

Răzvan V. Chereji

CONTACT INFORMATION

.....
Section on Chromatin and Gene Expression
Program in Genomics of Differentiation
National Institute of Child Health and Human Development
National Institutes of Health
Building 6A Room 2A14
6 Center Drive
Bethesda, MD 20892
Phone: 301-435-8670
E-mail: razvan.chereji@nih.gov

RESEARCH INTERESTS

.....
Chromatin organization, Nucleosome positioning, Gene regulation, Chromatin remodeling factors,
Statistical Mechanics, Biophysics

EDUCATION

.....
2007 - 2013 Ph.D.
Rutgers, The State University of New Jersey, NJ, U.S.A.
Physics Department
Adviser: Professor Alexandre V. Morozov
Thesis: Statistical Mechanics of Nucleosomes
Cumulative GPA: 3.90 / 4

2002 - 2007 B.Eng.
Babeş-Bolyai University, Cluj, Romania
Faculty of Physics
Graduated as valedictorian
Adviser: Professor Emil Vinteler
Thesis: Differential Geometry in General Relativity and Yang-Mills Theory
Thesis GPA: 10 / 10
Cumulative GPA: 9.83 / 10

POSTDOCTORAL EXPERIENCE

.....
2013 - Present Post-Doctoral Fellow
David Clark's Lab
NICHD, National Institutes of Health, Bethesda, MD, U.S.A.

Răzvan V. Chereji

AWARDS

2009	Richard J. Plano Outstanding Teaching Assistant Award
2002	Silver Medal at the International Physics Olympiad, Indonesia
2001, 2002	Excellency Diploma awarded by the President of Romania
2001	Bronze Medal at "Tuymaada" International Olympiad, Russia
1999, 2000, 2002	First Prize at Romanian National Physics Olympiad

SCHOLARSHIPS

2010 - 2013	Graduate Assistantship, Rutgers University
2008 - 2010	Teaching Assistantship, Rutgers University
2007 - 2008	Excellence Fellowship, Rutgers University
2002 - 2007	University Merit Scholarship, Babeş-Bolyai University
2002 - 2007	Romanian Ministry of Education Scholarship
2002 - 2007	"Petrom" Scholarship, OMV Petrom S.A.

PUBLICATIONS

- [1] Chereji RV, Tolkunov D, Locke G & Morozov AV – Statistical mechanics of nucleosome ordering by chromatin-structure-induced two-body interactions, *Phys. Rev. E* 83 (5), 050903 (2011)
 - [2] Chereji RV & Morozov AV – Statistical mechanics of nucleosomes constrained by higher-order chromatin structure, *J. Stat. Phys.* 144 (2), 379-404 (2011)
 - [3] Petrenko N, Chereji RV, McClean MN, Morozov AV & Broach JR – Noise and interlocking signaling pathways promote distinct transcription factor dynamics in response to different stresses, *Mol. Biol. Cell* 24 (12), 2045-2057 (2013)
 - [4] Elfving N*, Chereji RV*, Bharatula V, Björklund S, Morozov AV & Broach JR – A dynamic interplay of nucleosome and Msn2 binding regulates kinetics of gene activation and repression following stress, *Nucl. Acids Res.* 42 (9), 5468-5482 (2014)
- * These authors contributed equally
- [5] Chereji RV & Morozov AV – Ubiquitous nucleosome crowding and unwrapping in the yeast genome, *Proc. Natl. Acad. Sci.* 111 (14), 5236-5241 (2014)
 - [6] Ganguli D*, Chereji RV*, Iben JR, Cole HA & Clark DJ – RSC-dependent Constructive and Destructive Interference between Opposing Arrays of Phased Nucleosomes in Yeast, *Genome Res.* 24 (10), 1637-1649 (2014)
- * These authors contributed equally
- [7] Cole HA, Ocampo J, Iben JR, Chereji RV & Clark DJ – Transcription of Induced Genes in Yeast Correlates with Differential Loss of Histone H2A-H2B Dimers from Coding Regions, *Nucl. Acids Res.* 42 (20), 12512-12522 (2014)
 - [8] Chereji RV & Morozov AV – Functional roles of nucleosome stability and dynamics, *Brief. Funct. Genomics* 14 (1), 50-60 (2015)

Răzvan V. Chereji

PUBLICATIONS (CONTINUED)

- [9] Chereji RV*, Kan T-W*, Grudniewska MK, Romashchenko AV, Berezikov E, Zhimulev IF, Guryev V, Morozov AV & Moshkin YM – Genome-wide profiling of nucleosome sensitivity and chromatin accessibility in *Drosophila melanogaster*, Accepted in Nucl. Acids Res. (2015)
- * These authors contributed equally
- [10] Qiu H*, Chereji RV*, Hu C, Cole HA, Rawal Y, Clark DJ, Hinnebusch AG – Genome-wide cooperation by HAT Gcn5, remodeler SWI/SNF, and chaperone Ydj1 in promoter nucleosome eviction and transcriptional activation, Accepted in Genome Res. (2015)
- * These authors contributed equally
- [11] Ocampo J*, Chereji RV*, Eriksson PR, Clark DJ – Interplay among different ATP-dependent chromatin remodeling machines determines nucleosome spacing on active and inactive genes (Under review)
- * These authors contributed equally

