

Andrei Rodin

Place of birth: Moscow, Russia

Nationality: Russian

Postal Address: Institute of Philosophy RAS, 14 Volkhonka

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Current academic positions and affiliations:

(1) Senior Researcher at the Institute of Philosophy of Russian Academy of Sciences (principal affiliation)

<http://eng.iph.ras.ru/> ; <http://iph.ras.ru/page16140808.htm> (personal page)

(2) Lecturer (Docent) at Department of Liberal Arts and Sciences (Smolny College) of St-Petersburg State University (secondary affiliation)

<http://artesliberales.spbu.ru/about-en> ; <http://artesliberales.spbu.ru/contacts-en/rodin> (personal page)

(3) Associated Researcher in laboratory SPHERE of the French National Center of Scientific Research (CNRS), UMR 7219, University Paris-Diderot (secondary affiliation)

<http://www.sphere.univ-paris-diderot.fr/?lang=fr> ; <http://www.sphere.univ-paris-diderot.fr/spip.php?rubrique6&lang=fr> (member's personal pages)

Academic titles, qualifications and past positions:

2007-2011: Fellow at the Chair of Excellence of Prof. Michael Detlefsen "Ideals of Proof" at the Department of History and Philosophy of Science of University Paris-Diderot

2003-2007: Postdoctoral Fellow at the Philosophy Department of Ecole Normale Supérieure (Paris),

laboratory "Pensée de sciences" (<http://www.pensee-sciences.ens.fr/>)

1999-2002: Lecturer (Docent) at the Chair of Philosophy of Kaliningrad State University

Fall 1998 - Spring 1999 : Fulbright Visiting Scholar at the Department of Philosophy of Columbia University (New York City)

1995-1998: Junior Researcher at the Institute of Philosophy of Russian Academy of Sciences

1995: Ph.D. in Philosophy of Science (Ph.D. Title: *First Four Books of Euclid's Elements in the Context of Plato's and Aristotle's Philosophy*) from Institute of Philosophy of Russian Academy of Sciences

1990: MA in Mathematical Education (Title of MA paper: *"New Math" in USSR, USA and France: a Comparative Analysis*) from Moscow Pedagogical Institute

Research grants (last 10 years):

2013-2015 Research grant of Russian Foundation for Humanities for the project "Axiomatic Method as a Tool of Scientific Inquiry" (about 30K euros)

2013-2015 Research grant of Russian Foundation for Fundamental Research for the project “Epistemic strategies of applications of mathematics in natural sciences” (about 40K euros)
2013-2014 Research grant of Saint-Petersburg University for the project “Mathematical and Logical Structures of Knowledge Representation” (about 15K euros)
2010-2011: Research grant of University Paris-Diderot for the project “Category theory and Physics” (15K euros)
2008-2010 Research grant of Russian Foundation for Fundamental Research for the project “Category theory and Physics” (about 12K euros)
2008-2009: Postdoctoral Research grant within the Chair of Excellence of Prof. Michael Detlefsen in University Paris-Diderot (about 40K euros)
2008: Research grant of private Foundation “Treilles” (France) for the project “Category Theory and Physics” (15K euros);
2004: Postdoctoral Research grant within the Chair of Excellence of Prof. Ulises Moulines in ENS (Paris) (about 20K euros)

Selected Publications:

A) Monographs:

in English :

A1. *Axiomatic Method and Category Theory* (Synthese Library, vol. 364), Springer 2014

in Russian:

A2. *Euclid's Mathematics in Context of Plato's and Aristotle's Philosophy*, Moscow, Nauka, 2003

B) Peer-reviewed journal articles:

in English :

B1. "Elements of Categorical Logic: 50 Years Later" (with Valeria de Paiva), *Logica Universalis* 7(2013), pp. 265-273

B2. "Categories Without Structures", *Philosophia Mathematica* 19(1), 2011, pp. 20-46

B3. "How Mathematical Concepts Get Their Bodies", *TOPOI* 29(1), pp. 53-60

B4. "Identity and Categorification" *Philosophia Scientiae*, 11 (2), 2007, pp. 27-65

B5. "The Vessel and the Glue", *The Behavioral and Brain Sciences*, 27(5), 2004, pp.633-634

in Russian:

