Curriculum Vitae: Ioan Mărcuț

Date and place of birth:	24/03/1984, Sibiu, Romania
Work address:	Radboud University Nijmegen
	FNWI, IMAPP, Mathematics
	Heijendaalseweg 135
	6525 AJ Nijmegen
	The Netherlands
Website:	https://sites.google.com/view/marcut
E-mail:	i.marcut@math.ru.nl

1. General

Employment

9/2014-present **Assistant Professor (tenured)**, *Radboud University Nijmegen, The Netherlands*

8/2013-8/2014 **J.L.Doob Assistant Professor (postdoc)**, *University of Illinois, at Urbana-Champaign, USA*

9/2008-8/2013 **Teaching Assistant & Researcher (PhD)**, *Utrecht University, The Netherlands*

Education

9/2008-2/2013 **PhD** *Utrecht University*
Thesis: *Normal Forms in Poisson Geometry*
Advisor: Marius Crainic

9/2007-6/2008 **Master Class** organized by *Utrecht University, University of Amsterdam, and Radboud University Nijmegen*,
Quantum Groups, Affine Lie Algebras and their Applications,
Research project: *Representations of $U_q(\widehat{\mathfrak{sl}}_2)$ and the affine Hecke algebra*
Advisor: Jasper Stokman

9/2003-6/2007 **Bachelor** in Mathematics, *Babeș-Bolyai University, Cluj-Napoca, Romania*
Bachelor's thesis: *Linear Algebraic Groups*
Advisor: Andrei Mărcuș

2. Research

Grants and Awards

- **The André Lichnerowicz prize 2014**, for contributions to Poisson Geometry.
  See the *Notices of the AMS*, Nov 2014, p. 1253, or the *EMS Newsletter*, Dec 2014, p. 8.

- **Veni Grant** (250k €) of the Netherlands Organisation for Scientific Research (NWO),
  for the project: *Deformation problems in Poisson geometry*, 9/2015 - 8/2018.

- **NSF Grant** (146k $) DMS 14-05671, 6/2014 - 5/2017; after moving to the Netherlands,
  in 9/2014, Prof. R.L.Fernandes became the principal investigator of the project.

Books

[1] M. Crainic, R. L. Fernandes, I. Mărcuț, *Lectures on Poisson Geometry*, Graduate Studies in
Mathematics, 217. *American Mathematical Society, Providence, RI, 2021*, pp. 479, ISBN: 978–1–
4704–6430–1, `https://bookstore.ams.org/gsm-217`

Preprints

[1] P. Frejlich, I. Mărcuț, Normal forms for principal Poisson Hamiltonian spaces
Preprint: `arXiv:2302.02062`.

[2] I. Mărcuț, F. Zeiser, The Poisson linearization problem for $\mathfrak{sl}_2(\mathbb{C})$. Part II: The Nash-Moser method
Preprint: `arXiv:2212.07520`.

[3] I. Mărcuț, F. Zeiser, The Poisson linearization problem for $\mathfrak{sl}_2(\mathbb{C})$. Part I: Poisson cohomology
Preprint: `arXiv:2212.07512`.

[4] G. R. Cavalcanti, I. Mărcuț, Poisson structures with compact support
Preprint: `arXiv:2209.14016`.

[5] R. L. Fernandes, I. Mărcuț, Poisson geometry around Poisson submanifolds
Preprint: `arXiv:2205.11457`.

[6] R. L. Fernandes, I. Mărcuț, Multiplicative Ehresmann connections
Preprint: `arXiv:2204.08507`.

Published papers

[1] I. Mărcuț, F. Zeiser, The Poisson cohomology of $\mathfrak{sl}_2^*(\mathbb{R})$
Journal of Symplectic Geometry **21** (2023), no. 3, *to appear*.
Preprint: `arXiv:1911.11732`.

[2] A. Cabrera, I. Mărcuț, M. A. Salazar, Local formulas for multiplicative forms
Transformation Groups **27** (2022), no. 2, 371–401.
Preprint: `arXiv:1809.01546`.

[3] D. Joksimović, I. Mărcuț, Non-degeneracy of the Hofer norm for Poisson structures
Journal of Symplectic Geometry **19** (2021), no. 5, 1095–1100.
Preprint: `arXiv:1809.10722`.

