CURRICULUM VITAE

Name:	Yann Louis-Henri Bernard	**Date of Birth:**	February 17, 1977
Address:	School of Mathematical Sciences	**Citizenship:**	French
	Monash University		
	9 Rainforest Walk	**Phone:**	(+61) (0)39 905 4462
	3800 Victoria, Australia	**Email:**	yann.bernard@monash.edu

POSITIONS HELD

08/2015 - Present   Senior lecturer (level C) at Monash University

04/2014 - 07/2015   Research fellow at the ETH in Zürich, Switzerland, under the direction of Prof. Tristan Rivière.

07/2009 - 01/2014   Research fellow for the SFB Transregio 71 project "*Geometric partial differential equations*" at the Albert-Ludwigs-Universität in Freiburg, Germany, under the direction of Prof. Ernst Kuwert.

10/2006 - 07/2009   Postdoc at the ETH in Zürich, Switzerland, under the direction of Prof. Tristan Rivière.

EDUCATION

August 2006   Ph.D. in Mathematics, The University of Michigan, Ann Arbor, MI.
Sumner B. Myers Most Distinguished Thesis of the Year Award.

Dissertation: "*The Coupling of Gravity to Yang-Mills Fields and Fermions in Static Spherically Symmetric Spacetimes*".

Advisor: Joel Smoller (Lamberto Cesari Chair, Math., Michigan)

Committee: Anthony Bloch (Professor, Math., Michigan)
Denis Capozza (Professor, Business, Michigan)
Jeffrey Rauch (Professor, Math., Michigan)
Peter Smereka (Professor, Math., Michigan)
Sijue Wu (Professor, Math., Michigan)

April 2000   B.S. in Mathematics, The University of Michigan, Flint, MI.
With High Honors.

June 1997   D.E.U.G. Sciences de la Matière, Université de Bretagne Occidentale, Brest, France. *Mention Assez Bien.*

Publications

- 'End of immersed minimal and Willmore surfaces in asymptotically flat spaces', arXiv:1508.01391. Joint-work with Tristan Rivière

- 'Noether's theorem and the Willmore functional', to appear in Adv. Calc. Var. (2015)

- 'Spherocytosis and the Helfrich functional', arXiv:1412.3533. Joint-work with Glen Wheeler and Valentina-Mira Wheeler

- 'Concentration-compactness and finite-time singularities for the Chen flow', **in preparation (2014)**. Joint-work with Glen Wheeler and Valentina-Mira Wheeler

- 'On the Chen conjecture', **in preparation (2015)**. Joint-work with Glen Wheeler

- 'Autour des Surfaces de Willmore', *Images des Mathématiques (broad-audience publication of the CNRS)* (2014).

- 'Analysis of constrained Willmore surfaces', to appear in Comm. PDE (2015)

- 'Energy quantization for the Willmore functional and applications', *Annals of Math.* **180**, no. 1 (2014), 87–136. Joint-work with Tristan Rivière

- 'Singularity removability at branch points for Willmore surfaces', *Pacific J. Math.* **265**, no. 2 (2013), 257–311. Joint-work with Tristan Rivière

- 'On the structure of minimizers of causal variational principles in the non-compact and equivariant settings', *Adv. Calc. Var.* **7**, no. 1 (2014), 27–57. Joint-work with Felix Finster

- 'Local Palais-Smale sequences for the Willmore functional', *Comm. Anal. Geom.*, **19** (2011), 563–599. Joint-work with Tristan Rivière

- 'Diffusive limits for the Knudsen gas in thin channels with accommodation on the boundary', *Asympt. Anal.* **64** (2009), 100–123.

- 'Non-existence of black-hole solutions of the electroweak Einstein-Dirac-Maxwell-Yang/Mills equations', *Class. Quant. Gravity* **23** (2006), 4433–4451.

T A L K S

I have given numerous conference and seminar talks at various institutions in the US, Canada, England, France, Germany, Switzerland, China, and Australia. *Inter alia* The University of Michigan, Michigan State University, Penn State University, University of Toronto, UC San Diego, Imperial College, Warwick University, Université de Bretagne Occidentale, Ecole Normale Supérieure de Lyon, ETH-Zürich, Max Planck Institut in Golm, Max Planck Institut in Leipzig, Universität Potsdam, Universität Magdeburg, Universität Freiburg, Universität Tübingen, Universität Münster, Universität Frankfurt, Universität Regensburg, Freie Universität Berlin, Oberwolfach, University of Wollongong, Tsinghua University, University of Queensland (Brisbane), Monash University.