B6. “Programmatic Realism in Physics and Foundations of Mathematics”, forthcoming in *Questions of Philosophy (Voprosi Filosofii)*

“Scientific Realism and History of Science: an Attempt of Reconciliation”, *Epistemology and Philosophy of Science*, 35 (1), 2013, pp. 79-81

B7. “Category Theory and New Mathematical Principles of Physics”, *Questions of Philosophy (Voprosi Filosofii)*, 7, 2010, pp. 67-82

B8. “Rationality and Relativism”, *Questions of Philosophy (Voprosi Filosofii)*, 10, 2008, pp. 55-76

B9. “Theorem”, *Questions of Philosophy (Voprosi Filosofii)*, 11, 1998

B10. “Definitions of the First Book of Euclid *Elements* and Platonism”, *Questions of Philosophy (Voprosi Filosofii)* 3, 1996, 117-142

C) Papers and Essays in Volumes

in English:

- C1.** “Univalence and Constructive Identity”, in: O. Prozorov (ed.) *Philosophy, Mathematics, Linguistics: Aspects of Interaction - 2012*, St.-Petersburg 2012, Russian Academy of Sciences Press, p. 170-174
- C2.** “Renewing foundations”, in: O. Prozorov (ed.) *Philosophy, Mathematics, Linguistics: Aspects of Interaction - 2009*, St.-Petersburg 2009, Russian Academy of Sciences Press, 171-175
- C3.** “Category Theory and Mathematical Structuralism”, *Proceedings of the XXII World Congress of Philosophy* (2008), vol. 41 (Philosophy of Mathematics), pp. 37-40
- C4.** “Events and Intensional Sets”, in: T. Childers and O. Majer (eds.), *Logica'2002*, Prague 2003, pp.221-230

in Russian:

- C5.** “Doing and Showing”, in: V. Shaposhnikov (ed.), *Proof in Mathematics*, Moscow State University Publishing, 2013, pp. 219-251
- C5.** “The Idea of Intrinsic Geometry”, in: Barabashev et al. (ed.), *Mathematics and Experience*, Moscow State University Publishing, 2004, pp. 219-251
- C6.** “An ontology of wave-particle duality”, in Mamchur et al. (ed.), *100 years of Quanta: History, Physics, Philosophy*, Priroda Publishing, 2002

D) Edited Volumes

in English:

- D1.** Special Issue of *Logica Universalis* on Categorical Logic (vol. 7, 2013) (with Valeria de Paiva)

in Russian

- D2.** Collective Works of D.D. Mordukhai-Boltovskoi, Serebrennie Niti Publishing, 1998 (with Comments and Introduction by the Editor)

Refereeing:

Referee for *Synthèse*, *Logica Universalis*, *Science&Education* (Springer), *Questions of Philosophy* (Voprosi Filosofii), *Epistemology and Philosophy of Science* (Russian Academy of Sciences).

Membership in Editorial Boards of Refereed Journals: *Logica Universalis* (Springer)

Selected Talks at Conferences, Workshops and Seminars (last 5 years):

A) Invited and Keynote

- A1.** “Objectivity, Objecthood and Genetic Axiomatic Method in the Modern Categorical Mathematics”, conference *Philosophy, Mathematics, Linguistics: Aspects of Interaction - 2014*, Steklov Mathematical Institute, Saint-Petersburg, 21-25 April 2014 (forthcoming)
- A2.** “Galilean Science and Constructive Mathematics”, conference *Galileo Galilei: Contexts and Interpretation*, Institute of History of Science and Technology of Russian Academy of Sciences, Moscow, 19-20 March, 2014
- A3.** “Geometry, Logic and Axiomatic Method in the 21st Century: Back to Euclid?”, Seminar of the Department of Social Sciences of University of Turku (Finland), 11 December 2013
- A4.** “How and Why the Effectiveness of Mathematics in Natural Sciences Became “Unreasonable” in the 20th century”. *Philosophy of Science seminar* in the Institute of Philosophy of RAS (Moscow), 3 December 2013
- A5.** “All Objects are Arrows, All Arrows are Objects”, the *Itinerant Seminar on Categories*,

University Paris-Diderot, 16 November 2013

A6. “Spaces of Possibilities, Their Topology and Their Internal Language”, conference “Models of Reasoning”, Kaliningrad (Russia), 3-5 October 2013

A7. “Mathematics, Physics, and Metaphysics from the Neo-Kantian and the Analytic Perspectives”, *Philosophy of science seminar* of Moscow State University, 17 May 2012

A8. "Universal Mathematics in Euclid and the Origin of Logic in Aristotle," Philosophy Department of University of Sorbonne, 27 June 2013.

