

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

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Codice concorso 3735

Alessia Nota - CURRICULUM VITAE

INFORMAZIONI PERSONALI

COGNOME	NOTA
NOME	ALESSIA
DATA DI NASCITA	19 Aprile 1987

Alessia Nota

Curriculum Vitae

Personal details

First name Alessia
Family name Nota
Date of birth 19/04/1987
Place of birth Rome (IT)
Nationality Italian
Email nota@iam.uni-bonn.de
alessianota.mat@gmail.com

Languages

Italian **Native**
English **Fluent**
French **Fluent**
German **Basic**

Current position

01/01/2017 **Post Doctoral Researcher**
–31/12/2020 Research Institution: Institute for Applied Mathematics, University of Bonn.
Postdoctoral mentor: Prof. Dr. Juan J. L. Velázquez.
Research group: Functional Analysis.
Member of SFB 1060: The Mathematics of Emergent Effects, project B5.

Previous positions

01/12/2015 **Post Doctoral Researcher**
–31/12/2016 Research Institution: Institute for Applied Mathematics, University of Bonn.
Postdoctoral mentor: Prof. Dr. Juan J. L. Velázquez.
Research group: Functional Analysis.
Member of SFB 1060: The Mathematics of Emergent Effects, project B5.

01/01/2015 **Post Doctoral Researcher**
–30/11/2015 Research Institution: Department of Mathematics and Statistics, University of Helsinki.
Postdoctoral mentor: Jani M. Lukkarinen.
Research group: Mathematical Physics.

Formation

- 01/11/2011 **Ph.D. student**
–22/12/2014 *Dipartimento di Matematica Guido Castelnuovo*,
Sapienza, Università di Roma.
Supervisor: Prof. Mario Pulvirenti.
Research group: Mathematical Physics (Kinetic theory).
- 5/2011–7/2011 **Research training fellowship for post-graduate students**
International School for Advanced Studies (SISSA), Trieste.
Supervisors: Prof. Gianfausto Dell’Antonio & Prof. Ludwik Dabrowski.
Research group: Mathematical Physics (Quantum mechanics).

Ph.D. Thesis

- Title *From microscopic dynamics to macroscopic equations:
scaling limits for the Lorentz gas*
- Supervisor Prof. Mario Pulvirenti.
- Research area Mathematical Physics (Kinetic theory).
- Committee Prof. Laurent Desvillettes,
Prof. Benedetto Scoppola,
Prof. Guido Cavallaro.
- Defence date December 22, 2014.

Education

- 12/2008–3/2011 **Master in Mathematics** Sapienza, Università di Roma.
- 10/2005–10/2008 **Bachelor in Mathematics** Sapienza, Università di Roma.
- 2000–2005 **High School Diploma** Liceo Scientifico Statale “Augusto Righi”, Roma.

Master Thesis

- Title *Teoremi adiabatici e applicazioni all’Effetto Hall quantistico
(Adiabatic theorems and applications to the quantum Hall Effect)*
- Supervisor Prof. Gianluca Panati
- Final grade 110/110 cum laude
- Subject Mathematical Physics (Quantum Mechanics)

Bachelor Thesis

- Title *Onde viaggianti per equazioni di reazione-diffusione
(Traveling waves for reaction-diffusion equations)*
- Supervisor Prof. Corrado Mascia
- Final grade 110/110 cum laude
- Subject Mathematical Analysis (Partial differential equations)

Research

Research papers

1. **A Diffusion Limit for a Test Particle in a Random Distribution of Scatterers**
Giada Basile, Alessia Nota and Mario Pulvirenti
J. Stat. Phys. Vol. 155, Issue 6, pp. 1087-1111 (2014)
2. **Diffusive limit for the random Lorentz gas**
Alessia Nota
From Particle Systems to Partial Differential Equations II, Springer Proceedings in Mathematics & Statistics, Vol. 129, pp. 273-292 (2015)
3. **Derivation of the Fick's Law for the Lorentz Model in a low density regime**
Giada Basile, Alessia Nota, Federica Pezzotti and Mario Pulvirenti
Commun. Math. Phys. Vol. 336, Issue 3, pp. 1607-1636 (2015)
4. **Derivation of the linear Landau equation and linear Boltzmann equation from the Lorentz model with magnetic field**
Matteo Marozzi, Alessia Nota
J. Stat. Phys. Vol.162, Issue 6, pp. 1539-1565 (2016)
5. **Harmonic chain with velocity flips: thermalization and kinetic theory**
Jani Lukkarinen, Matteo Marozzi and Alessia Nota
J. Stat. Phys. Vol. 165, Issue 5, pp. 809-844 (2016)
6. **On the growth of a particle coalescing in a Poisson distribution of obstacles**
Alessia Nota, Juan J. L. Velázquez
Commun. Math. Phys. Vol. 354, Issue 3, pp. 957-1013 (2017)
7. **On the theory of Lorentz gases with long range interactions**
Alessia Nota, Sergio Simonella, Juan J. L. Velázquez
arXiv: 1707.04193 (2017) To appear in *Rev. Math. Phys.* Vol. 30 (2018)
DOI: 10.1142/S0129055X18500071