H O N O R S

- *Visiting research fellow*, University of Wollongong (Australia), August 2014

- *Visiting research fellow*, University of Wollongong (Australia), October 2013

- *Visiting research fellow*, ENS Lyon (France), January 2011

- *Sumner B. Myers Most Distinguished Thesis of the Year Award*, U of Michigan, 2006

- *Michigan Outstanding Graduate Student Instructor Award*, U of Michigan, 2006

- *Rackham Graduate School One-Term Dissertation Fellowship*, U of Michigan, Winter 2005

E D U C A T I O N A L   E X P E R I E N C E

Teaching   At the ETH, I was in charge of teaching one section of about 25 students for a course in Functional Analysis (Fall 2007), a course in Measure Theory (Winter 2008), a course in PDEs for engineers (Fall 2008), and a course in PDEs for mathematicians (Winter 2009). Each of these courses would belong to the post-graduate curriculum in an American university.

While a graduate student at the University of Michigan, I was each semester in charge of a class of approximately thirty students in several introductory courses. Each class comprised four weekly hours of lectures. Duties included preparing lessons, quizzes, assignments, and grading exams. Between the Fall of 2000 and the Summer of 2006, I taught Pre Calculus, Calculus I, and Calculus II.

Coordinating	At the ETH, courses are divided into two types of sessions: lessons taught to large groups of students by a tenured professor, and exercises sessions regrouping about 25 students and managed by graduate students and postdocs. One coordinator is assigned to each course ; he is in charge of ensuring the cohesion of the various exercise groups, of preparing weekly exercise sheets and solutions, and of writing the final exam (or to partake in the oral examination, for the upper-level courses). I assumed these duties for the Functional Analysis course taught by Prof. Michael Struwe in the Fall 2007, for the Measure Theory and PDEs for engineers courses taught by Prof. Alessandra Iozzi in the Winter and Fall 2008, and for the PDEs for mathematicians course taught by Prof. Peter Albers in the Winter 2009.
	The Michigan Introductory Program in Mathematics enrolls over one thousand students each term. The students are divided into small sections of about thirty heads. The course coordinators set the curriculum, assist and direct the instructors, write exams and grading policies, resolve grievances. During the Fall 2004 semester, I coordinated Calculus II jointly with Prof. B. A. Taylor. Over 800 students were enrolled.
Mentoring	During the Winter 2012 semester at the University of Freiburg, Prof. Ernst Kuwert organized a seminar attended by 7 upper-level students, and titled "Geometric variational problems". Each student had to prepare two 2-hour talks on a given topic chosen either from an advanced textbook or from a research article. I was in charge of mentoring three of these students, guiding them through the preparation of their oral presentation and through the redaction of their final report. The topics were Hardy spaces, Lorentz spaces, and the Brennan conjecture.
	As of August 2014, I am co-supervising along with Glen Wheeler (Wollongong) a student's undergraduate project whose goal is to generalize an important "div-curl"-type result of Chanillo-Li and of Bethuel-Coron.
	The Michigan Math and Science Scholars is a summer camp for high school students whom are particularly talented for Mathematics and/or other scientific disciplines. For two weeks, several hundreds students stay on campus, experience college life, and take intensive short courses of interest to them. In the Summer 2005, I assisted Emeritus Professor M. Brown in his game theory course called "Combinatorial Combat".
Training	At the University of Michigan, I was in charge at the beginning of the school year of organizing various workshops and of giving short talks to graduate students and lecturers teaching an introductory class for the first time in our department. Continued support and monitoring was provided throughout the semester. I assumed these duties in the Fall 2004 term. I also mentored and advised new instructors every term from Fall 2003 to Winter 2006.

References

Prof. Tristan Rivière
Postdoc Supervisor
Research Collaborator

Departement Mathematik – ETH Zürich
Rämistrasse 101 – 8092 Zürich
Switzerland
+41 (0)44 632 0671
riviere@math.ethz.ch

Prof. Fernando Codà Marques

Department of Mathematics – Princeton University
1006 Fine Hall – Princeton, NJ 08544
USA
+1 609 258 1769
coda@math.princeton.edu

and

IMPA
Estrada Dona Castorina 110 – 22460 Rio de Janeiro
Brasil
+55 21 25 29 5118
coda@impa.br

Prof. Hans-Christoph Grunau

Fakultät für Mathematik – Universität Magdeburg
Postfach 4120 – 39016 Magdeburg
Germany
+49 (0)391 671 8693
hans-christoph.grunau@ovgu.de

Prof. Joel Smoller
Ph.D. Thesis Advisor

Department of Mathematics – The University of Michigan
530 Church Street – Ann Arbor, MI 48109
USA
+1 734 764 0325
smoller@umich.edu

Prof. Alessandra Iozzi
Teaching Supervisor

Departement Mathematik – ETH Zürich
Rämistrasse 101 – 8092 Zürich
Switzerland
+41 (0)44 632 3588
alessandra.iozzi@math.ethz.ch