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] Elfving N*, **Chereji RV***, Larsson M, Morozov AV, Broach JR & Björklund S – Mediator exists in multiple forms and is predominantly associated to promoters with low nucleosome density (Submitted)

* These authors contributed equally

[10] **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 (Submitted)

* 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-DECODE Seminar, NIH, Bethesda, MD (invited talk)
May, 2015	11th Annual NICHD Fellows Meeting, Washington, DC (poster)
May, 2015	PGD Seminar, NIH, Bethesda, MD (seminar)
June, 2015	FASEB conference: Transcription, Chromatin, and Epigenetics, Palm Beach, FL (poster)
July, 2015	34th Summer Symposium in Molecular Biology, Penn State University, State College, PA (poster)

Răzvan V. Chereji

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

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

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

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

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

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