Preprints

1. **Summability of joint cumulants of nonindependent lattice fields**
Jani Lukkarinen, Matteo Marozzi and Alessia Nota
arXiv: 1601.08163 (2016) Submitted
2. **Self-similar profiles for homoenergetic solutions of the Boltzmann equation: particle velocity distribution and entropy**
Richard D. James, Alessia Nota, Juan J.L. Velázquez
arXiv:1710.03653 (2017) Submitted

Contributed papers for broad audience

1. **Energia**
Alessia Nota
Sec. **Materia, energia, pensiero: fisica e teoria della nascita**
in *Ricerca sulla verità della nascita umana. 40 anni di Analisi collettiva. Atti Convegni all'Aula Magna Università di Roma.*
L'Asino d'oro edizioni (2016). ISBN: 978-88-6443-372-1

In preparation

1. **Long time asymptotics for homoenergetic solutions of the Boltzmann equation for non maxwellian molecules**
Richard D. James, Stefan Müller, Alessia Nota, Juan J.L. Velázquez (2018)

2. **Self-similar asymptotic behavior for the solutions of a linear coagulation equation**
Barbara Niethammer, Alessia Nota, Sebastian Throm, Juan J.L. Velázquez (2018)
3. **Derivation of the linear Landau equation for Lorentz gases with Coulombian potentials**
Alessia Nota, Juan J.L. Velázquez (2018)

Invited talks

- 13/12/2017 **Homoenergetic Solutions for the Boltzmann Equation**, *Seminario di Fisica Matematica*, Dipartimento di Matematica “F. Brioschi”. Politecnico di Milano, IT.
- 3-9/12/2017 **On the Lorentz gases with long range interactions**, *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach-Walke, DE.
- 11/08/2017 **Homoenergetic Solutions for the Boltzmann Equation**, *Institute for Mathematics and its Applications*, University of Minnesota, Minneapolis.
- 2/12/2016 **On the growth of a particle coalescing in a Poisson distribution of obstacles**, *Mathematical Physics & PDEs Group*, LAGA, Université Paris 13. Paris.
- 28/11/2016 **On the asymptotic behaviour for equidispersive solutions of the Boltzmann equation**, *Mathematical Institute*, University of Oxford, Oxford.
- 18/11/2016 **On the asymptotic behaviour for equidispersive solutions of the Boltzmann equation**, *Functional analysis group seminar*, University of Bonn.
- 20/10/2016 **On the growth of a particle coalescing in a Poisson distribution of obstacles**, *Kinetic Theory and its neighbours*, GSSI, Gran Sasso Science Institute, L’Aquila.
- 7/10/2016 **On the growth of a particle coalescing in a Poisson distribution of obstacles**, *The Mathematics of Disorder*, Young Women in Probability and Analysis 2016, University of Bonn.
- 15/04/2016 **From Hamiltonian dynamics to kinetic equations. Known results and perspectives for the Lorentz Gas**, *Functional analysis group seminar*, University of Bonn.
- 19/01/2016 **Summability of joint cumulants of nonindependent lattice fields**, *CRC seminar*, University of Bonn.
- 11/01/2016 **From microscopic dynamics to macroscopic equations. Scaling limits for the Lorentz Gas**, *Geometric Analysis and Partial Differential Equations seminar*, University of Cambridge.
- 12/10/2015 **From microscopic dynamics to macroscopic equations: The Lorentz Gas**, *Tullio Levi-Civita lectures*, Dipartimento di Matematica Guido Castelnuovo, Sapienza, Università di Roma.
- 14/7/2015 **Scaling limits for the Lorentz Gas**, *Nonlinear evolutions: Kinetic equations and defect dynamics*, Hausdorff School, University of Bonn.
- 3/06/2015 **Fick’s law for the Lorentz model**, *Periodic and Ergodic Spectral Problems Seminar*, Isaac Newton Institute for Mathematical Sciences, Cambridge.
- 17/3/2015 **Scaling limits for the Lorentz Gas**, *Ciclo di Seminari “Modelli matematici per le teorie cinetiche”*, Dipartimento di Matematica, Sapienza, Università di Roma.
- 19/2/2015 **Trails in a kinetic land**, *Bernoullis Tafelrunde*, Mathematisches Institut. Universität Basel.
- 9/12/2014 **From microscopic dynamics to macroscopic equations. Scaling limits for the Lorentz Gas**, *PhD defence seminar*, Dipartimento di Matematica Guido Castelnuovo. Sapienza, Università di Roma.
- 9/12/2014 **Derivation of the Fick’s law for the Lorentz model in a low density regime**, *CRC Seminar*, University of Bonn.

