

# CURRICULUM VITAE

## **Séverine Biard**

LAMAV, Université polytechnique Hauts-de-France,  
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## CURRENT POSITION

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- ▷ September 2019 – . . . : Assistant professor at Université Polytechnique Hauts-de-France, Valenciennes, France.

### **Grants:**

- from the Watanabe Trust Fund at the University of Iceland: 2018-2019.
- from the Scandinavia - Japan Sasakawa Foundation: 2018-2019.
- from the Watanabe Trust Fund at the University of Iceland: 2017-2018.

## PAST POSITIONS

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- ▷ 2016 – September 2019 : Post-doctoral fellow at University of Iceland, Reykjavík, Iceland.
- ◇ 2014-2016: Visiting Assistant Professor in Mathematics at Texas A&M University, College Station, USA.
- ◇ 2013-2014: Research and Teaching Assistant, Mathematics, Université Pierre et Marie Curie, Paris VI

## EDUCATION

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- ◇ 2010-2013: Ph.D in Mathematics under the supervision of Andrei Iordan, Université Pierre et Marie Curie, Paris VI, defended in December 2013.

- ◇ 2007-2009: Master of fundamental mathematics, Université Pierre et Marie Curie, Paris VI

#### RESEARCH INTERESTS

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**Several Complex variables :** geometry of pseudoconvex domains, CR-geometry, Diederich–Fornaess exponent,  $L^2$ -estimates for  $\bar{\partial}$  and its applications, Levi-flat hypersurface  
**Complex geometry :** Levi-flat structure, Hodge theory

#### PUBLICATIONS

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- ◇ S. BIARD, Symmetry and Interpolation of estimates for the complex Green operator, to appear in *Proceeding of RIMS, Kyoto, Japan*.
- ◇ S. BIARD AND E. STRAUBE, Estimates for the complex Green operator: Symmetry, percolation and Interpolation, *Transactions of AMS*, Vol. 371 (2019).
- ◇ S. BIARD AND E. STRAUBE,  $L^2$ -Sobolev Theory for the complex Green Operator, *International Journal of Mathematics*, Vol. 28, N°9 (2017).
- ◇ S. BIARD, On  $L^2$  estimates for  $\bar{\partial}$  on pseudoconvex domains in complete Kähler manifolds with positive holomorphic bisectional curvature, *The Journal of Geometric Analysis*, Volume 24, Issue 3, p.1583-1612 (2014).
- ◇ S. BIARD, On  $L^2$  estimates for  $\bar{\partial}$  on pseudoconvex domains in complete Kähler manifolds with positive holomorphic bisectional curvature, *Comptes Rendus de l'Académie des Sciences Mathématiques*, vol. 350, fascicule 11-12, juin 2012

#### SUBMITTED PAPER

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- ◇ with J. E. FORNÆSS AND J. WU, Weighted- $L^2$  polynomial approximation in  $\mathbb{C}$ , *accepted in Trans. of AMS*.
- ◇ with A. IORDAN, Non existence of Levi flat hypersurfaces with positive normal bundle on compact Kähler manifolds of dimension  $\geq 3$ .

#### TEACHING

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- ◇ Fall 2017: Mathematical Analysis IIIA (1 class) at University of Iceland (in english).
- ◇ Spring 2016: Engineering Mathematics III, MATH 251: 2 classes.
- ◇ Fall 2015: Engineering Mathematics III, MATH 251: 1 class.
- ◇ July 2015: Post-Doc Assistant for Research Experience for Undergraduates (REU) mentored by Anne Shiu.
- ◇ Spring 2015: Engineering Mathematics III, MATH 251: 2 classes.

- ◇ Fall 2014: Engineering Mathematics III, (MATH 251): 1 class.
- ◇ 2013-2014: Research and Teaching Assistant, Université Pierre et Marie Curie
  - \* In charge of Oral examinations in LM216 (Functions and integrals in several variables) to 2nd year undergraduates in Physics and mathematics, (10h)
  - \* In charge of a recitation class for LM216.(36h) in first semester
  - \* In charge of 3 recitation classes for LM216 (108h) in second semester.
- ◇ 2011-2012: Teaching Assistant, Université Pierre et Marie Curie
  - \* In charge of Oral examinations in LM216 (10h)
  - \* In charge of 2 recitation classes in LM216 (72h).
  - \* Academic support in LM216 to a young top-level sportswoman (2-4h).
- ◇ 2010-2011: Teaching Assistant, Université Pierre et Marie Curie
  - \* In charge in first semester of Oral examinations in LM216 (10h)
  - \* In charge of a recitation class in Algebra I for first year undergraduates (28h)
  - \* In charge of a recitation class in LM216 (68h).
- ◇ 2009-2010: Oral examinations in classe préparatoire MP, Lycée Condorcet, Paris IX