[4] I. Mărcuț, Poisson structures whose Poisson diffeomorphism group is not locally path-connected
Annales Henri Lebesgue **4** (2021), 1521–1529.
Preprint: `arXiv:2001.00644`.

[5] P. Frejlich, I. Mărcuț, The homology class of a Poisson transversal
International Mathematics Research Notices. IMRN (2020), no. 10, 2952–2976.
Preprint: `arXiv:1704.04724`.

[6] A. Cabrera, I. Mărcuț, M. A. Salazar, On local integration of Lie brackets
Journal für die Reine und Angewandte Mathematik **760** (2020), 267–293.
Preprint: `arXiv:1703.04411`.

[7] P. Frejlich, I. Mărcuț, On dual pairs in Dirac geometry
Mathematische Zeitschrift **289** (2018), no. 1-2, 171–200.
Preprint: `arXiv:1602.02700`.

[8] P. Frejlich, I. Mărcuț, Normal forms for Poisson maps and symplectic groupoids around PTs
Letters in Mathematical Physics **108** (2018), no. 3, 711–735.
Preprint: `arXiv:1508.05670`.

[9] P. Frejlich, I. Mărcuț, The normal form theorem around Poisson transversals
Pacific Journal of Mathematics **287** (2017), no. 2, 371–391.
Preprint: `arXiv:1306.6055`

[10] M. Crainic, I. Mărcuț, Reeb-Thurston stability for symplectic foliations
Mathematische Annalen **363** (2015), no. 1-2, 217–235.
Preprint: `arXiv:1307.4363`.

[11] I. Mărcuț, B. Osorno Torres, Deformations of log-symplectic structures
Journal London Mathematical Society (2) **90** (2014), no. 1, 197–212.
Preprint: `arXiv:1307.3277`.

[12] I. Mărcuț, B. Osorno Torres, On cohomological obstructions for log-symplectic structures
Journal of Symplectic Geometry **12** (2014), no. 4, 863–866.
Preprint: `arXiv:1303.6246`.

[13] I. Mărcuț, Deformations of the Lie-Poisson sphere of a compact semisimple Lie algebra
Compositio Mathematica **150** (2014), no. 4, 568–578.
Preprint: `arXiv:1208.2298`.

[14] I. Mărcuț, Rigidity around Poisson submanifolds
Acta Mathematica **213** (2014), no. 1, 137–198.
Preprint: `arXiv:1208.2297`.

[15] I. Mărcuț, Formal equivalence of Poisson structures around Poisson submanifolds
Pacific Journal of Mathematics **255** (2012), no. 2, 439–461.
Preprint: `arXiv:1011.5998`.

[16] M. Crainic, I. Mărcuț, A normal form theorem around symplectic leaves
Journal of Differential Geometry **92** (2012), no. 3, 417–461.
Preprint: `arXiv:1009.2090`.

[17] M. Crainic, I. Mărcuț, On the existence of symplectic realizations
Journal of Symplectic Geometry **9** (2011), no. 4, 435–444.
Preprint: `arXiv:1009.2085`.

Talks at Conferences, Workshops, and Seminars

Mar 2023 University of Coimbra, speaker at the "Geometry Seminar"

Nov 2022 UFF, Niterói, Brazil: speaker at the "Seminário Simplètico Conjunto no Rio"

Nov 2022 University of Illinois, at Urbana-Champaign, USA: speaker at the "Symplectic and Poisson Geometry Seminar"

Oct 2022 IMPA, Rio de Janeiro, Brazil: speaker at the "Seminário de Geometria Diferencial"

Sep 2022 UFRJ, Rio de Janeiro, Brazil: speaker at the "Seminário Simplètico Conjunto no Rio"

Jun 2022 Banff International Research Center, Banff, Alberta, Canada: speaker at the workshop "Poisson Geometry, Lie Groupoids and Differentiable Stacks"

Feb 2022 SwissMAP Research Center in Les Diablerets, Switzerland: speaker at the workshop "Differentiable Stacks, Poisson geometry and related geometric structures"

Sep 2021 online talk at workshop organized by University of São Paulo, Brazil: "VIII Workshop on Poisson Geometry and Related Topics"

Aug 2021 Wolfgang Pauli Institute Vienna, Austria: speaker at the workshop "A finite and infinite-dimensional meeting on Lie groupoids, Poisson geometry and integrability"