- 4/12/2014 **Derivation of the Fick's law for the Lorentz model in a low density regime**, *Seminario di Fisica Matematica*, Workshop dei dottorandi di area fisico-matematica del XXVII ciclo. Dipartimento di Matematica, Sapienza, Università di Roma .
- 8/10/2014 **Derivation of the Fick's law for the Lorentz model in a low density regime**, *Mathematical Physics Seminar*, University of Helsinki.
- 21-26/07/2014 **Derivation of the Fick's law for the Lorentz model in a low density regime**, *Mathematical Physics, Analysis and Stochastics*, Summer School at Universität Heidelberg.
- 26-28/05/2014 **Derivation of the Fick's law for the Lorentz model in a low density regime**, *Young Women in Probability 2014*, University of Bonn.
- 21/01/2014 **A diffusion limit for a test particle in a random distribution of scatterers**, *HFAKT Seminar*, University of Bristol.
- 16-17/12/2013 **Propagazione della luce in mezzi aleatori: un problema di omogeneizzazione**, *Kinetic Theory Methods Toward Applications*, Torino.
- 12-13/12/2013 **A diffusion limit for a test particle in a random distribution of scatterers**, *Particle systems and PDE's - II*, Braga, Portugal.
- 17-28/06/2013 **A diffusion limit for a test particle in a random distribution of scatterers**, *Kinetic Description of Multiscale Phenomena*, Heraklion, Crete.
- 23-29/09/2012 **A rigorous derivation of linear kinetic equation of Fokker-Planck type in the limit of grazing collisions**, *XXXVII Summer School on Mathematical Physics*, Ravello.

Visits to international research institutions

- 2-10/12/2017 **Mathematisches Forschungsinstitut Oberwolfach**, *Oberwolfach-Walke*, DE.
- 6-17/08/2017 **Institute for Mathematics and its Applications**, *University of Minnesota*, Minneapolis. MN.
- 10-17/06/2017 **Institute Henri Poincaré (IHP)**, *Paris*, FR.
Thematic trimester: Stochastic Dynamics Out of Equilibrium.
- 29/02-4/03/2016 **Dipartimento di Matematica**, *Università degli Studi di Torino*, Torino. IT.
- 1-4/12/2016 **LAGA**, *Université Paris 13*, Paris. FR.
- 26-29/11/2016 **Mathematical Institute**, *University of Oxford*, Oxford. UK.
- 29/02/2016-05/03/2016 **Dipartimento di Matematica**, *Università degli Studi di Torino*, Torino. IT.
- 10-12/01/2016 **DPMMS, Centre for Mathematical Sciences**, *University of Cambridge*, Cambridge. UK.
- 06-09/01/2016 **Dipartimento di Matematica**, *Università degli Studi di Torino*, Torino. IT.
- 11-17/10/2015 **Dipartimento di Matematica Guido Castelnuovo**, *Sapienza, Università di Roma*, Roma. IT.
- 01-10/06/2015 **Isaac Newton Institute for Mathematical Sciences**, *Cambridge*, UK.
- 9-13/03/2015 **Institute Henri Poincaré (IHP)**, *Paris*, FR.
- 17-20/02/2015 **Departement Mathematik und Informatik**, *University of Basel*, Basel. CH.
- 08-10/12/2014 **Hausdorff Center for Mathematics**, *Bonn*, DE.
- 06-11/09/2014 **Kumpula Campus of the University of Helsinki**, *Helsinki*, FINL.
- 21/04/2014-03/05/2014 **University of Bristol**, *Bristol*, UK.
- 19-24/01/2014 **University of Bristol**, *Bristol*, UK.

Teaching

- Winter Term 2017/2018 **On the mathematical theory of Landau Damping**, *Graduate Seminar on Analysis (S4B1)*, Institute for Applied Mathematics. University of Bonn.
- Winter Term 2016/2017 **Spectral Theory in Quantum Mechanics**. *Graduate Seminar on Analysis (S4B1)*, Institute for Applied Mathematics. University of Bonn.
- Summer Term 2015/2016 **Scaling limits for particle systems**, *Graduate Seminar on Analysis (S4B1)*, Institute for Applied Mathematics. University of Bonn.
- 10/2014–12/2014 **Teaching assistant for the OFA course in Mathematics**, Sapienza, Università di Roma.
- 10/2013–2/2014 **Teaching assistant for the Linear Algebra course at the Mathematics Department Guido Castelnuovo**, Sapienza, Università di Roma.

Since December 2015 assistant for the exams of the Functional Analysis group, University of Bonn.

Administration

Organization of scientific events

Upcoming

- 13/05–23/08/2019 **Kinetic Theory Junior Hausdorff Trimester Program**, Hausdorff Research Institute for Mathematics. Bonn.
- 20–23/09/2018 **Young Women in Mathematical Physics** *Hausdorff Center for Mathematics*, Bonn.

Upcoming

Starting from 2018 member of the new proposal for the Research Area C1 (Mathematical modeling of matter and materials) of the Cluster of Excellence of the Hausdorff Center for Mathematics, Bonn, Germany.

For broad audience

Talks

- 06/11/2015 **Materia energia pensiero: tra fisica e teoria della nascita** *Aula Magna*, Sapienza. Università di Roma.
- 21/11/2015 **Luce, Gravità e Musica** *Conferenza in occasione del centenario della Relatività Generale*, Biblioteca Vaccheria Nardi. Roma.

Bonn, 22/12/2017

Data

Bonn

Luogo

22 Dicembre 2017