## TALKS

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- ◇ **June, 20, 2019:** Several Complex Variables Seminar at NTNU, Trondheim, Norway.
- ◇ **March, 26-29, 2019:** Workshop on holomorphic maps, pluripotentials and complex geometry, Shizuoka, Japan.
- ◇ **December, 10-14, 2018:** Workshop on Analysis and CR-geometry to honor the accomplishments of Emil Straube and Fritz Haslinger, ESI, Vienna, Austria.
- ◇ **May, 25-27, 2018:** NORDAN 2018 : Conference in Complex Analysis and Geometry at Stavanger, Norway.
- ◇ **May, 16, 2018:** Complex Analysis and Geometry Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **November, 20-22, 2017:** Workshop on "Topology of pseudoconvex domains and analysis of reproducing kernels", RIMS, Kyoto, Japan.
- ◇ **October, 5-9, 2017:** Workshop on  $\bar{\partial}$ -operator, Trondheim, Norway.
- ◇ **June, 16, 2017:** SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **June, 9-11, 2017:** "Midwest SCV conference", Brown University, Providence, Rhode Island, USA.
- ◇ **May, 22-26, 2017:** "Complex geometry and PDEs", American University of Beirut, Lebanon.

- ◇ **January, 13th, 2017:** SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **December, 16th, 2016:** SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **November, 2016:** Series of 2 talks at SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **October, 10th, 2016:** Math Colloquium, University of Iceland, Reykjavík, Iceland.
- ◇ **October, 7th, 2016:** SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **September, 16th, 2016:** SCV Seminar, University of Iceland, Reykjavík, Iceland.
- ◇ **May, 13-15th, 2016:** Midwest Several Variables Conference, University of Toledo, Ohio, USA.
- ◇ **January, 11-14, 2016:** Sanya School in Complex Analysis and Geometry, Winter School, Sanya, China.
- ◇ **January, 8th, 2016:** The 2016 Joint Mathematics Meetings, Seattle, WA in the occasion of the AMS special session "Partial Differential Equations in Complex Analysis", USA.
- ◇ **January, 4-7th, 2016:** Conference in PDE, Complex Analysis and related topics, Florida International University, Miami, Florida.
- ◇ **August, 3-7, 2015:** 8th Workshop on Geometric Analysis of PDEs and Several Complex variables, Serra Negra, Brazil.
- ◇ **March, 27-29, 2015:** "Nonexistence of smooth Levi flat hypersurface with positive normal bundle in compact Kähler manifolds of dimension  $\geq 3$ ", Conference on complex Analysis and Geometry on the occasion of Sidney Webster's 70th Birthday, University of Wisconsin-Madison, USA.
- ◇ **March, 6, 2015:** "The Diederich-Fornaess exponent in  $\mathbb{C}P^n$  and Applications", Several Complex Variables Seminar, Texas A&M University, College Station, USA.
- ◇ **January, 4-8, 2015:** "Nonexistence of smooth Levi flat hypersurface with positive normal bundle in compact Kähler manifolds of dimension  $\geq 3$ ", Workshop: Complex Analysis and Geometry in several complex variables, Texas A&M Qatar, Doha, Qatar.
- ◇ **May 16th, 2014:** "Sur la non-existence d'hypersurfaces Levi-plate dans les variétés kählériennes compactes de dimension  $\geq 3$ ", Geometric Analysis Seminar, Laboratoire P. Painlevé, Lille I University, France.
- ◇ **April 25th, 2014:** "On the non existence of Levi flat hypersurfaces in compact Kähler manifolds in dimension  $\geq 3$ ", Several complex variables Seminar, Texas A&M University, College Station, USA.
- ◇ **April 15th, 2014:** "Sur la non-existence d'hypersurfaces Levi-plate dans les variétés kählériennes compactes de dimension  $\geq 3$ ", Analysis and Geometry Seminar, Laboratoire J.A. Dieudonné, Nice Sophia-Antipolis University, France.
- ◇ **April 8th, 2014:** "Sur la non-existence d'hypersurfaces Levi-plate dans les variétés kählériennes compactes de dimension  $\geq 3$ ", Seminar Analysis and Geometry, Institute IMJ-PRG, Paris, France.
- ◇ **March 2014:** "Sur la non-existence d'hypersurfaces Levi-plate dans les variétés kählériennes compactes de dimension  $\geq 3$ ", Seminar Analysis and Geometries, Institute Joseph Fourier, Grenoble, France.
- ◇ **October 2013:** Exposant de Diederich et Fornaess et Estimées  $L^2$  pour l'opérateur  $\bar{\partial}$ , Séminaire de Géométrie analytique, IRMAR, Rennes, France.