Dec 2020 online talk at the "Global Poisson Webinar"

Dec 2019 IMPA, Rio de Janeiro, Brazil: speaker at the "International Conference on Poisson Geometry"

Nov 2019 West University of Timișoara, Romania: speaker at the workshop on "Contact and Poisson Geometry"

Oct 2019 Julius-Maximilians-Universität, Würzburg, Germany: gave a mini-course on deformations of Poisson structures at the autumn school "Deformations and Rigidity in Algebra, Geometry and Analysis"

Jun 2019 Utrecht University, Netherlands: speaker at the workshop "Higher Geometric Structures along the Lower Rhine XIII"

Oct 2018 Julius-Maximilians-Universität, Würzburg, Germany: speaker at the workshop "Differential Geometry and Applications"

Sep 2018 University La Sapienza of Rome, Italy: speaker at the INdAM workshop on "Poisson Geometry and Higher Structures"

Jul 2018 Toronto University, Canada: gave an introductory mini-course on Poisson geometry, part of the "Poisson 2018" school and conference

Oct 2017 Utrecht University, Netherlands: speaker at the workshop "Lie Pseudogroups: Old and New"

Sep 2017 Université de Lyon 1, France: speaker at the "Workshop on topological aspects of symplectic foliations"

Aug 2017 KU Leuven, Belgium: speaker at the "Pure and Applied Differential Geometry - PADGE 2017" conference

Aug 2017 Oaxaca, Mexico: speaker at the "The Third Pacific Rim Mathematical Association (PRIMA) Congress", special section on "Poisson Geometry and Its Applications"

Aug 2017 Toronto University, Canada: speaker at the "Conference on Poisson Geometry and Stacks"

Dec 2016 Max Planck Institute Bonn, Germany: speaker at the workshop "Higher Geometric Structures along the Lower Rhine VIII"

Nov 2016 Utrecht University, Netherlands: speaker at the "Workshop on generalized geometry"

Oct 2016 University of Cologne, Germany: speaker at the "Seminar on Symplectic and Contact Geometry"

Sep 2016 Utrecht University, Netherlands: speaker at the "Workshop on Lie pseudo groups"

Jul 2016 ETH Zürich, Switzerland: speaker at the "Poisson 2016" conference

Jun 2016 West University of Timișoara, Romania: speaker at the "Geometry and PDE's" workshop

Jun 2016 GQT School and Colloquium, Zeist, Netherlands: gave a mini-course on Dirac Geometry

Apr 2016 University of Münster (WWU), Germany: speaker at the "Oberseminar Differentialgeometrie"

Mar 2016 IMPA, Rio de Janeiro, Brazil: talk at the "Seminário Simplético Conjunto no Rio"

Mar 2016 University of Illinois, at Urbana-Champaign, USA: speaker at the "Symplectic and Poisson Geometry Seminar"

Jan 2016 Institut Henri Poincaré, Paris, France: gave a mini-course on Dirac Geometry at the "10th International Young Researcher Workshop on Geometry, Mechanics and Control"

Mar 2015 UFRJ, Rio de Janeiro, Brazil: speaker at the "Seminário Simplètico Conjunto no Rio"

Mar 2015 University of Illinois, at Urbana-Champaign, USA: speaker at the "Symplectic and Poisson Geometry Seminar"

Nov 2014 ICMAT, Madrid, Spain: speaker at the "New trends in generalized geometry and Poisson geometry" workshop

Nov 2014 GQT School and Colloquium, Zandvoort, Netherlands: speaker at the GQT Colloquium

Aug 2014 University of Illinois at Urbana-Champaign, USA: speaker at the "Poisson 2014" conference

May 2014 Toronto University, Canada: gave a mini-course "Linearization problems around symplectic leaves"

Apr 2014 University of Notre Dame, USA: speaker at the "Felix Klein Seminar"

Feb 2014 University of São Paulo, Brazil: gave a mini-course on Poisson geometry

Oct 2013 Washington University in St. Louis, USA: speaker at the AMS Sectional Meeting, Special Session on Groupoids in Analysis and Geometry

Sep 2013 Temple University, Philadelphia, USA: speaker at the "Gone Fishing" workshop on Poisson geometry

