federal do Pará (Brazil).

Celsa Herminia de Mélo Maranhão - Universidade Federal do Pará (Brazil).

Mohand Moussaoui - Ecole Centrale de Lyon (France) and Ecole Normale Superieure (Kouba, Algeria).

Sárka Necasová - The Academy of Sciences of Czech Republic (Czech Republic).

Dung Le - University of Texas at San Antonio (USA).

Hong Van Le - The Academy of Sciences of Czech Republic (Czech Republic).

Helena Judith Nussenzveig Lopes - Universidade Federal do Rio de Janeiro (Brazil).

Ducival Carvalho Pereira - Universidade do Estado do Pará (Brazil).

Verónica Poblete - Universidad de Chile (Chile).

Milan Pokorny - Charles University (Czech Republic).

Carlos Alberto Raposo da Cunha - Universidade Federal de São João del-Rei (Brazil).

Joilson Oliveira Ribeiro - Universidade Federal da Bahia (Brazil).

Yves Raudin - Université de Pau et des Pays de l'Adour - France.

Nour Seloula - Université de Caen Basse Normandie (France).

Paulo Varandas - Universidade Federal da Bahia (Brazil) and Universidade do Porto (Portugal).

Octavio Vera Villagrá - University of Bío-Bío (Concepción, Chile).

ACADEMIC VISITING PROGRAMS

Universidade Federal do Rio de Janeiro (Brazil)

- 03/2018: Received Chérif Amrouche (UPPA - France) as visiting professor
- 04/2017: Received A. Bouharguane (Université de Bordeaux - France) as visiting professor
- 04/2017: Received N. Seloula (Université de Caen - France) as visiting professor
- 09/2015: Received Chérif Amrouche (UPPA - France) as visiting professor
- 06/2015: Received Flank Bezerra (UFPB - Brazil) as visiting professor
- 03/2015: Received Dung Le (UTSA - USA) as visiting professor
- 10/2013 - 11/2013: Received Chérif Amrouche (UPPA - France) as visiting professor
- 04/2010 - 05/2010: Visiting researcher (invited by Wladimir Neves (UFRJ))

Université de Bordeaux and INRIA (France)

- 02/2018: Visiting researcher (invited by A. Bouharguane)

Universidade Federal do Pará (Brazil)

- 06/2018: Visiting researcher (invited by Dilberto da Silva Almeida Júnior and Mauro de Lima Santos)
- 09/2017: Visiting researcher (invited by Dilberto da Silva Almeida Júnior and Mauro de Lima Santos)

The Academy of Sciences of Czech Republic (Czech Republic)

- 01/2018 : Visiting researcher (invited by Sárka Necasová)
- 08 - 09/2016 : Visiting researcher (invited by Sárka Necasová)
- 08/2015 : Visiting researcher (invited by Sárka Necasová)

Université de Pau et des Pays de l'Adour (France)

- 10/2017 - 03/2018: Visiting professor (invited by Chérif Amrouche)
- 07/2016 - 08/2016: Visiting professor (invited by Chérif Amrouche)
- 07/2015 - 08/2015: Visiting professor (invited by Chérif Amrouche)
- 06/2014 - 07/2014: Visiting professor (invited by Chérif Amrouche)
- 07/2013 - 08/2013: Visiting professor (invited by Chérif Amrouche)

Universidade Federal da Paraíba (Brazil)

- 02/2016 : Visiting professor (invited by F. Bezerra)

Universidade Federal de Viçosa (Brazil)

- 02/2016 : Visiting professor (invited by M. Alves)

Université de Caen (France)

- 12/2017 : Visiting professor (invited by Nour Seloula)
- 08/2015 : Visiting professor (invited by Nour Seloula)

University of Texas at San Antonio (USA)

- 12/2014 - 02/2015: Visiting professor (invited by Dung Le)
- 12/2006: Visiting researcher (invited by Dung Le)

Universidade Federal da Bahia (Brazil)

- 08/2014: Visiting professor (invited by Paulo César Varandas)
- 11/2013: Visiting professor (invited by Paulo César Varandas)
- 06/2013: Visiting professor (invited by Paulo César Varandas)

Universidade de Lisboa (Portugal)

- 03/2013: Visiting professor (invited by Nikolai Chemetov)

University of California, Santa Cruz (USA)

- 04/2009 - 05/2009: Visiting researcher (invited by Maria Schonbek)

EXTENSION ACTIVITIES

2018 National Science and Technology Week
"A better world is always possible" (Um mundo melhor é sempre possível) (UFRJ)

2017 National Science and Technology Week
"Mathematics in everything" (A Matemática está em tudo) (UFRJ)

2017-2018 Building Experiments in Physics (UFRJ)

2016-2017 Environmental education: how to reuse organic waste to improve cultivation of medicinal plants (UFRJ)

2017 Getting to know UFRJ" (Conhecendo UFRJ) (UFRJ)

2016 "Personal Finances" (Universidade Veiga de Almeida)