- ◇ **June 2013:** On  $L^2$  estimates for  $\bar{\partial}$  on pseudoconvex domains in complete Kähler manifolds with positive holomorphic bisectional curvature, Complex Analysis and Geometry-XXI , Levico Terme, Italy
- ◇ **January 2013:** Des estimées  $L^2$  pour l'opérateur  $\bar{\partial}$  sur des domaines pseudoconvexes, Séminaire des thésards, IMJ, Paris VI, France.
- ◇ **October 2012:** On  $L^2$  estimates for  $\bar{\partial}$  on pseudoconvex domains in complete Kähler manifolds with positive holomorphic bisectional curvature, "Progressi recenti in Geometria reale e complessa", Levico Terme, Italy

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ATTENDANCE TO CONFERENCES/WORKSHOPS

- **June, 6-9, 2017:** Conference on Complex Analysis and Geometry in honor of J-P. Demailly for his 60th birthday anniversary, Institut Fourier, Grenoble, France.
- **March, 25th, 2017:** Biannual meeting of Math. Soc. of Japan, SCV session, Tokyo, Japan.
- **September, 21-23, 2016:** STEM Faculty Launch Program, Worcester Polytechnic Institute, Massachusetts, USA.
- **August, 22-27, 2016:** The complex geometry and the Cauchy-Riemann Equation Conference in the occasion of 70th birthday of J.E. Fornæss, Oslo, Norway.
- **January, 11-14, 2016,** Sanya School in Complex Analysis and Geometry, Winter School, Sanya, China.
- **June, 11-12, 2015,** Journées d'Analyse Complexe, Institut J. Fourier, Grenoble, France.
- **June, 1-5, 2015,** Complex Analysis and Geometry XXII, Levico Terme, Italy.
- **March, 24-29, 2014,** Komplex Analysis Winter School and Workshop 4, CIRM, Marseille, France.
- **June, 2-4 2014** Colloque in honor of P. Dolbeault, Institut de Mathématiques de Jussieu-PRG, Paris, France.
- **October, 13-17, 2013** Complex Analysis and Geometry XXI, Levico Terme, Italy.
- **2-3 October, 2-3, 2012** Colloque in honor of Gennadi Henkin, IMJ-PRG, Paris, France.
- **June, 18-30, 2012** Feuilletages, courbes pseudoholomorphes, applications, Institut J. Fourier, Grenoble, France.
- **June, 20-25, 2011** Colloque, Dynamics and Geometry, IHP, Paris, France.
- **June, 13-17, 2011,** Complex Analysis and Geometry, XX, Levico Terme, Italy.

## SERVICE

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- ◇ March 2019: Organizer with Masanori Adachi of a Workshop in Shizuoka, Japan
- ◇ 22 & 26 February, 2018: Short talks in the high school Austubaejarskoli in front of 14 & 16 years old, Reykjavík, Iceland
- ◇ 2017-...: Organizer of the Complex Analysis and Geometry Seminar, University of Iceland, Reykjavik, Iceland
- ◇ 2015-2016: Organizer of the Several Complex Variables Seminar, Texas A&M University, College Station
- ◇ April 16th, 2016: Stand in the "Art Room" in occasion of the Math Fair, Texas A&M University, College Station
- ◇ 2012-2014: Representative of Ph.D students at the board of the mathematical Ph.D school of Mathematics of Paris
- ◇ May 31st- June 3rd, 2012: Presentation Stand "Research at UPMC" in occasion of "Salon des jeux Mathématiques", Université Pierre et Marie Curie Paris VI

## LANGUAGES

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French (native speaker), English, Russian.