PRESENTATIONS

- September, 2012 Biophysical Society Pennsylvania Network Meeting, Lehigh University, Bethlehem, PA (poster)
- November, 2012 The 8th Gotham-Metro Condensed Matter Meeting, The New York Academy of Sciences, New York, NY (poster)
- December, 2012 108th Statistical Mechanics Conference, Rutgers University, Piscataway, NJ (contributed talk)
- February, 2013 Biophysical Society 57th Annual Meeting, Philadelphia, PA (poster)
- March, 2013 APS March Meeting, Baltimore, MD (contributed talk)
- June, 2013 University of California San Francisco, San Francisco, CA (invited talk)
- June, 2013 National Institutes of Health, Bethesda, MD (invited talk)
- September, 2013 BioMaPS Institute for Quantitative Biology Student Seminar, Rutgers University, Piscataway, NJ (invited talk)
- February, 2014 Biophysical Society 58th Annual Meeting, San Francisco, CA (poster)
- March, 2014 APS March Meeting, Denver, CO (contributed talk)
- April, 2014 10th Annual NICHD Fellows Meeting, Washington, DC (poster)
- June, 2014 NICHD Scientific Retreat, NIH, Bethesda, MD (poster)
- June, 2014 PGD Seminar, NIH, Bethesda, MD (seminar)
- September, 2014 CSHL Epigenetics & Chromatin Meeting, Cold Spring Harbor, NY (poster)
- February, 2015 Biophysical Society 59th Annual Meeting, Baltimore, MD (poster)
- March, 2015 APS March Meeting, San Antonio, TX (invited talk + contributed talk)
- March, 2015 Keystone Symposia: DNA Methylation / Epigenomics, Keystone, CO (poster)
- April, 2015 NCI Symposium on Chromosome Biology, NIH, Bethesda, MD (poster)
- April, 2015 Chromatin-ENCODE Seminar, NIH, Bethesda, MD (invited talk)
- May, 2015 11th Annual NICHD Fellows Meeting, Washington, DC (poster)

Răzvan V. Chereji

PRESENTATIONS (CONTINUED)

May, 2015	PGD Seminar, NIH, Bethesda, MD (seminar)
June, 2015	FASEB conference: Transcription, Chromatin, and Epigenetics, Palm Beach, FL (poster)
July, 2015	34 th Summer Symposium in Molecular Biology, Penn State University, State College, PA (poster)
September, 2015	NIH Research Festival, NIH, Bethesda, MD (poster)

TEACHING EXPERIENCE

Summer, 2012	General Physics II
Summer, 2010	General Physics II
Spring, 2010	Extended Analytical Physics II
Fall, 2009	Extended Analytical Physics I
Summer, 2009	General Physics II
Spring, 2009	Extended Analytical Physics II
Fall, 2008	Extended Analytical Physics I

TEST SCORES

August, 2008	Ph.D. Candidacy Examination, overall percentage: 89.1%
November, 2006	GRE Subject: Physics, score: 990 / 990

OTHER SKILLS

MATLAB, R, Bash, LaTeX, Adobe Illustrator, Adobe InDesign, Adobe Dreamweaver

MEMBERSHIPS

American Physical Society, Biophysical Society

Răzvan V. Chereji

REFERENCES

David J. Clark

Chief, Section on Chromatin and Gene Regulation
Program in Genomics of Differentiation, NICHD
National Institutes of Health
Building 6A, Room 2A14
Bethesda, MD 20892, USA



301-496-6966



301-480-1907



clarkda@mail.nih.gov

Gordon L. Hager

Chief, Laboratory of Receptor Biology and Gene Expression
Head, Hormone Action and Oncogenesis Section
Center for Cancer Research, NCI
National Institutes of Health
Building 41, Room B-602
Bethesda, MD 20892, USA



301-496-9867



301-496-4951



hagerg@dce41.nci.nih.gov

Alan G. Hinnebusch

Chief, Section on Nutrient Control of Gene Expression
Program in Cellular Regulation and Metabolism, NICHD
National Institutes of Health
Building 6, Room 230
Bethesda, MD 20892, USA



301-496-4480



301-496-6828



alanh@mail.nih.gov

Alexandre V. Morozov

Associate Professor
Department of Physics & Astronomy
BioMaPS Institute for Quantitative Biology
Rutgers, The State University of New Jersey
136 Frelinghuysen Road
Piscataway, NJ 08854-8019, USA



848-445-1387



732-445-4320



morozov@physics.rutgers.edu

James R. Broach

Professor and Chair, Department of Biochemistry and
Molecular Biology
Director, Penn State Hershey Institute for Personalized
Medicine

Penn State College of Medicine
500 University Drive
Hershey, PA 17033-0858, USA



717-531-8586



717-531-7072



jbroach@hmc.psu.edu

Joel L. Lebowitz

George William Hill Professor of Mathematics and Physics
Director, Center for Mathematical Sciences Research
Rutgers, The State University of New Jersey
110 Frelinghuysen Road
Piscataway, NJ 08854-8019, USA



848-445-3117



732-445-4936



lebowitz@math.rutgers.edu