Jun 2013 Imperial College London, UK: speaker at the seminar of the group of Prof. Darryl Holm

Dec 2012 Radboud University Nijmegen, Netherlands: speaker at the "Higher Geometric Structures along the Lower Rhine II" workshop

3. Supervision

PhD students

- Lennart Obster - University of Coimbra
  co-advisor: João Nuno Mestre
  Research topic: *Linearization of Lie algebroids*
  Expected to defend in 2025

- Andreas Schüßler - Radboud University Nijmegen & KU Leuven
  co-advisor: Marco Zambon
  Research topic: *Desingularization of Lie algebroids and related geometric structures*
  Expected to defend in 2025

- Florian Zeiser - Radboud University Nijmegen
  PhD Thesis: *Poisson cohomology and linearization for $\mathfrak{sl}(2,\mathbb{R})$ and $\mathfrak{sl}(2,\mathbb{C})$*
  Defended April 2021

- Stephane Geudens - KU Leuven
  co-advisor: Marco Zambon
  PhD Thesis: *On Submanifolds and Deformations in Poisson Geometry*
  Defended April 2021

- Roy Wang - Utrecht University
  co-advisor: Marius Crainic
  PhD Thesis: *On Integrable Systems & Rigidity for PDEs with Symmetry*
  Defended September 2017

Master students

- Lennart Obster - Radboud University Nijmegen
  Master's Thesis: *Blow-ups of Lie groupoids and Lie algebroids*, September 2021

- Quinten Rutgers - Radboud University Nijmegen
  Master's Thesis: *The Lu-Weinstein Poisson structure on a compact semisimple Lie group – A new perspective on linearization*, August 2021

- Wilmer Smilde - Utrecht University
  Master's Thesis: *Lie groups of Poisson diffeomorphisms*, April 2021

- Roy Wang - Utrecht University
  co-advisor: Marius Crainic
  Master's Thesis: *The Nash-Moser implicit function theorem and applications*, July 2012

Bachelor students

- Matthijs Lau - Radboud University Nijmegen
  Bachelor's Thesis: *Symplectic geometry – Darboux's theorem and Hamiltonian systems*, May 2023

- Jeroen Smeets - Radboud University Nijmegen
  Bachelor's Thesis: *Cartan's Closed Subgroup Theorem*, August 2022

- Douwe Hoekstra - Radboud University Nijmegen
  co-advisor: Florian Zeiser
  Honors Bachelor's Thesis: *Poisson cohomology of 3-dimensional Lie algebras*, July 2021

- Hymke ten Have - Radboud University Nijmegen
  Bachelor's Thesis: *The Gauss-Bonnet Theorem*, July 2021

- Rik Pansier - Radboud University Nijmegen
  Bachelor's Thesis: *Rectangular peg problem*, July 2021

- Lennart Obster - Radboud University Nijmegen
  Bachelor's Thesis: *Triangulation Theorem and Hauptvermutung for Surfaces*, July 2019

- Marco Roosken - Radboud University Nijmegen
  Bachelor's Thesis: *The Heat Kernel Proof of the Atiyah-Singer Index Theorem for Dirac Operators*, August 2018

- Maarten Smit - Radboud University Nijmegen
  Bachelor's Thesis: *Prime Decompositions and Geometries of 3-manifolds and the Poincaré Conjecture*, June 2015

4. Teaching

Lecturer for the courses

Course name, period	For whom?	Language	Book/material	Grading system	Average # students
Curves and Surfaces Spring 2020, 2021, 2022, 2023	2nd year mathematics students at RUN	Dutch	*Elementary Differential Geometry*, by A.N.Pressley	Small project 70% + homework 30%	15
Riemannian Geometry Spring 2020, 2021	3rd year mathematics students at RUN	English	*Introduction to Riemannian Manifolds*, by M.Lee	Take home exam 70% + homework 30%	4
Calculus B Spring 2018, 2019, 2020, 2021, 2022, 2023	1st year mathematics and physics students at RUN	Dutch	*Calculus. A complete course* by R.Adams, C.Essex	Written exam 100% + homework 10% bonus	150
Calculus 4 Spring 2015, 2016, 2017		English		Written exam 100% + homework 10% bonus	110
Manifolds Fall 2014, 2015, 2016, 2017, 2018	3rd year mathematics students at RUN	English	*I developed my own lecture notes*	Written exam 100% + homework 10% bonus	10
Poisson Geometry Fall 2017, 2019, 2021 In 2017 and 2019, I taught together with Marius Crainic from UU	Master students from several Dutch Universities. Part of Mastermath.	English	*Lectures on Poisson Geometry* by M.Crainic, R.L.Fernandes, I.Marcut	Oral exam 70% + homework 30% (in 2021)	12
Euclidean Geometry Spring 2014	Bachelor students at UIUC	English	*Vectors and Transformations in Plane Geometry*, by P.Tondeur	2 x (midterms 15%) + final 40% + homework 30%	30
Basic Discrete Mathematics Fall 2013	Bachelor students at UIUC	English	*Discrete Mathematics and Its Applications* by K.H.Rosen	3 x (midterms 15%) + final 30% + homework 25%	30