A9. “Categorical logic and Hegelian dialectics”, *Formal Philosophy seminar* at Higher School of Economics (Moscow) 22 February 2013

A10. “What Comes After Structural Realism? Homotopy Type Theory and Constructive Identity”: workshop *Realism and Modern Science* , Institute of Philosophy of RAS (Moscow), 22-23 November 2012

A11. “Univalence and Constructive Identity”, conference *Philosophy, Mathematics, Linguistics: Aspects of Interaction - 2012*, Steklov Mathematical Institute, Saint-Petersburg, 22-25 May 2014

A12. “Why Category Theory Is “Unreasonably Effective”?”, *New York City Category Theory Seminar*, Graduate Center CUNY, 9 November 2011

A13. “Categories Without Structures”, Philosophy Department of Oxford University (17 February 2009), Philosophy Department of Bristol University (31 March 2009) and *New York City Category Theory Seminar* (CUNY, 11 May 2009)

B) Contributed and Refereed

B1. “Logic, Natural Sciences and Category Theory”, conference *Teaching Logic and Prospects of its Development*, Kiev (Ukraine), 15-16 May 2014 (forthcoming)

B2. "New-Old Axiomatic Method", Conference “What Category Theory Can Do for Philosophy?”, University of Kent (UK), 10 July 2013

B3. “Higher Identity Types in Empirical Contexts”, Workshop on Higher Dimensional Algebra, Categories and Types, Ljubljana 20 June 2012

B4. “Doing and Showing: Classical Model of Science and Axiomatic Method in Mathematics”, conference *Classical Model of Science - 2* , 2-5 August 2011, Free University of Amsterdam

B5. “Formal Axiomatics and Set-Theoretic Constructions in Bourbaki”: Conference *Sets Within Geometry*, 26-29 August 2011, Nancy (France)

B6. “Translation versus Formalization: the Example of Euclid’s *Elements*”: *14th Congress of Logic, Methodology and Philosophy of Science*, 19-26 June 2011, Nancy (France)

B7. “Diagrammatic Syntax and Its Constraints”, *Workshop on Computer Algebra Methods and Commutativity of Algebraic Diagrams (CAM-CAD)*, Toulouse (France), 16-17 October 2009

B8. “Pluralism in Geometry and Logic: A Categorical Approach”, the *3d World Congress on Universal Logic*, Lisbon, Portugal, 22-25 April 2010

B9. “Renewing foundations”, conference *Philosophy, Mathematics, Linguistics: Aspects of Interaction - 2009*, Steklov Mathematical Institute, Saint-Petersburg, 20 November 2009

Teaching Experience:

Undergraduate: History and Philosophy of Science, History and Philosophy of Mathematics, Basic Mathematics

Master: Introduction to Category Theory and Categorical Logic

Administration:

2007-2011: Co-administrating of the Paris branch of “Ideal of Proof” project (Chaire of Excellence of Michael Detlefsen funded by French National Research Agency (ANR))

Languages:

Russian (native), English (fluent), French (fluent), German (reading and basic communication skills)

Referees:**1. Prof. Jaakko J. Hintikka**

Professor of Philosophy at Boston University

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2. Prof. Sergei N. Artemov

Distinguished Professor at the Graduate Center of the City University of New York (Computer Science, Mathematics, Philosophy)

Professor of Mathematics at Moscow State University, the founder and the Head of the research laboratory Logical Problems in Computer Science

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365 Fifth Avenue, rm 4319
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3. Prof. Vladimir I. Markin,

Professor, Chair of Logic, Department of Philosophy, Moscow State University

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27 Lomonosovsky av., building 4, Moscow 119991, Russia

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