2016 National Science and Technology Week
"Science feeding Brazil" (Ciência alimentando o Brasil)

2016 "Getting to know UFRJ" (Conhecendo UFRJ) (UFRJ)

2016 Project: "Environmental Study: using organic wastes for medicinal plant's cultivation to improve quality of health care products made from plants' extraction" (UFRJ)

2015 Project: "What is antimatter?" (UFRJ)

2009 English training courses (New York Language Center, USA)

2008 First summer school on nonlinear conservation law (Jaca, Spain)

2007 Documentary internship at the Library of Mathematics - Geology (UPPA, France)

2003 Training course as a mathematical teacher and a teacher in charge of a class at Le Quy Don High school (Ho Chi Minh city, Vietnam (HCMUE))

2002 Cultural training course (Agence Universitaire de la Francophonie) (Tours and Paris, France)

2002 Training course as a teacher at Practice High school (Ho Chi Minh city, Vietnam (HCMUE))

SEMINARS

2018 Universidade Federal do Pará (Brazil)

2017 Universidade Federal do Pará (Brazil)

2016 Universidade Federal da Bahia (Brazil)

2016 Universidade Federal da Paraíba (Brazil)

2016 Universidade Federal de Viçosa (Brazil)

2013 Universidade Federal da Bahia (Brazil)

2013 Universidade de Lisboa (Portugal)

2012 Universidade Estadual do Norte Fluminense (Brazil)

2009 University of California, Santa Cruz (USA)

2007 Université de Pau et des Pays de l'Adour (France)

2006 University of Texas at San Antonio (USA)

2006 Université de Pau et des Pays de l'Adour (France)

CONFERENCES

2018 First Workshop in Applied Mathematics (Scientific Committee) (invited talk) (São João del-Rei - Brazil)

2017 VII International Symposium of Applied Mathematics (invited talk) (Lima - Peru)

2016 IV Encontro da Pós - Graduação em Matemática da UFBA (invited talk) (Salvador, Brazil)

2016 Prague Summer School (Prague, Czech Republic)

2016 Workshop "Pressure under Fluids" (invited talk) (Prague, Czech Republic)

2015 XIV Workshop on Partial Differential Equations (invited talk) (Petropolis, Brazil)

2014 10^{th} AIMS conference on Dynamical Systems, Differential Equations and Applications (invited talk in the special section: The Navier-Stokes Equations and Related Problems (Madrid, Spain)

2014 4^{th} Workshop on Fluids and PDE (Rio de Janeiro, Brazil)

2012 XI Workshop on Partial Differential Equations (talk) (Rio de Janeiro, Brazil)

2011 ICMC Summer Meeting on Differential Equations (talk) (São Paulo, Brazil)

2011 Waves in Fluids III (talk) (Rio de Janeiro, Brazil)

2011 3^{rd} Workshop on Fluids and PDE (poster) (Campinas, Brazil)

2011 28^{th} Colóquio Brasileiro de Matemática (poster) (Rio de Janeiro, Brazil)

2010 First Franco-Brazilian Fluids Summer School (invited talk) (Campinas, Brazil)

2010 CFL conditions 80 years gone by (invited talk) (Rio de Janeiro, Brazil)

2010 Nonlinear PDE's @ IMPA (Rio de Janeiro, Brazil)

2010 IX Workshop on Partial Differential Equations (talk) (Rio de Janeiro, Brazil)

2009 1049^{th} AMS Meeting (San Francisco, USA)

2008 Tenth International Conference Zaragoza Pau on Applied Mathematics and Statistics (talk) (Zaragoza, Spain)

2007 First French Spanish Mathematical Congress (Zaragoza, Spain)

2007 International Conference on Approximation Methods and Numerical Modeling in Environment and Natural Resources (Granada, Spain)

2006 Bordeaux - Pau - Toulouse Conference in Applied Mathematics (Anglet, France)

DEPARTMENT DUTIES AND RESPONSIBILITIES

2016 - 2018 Commission: Creating new graduate "Multidisciplinary Program"(Campus Xerém, UFRJ)

2016 - 2017 Coordinator of the area of Mathematics (Campus Xerém, UFRJ)

2016 - 2017 Member of the Camera of the Faculty Body (Nanotechnology Program) (Campus Xerém, UFRJ)

2015 - 2018 Commission: Elaborating items for functional progression (Campus Xerém, UFRJ)

2015 - 2017 Responsible for the PDE seminars (Institute of Mathematics, UFRJ)

2012 - 2014 Elected representative for the area of Mathematics of the Congregation of Biophysics course (Campus Xerém, UFRJ)

2012 - 2014 Member of the Camera of the Faculty Body (Biophysics Program) (Campus Xerém, UFRJ)