RUN = Radboud University Nijmegen
UIUC = University of Illinois at Urbana-Champaign
UU = Utrecht University

Course materials

The most relevant teaching materials I have developed are:

- The lecture notes for the course **Manifolds** are available on my homepage.

- An extended version of the lecture notes for **Poisson Geometry**, developed with collaborators, was published as a book `https://bookstore.ams.org/gsm-217`.

Teaching qualifications

- In 2019, I have obtained the *University Teaching Qualification (Basiskwalificatie Onderwijs)*, which is required for teaching at Dutch universities.

- As a bachelor student, I followed the courses of the *Educational Module*, which is required for teaching mathematics at high school level in Romania.

5. Academic and Departamental Service

Committees

- Part of the **PR committee** of the educational institute WiNSt (for Mathematics, Physics and Astronomy), Faculty of Science, Radboud University (since 2016)

- Part of the **hiring committee** for the position on Assistant/Associate Professor in Higher Structures and Derived Techniques in Geometry, at Radboud University (2019)

- Part of several **PhD defence committees** at Utrecht University: Aldo Witte (2021), Ralph Klaasse (2017), Joey van der Leer Duran (2016), João Mestre (2016), Ori Yudilevich (2016), Boris Osorno Torres (2015).

- Part the **PhD reading committee** for Jonas Schnitzer, University of Salerno (2019).

Organization of Conferences, Workshops, and Seminars

- Co-organizer with Steffen Sagave of the "Geometry Seminar" at Radboud University Nijmegen

- In December 2018 I have organized the workshop "Poisson aan de Waal" at Radboud University Nijmegen, supported by my Veni Grant

- Since 2015 I am co-organizer of the series of workshops "Higher geometric structures along the Lower Rhine", held alternatively at Max Planck Institute Bonn, Utrecht University and Radboud University Nijmegen

- Member on the advisory committee of the school and conference "Poisson 2022", Barcelona (CRM) and Madrid (ICMAT), summer of 2022

- Member on the advisory committee of the school and conference "Poisson 2020", University of Salerno, summer of 2020 (canceled)

- Member on the advisory committee of the school and conference "Poisson 2018", University of Toronto and Fields Institute, July 9 – July 20, 2018

- Member on the scientific committee of the school and conference "Poisson 2016", Geneva and Zürich, June 27 – July 8, 2016

- Member of the local organizing committee for the school and conference "Poisson 2012", Utrecht, July 23 – August 3, 2012

Grant evaluator for grant applications to

- DFG, German Research Foundation
- FWO, Research Foundation - Flanders

Reviewer for the Journals

Annals of Global Analysis and Geometry, Annals of Mathematics, Bulletin of the London Mathematical Society, Communications in Analysis and Geometry, Compositio Mathematica, Differential Geometry and its Applications, Higher Structures, International Mathematics Research Notices. IMRN, Journal of Geometric Mechanics, Journal of Singularities, Journal of Symplectic Geometry, Journal of the European Mathematical Society (JEMS), L'Enseignement Mathématique, Letters in Mathematical Physics, Mathematical Research Letters, Mathematische Zeitschrift, Pacific Journal of Mathematics, Proceedings of the AMS, Revista Matemática Iberoamericana, SIGMA (Symmetry, Integrability and Geometry. Methods and Applications), Topology and its Applications, Transactions of the American Mathematical Society

6. Other

Languages

Romanian (native), English (fluent), Dutch (good), German (good)