JURIES AND COMMITTEES

2019 Second Workshop in Applied Mathematics (Member of Scientific Committee), (São João del-Rei - Brazil)

2018 Jury: Defense of PhD thesis in Mathematics of Manoel Jeremias dos Santos, (Universidade Federal do Pará - Brazil)

2018 Jury: Defense of PhD thesis in Mathematics of Elany da Silva Maciel, (Universidade Federal do Pará - Brazil)

2018 Commission: PhD Second Qualification Exam of Leonardo Rogério da Silva Rodrigues, (Universidade Federal do Pará - Brazil)

2018 Commission: Selecting assistant professor (Tenure track) (Functional Analysis) (Universidade Federal do Pará - Brazil)

2017 Commission: PhD Monitoring Committee in Mathematics (*Comité de suivi de thèse*) of Pascal Moinier, (Université de Pau et des Pays de l'Adour - France)

2017 Jury: Defense of PhD thesis in Mathematics of Manoel Lucival da Silva Oliveira, (Universidade Federal do Pará - France)

2017 Jury: Defense of PhD thesis in Mathematics of Manoel Lucival da Silva Oliveira, (Universidade Federal do Pará - Brazil)

2017 Commission: PhD Second Qualification Exam of Elany da Silva Maciel, (Universidade Federal do Pará - Brazil)

2017 Commission: PhD Second Qualification Exam of Manoel Jeremias dos Santos, (Universidade Federal do Pará - Brazil)

2017 The First Angkor International Conference on Applied Mathematics and Statistics, (Member of International Scientific Committee), (Phnom Penh - Cambodia)

2016 Commission: PhD Second Qualification Exam of Bruno Telch dos Santos, (Universidade Federal do Rio de Janeiro - Brazil)

2016 - 2018 Commission: Evaluating probationary phase (tenure track to tenured position), (Campus Xerém, UFRJ - Brazil)

2016 - 2017 Commission: Selecting candidates for Master programs in Mathematics, (Institute of Mathematics, UFRJ - Brazil)

2016 Commission: Selecting substitute professor of Mathematics, (Campus Xerém, UFRJ - Brazil)

2016 Commission: Revalidation of PhD diploma in Mathematics (Universidad Carlos III de Madrid) for Jorge Alberto Borrego Morell, (CCMN, UFRJ - Brazil)

2016 Jury: Defense of PhD thesis in Mathematics of Raphael Antunes dos Santos, (UFRJ - Brazil)

2016 Commission: PhD Second Qualification Exam of Desio Ramirez da Rocha Silva, (Universidade Federal da Paraíba - Brazil)

2016 Jury: Defense of Master's thesis in Mathematics of Aldo Henrique de Souza Medeiros, (Universidade Federal de Viçosa - Brazil)

2014 - 2015 Commission's president: Selecting assistant professor (Tenure track) (UFRJ - Brazil)

2015 Jury's president: Defense of Master's thesis in Mathematics of Bruno Telch dos Santos, (UFRJ - Brazil)

2015 Jury's president: Defense of Master's thesis in Mathematics of Alex David Hernández Maturrano, (UFRJ - Brazil)

2014 Commission: "Day of Scientific Initiation" (JICTAC) (Section: Nanotechnology, Physiology, Genetics and Environment) (Campus Xerém, UFRJ - Brazil)

2014 Commission: Selecting candidates for PhD programs in Mathematics, (Universidade Federal da Bahia/Universidade Federal de Alagoas - Brazil)

2014 Jury: Defense of Master's thesis in Mathematics of Laise Caldas, (Universidade Federal da Bahia - Brazil)

2014 Commission: Selecting substitute professor of Mathematics, (Campus Xerém, UFRJ - Brazil)

2013 Commission: Selecting substitute professor of Mathematics, (Campus Xerém, UFRJ - Brazil)

OTHERS

Computation: Office, Latex, Pascal, Matlab, C++, Python, R, SAS

Reviewer: Mathematical Reviews, SIAM Journal on Mathematical Analysis, Arabian Journal of Mathematics, Nonlinear Analysis Series A: Theory, Methods Applications, Advanced Nonlinear Studies, Advances in Nonlinear Analysis,...

Languages: Vietnamese (Native), English (Full professional proficiency), French (Full professional proficiency), Portuguese (Full professional proficiency), Spanish (Elementary proficiency), Japanese (Elementary proficiency)

First place for contests of Assistant professor position at Universidade do Estado do Rio de Janeiro (UERJ) and Universidade Federal do Rio de Janeiro (UFRJ) (2011)

REFERENCES

Prof. Chérif Amrouche
Université de Pau et des Pays de l'Adour - France
Email: cherif.amrouche@univ-pau.fr

Dr. Sarka Necasova
Head of Department of Evolutionary Differential Equations
The Academy of Sciences of Czech Republic - Czech Republic
Email: matus@math.cas.cz

Prof. Jorge Alberto Borrego Morell
Coordinator of Mathematics - Campus Duque de Caxias
Universidade Federal do Rio de Janeiro - Brazil
Email: jborrego@caxias.ufrj.br

Prof. Mohand Moussaoui
Ecole Centrale de Lyon - France and Ecole Normale Superieure, Kouba - Algeria
Email: mmohand47@gmail.com