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Автобиография

Собствено име(на) Фамилия(и)	**РЕНЕТА ПЕТРОВА БЪРНЕВА**
Адрес(служебен)	Минно-геоложки университет "Св. Иван Рилски ", Студентски град, София 1700 Катедра „Информатика”
Мобилен (незадължително)	
E-mail	barneva@mgu.bg
Дата на раждане, Място	
Длъжност(и) (в момента)	
Дати	1998 -
Заемана длъжност или позиция	**Доцент**
Име и адрес на работодателя	Минно-геоложки университет "Св. Иван Рилски ", Студентски град, София 1700

Образование и обучение

Дати	1990
Придобитата квалификация	Доктор
Образователна институция	Софийски университет "Св. Климент Охридски"
Дати	1984
Придобитата квалификация	Магистър
Образователна институция	Софийски университет "Св. Климент Охридски"

Чужд (и) език (езици) **Руски, Английски**

Самооценка	Разбиране				Говорене				Писане	
Европейско ниво (*)	Слушане		Четене		Участие в разговор		Самостоятелно устно изложение			
руски	C2	Свободно ниво на владеене	C2	Свободно ниво на владеене	C1	Свободно ниво на владеене	C1	Свободно ниво на владеене	C1	Свободно ниво на владеене
английски	C2	Свободно ниво на владеене	C2	Свободно ниво на владеене	C1	Свободно ниво на владеене	C1	Свободно ниво на владеене	C1	Свободно ниво на владеене

Професионална информация и приложения

Области на професионални и научни интереси (ключови думи)	Компютърна графика Дискретна геометрия Мултимедия Алгоритми Изчислителна биология
Патенти и изобретения	
Членство в професионални и браншови организации	American Mathematical Society, Асоциация “Развитие на информационното общество” International Association for Pattern Recognition, Technical Committee on Discrete Geometry
Публикации	47 за периода 2007-2011 **Приложение 1**
Проекти	5 за периода 2007-2011 **Приложение 2**

Участие в научни сесии и конгреси
(за последните 5 години)

Водеща роля:

CompIMAGE'10, Buffalo-Niagara Falls, May 2010, General Chair, Chair of Organizing Committee

IWCIA'08, Buffalo, April 2008, Vice-chair, Chair of Organizing Committee

IWCIA'09, Playa del Carmen, Mexico, November 2009, Program Chair and Principal Organizer

IWCIA'11, Madrid, Spain, Program and Publication Chair

IWCIA'12, Austin, TX, November 2012, Program and Publication Chair

ISVC'08 International Symposium on Visual Computing, Special Track on "Discrete and Computational Geometry and their Applications to Visual Computing," Las Vegas, NV, Special Track Chair

ISVC'08 International Symposium on Visual Computing, Special Track on "Discrete and Computational Geometry and their Applications to Visual Computing," Lake Tahoe, NV, Special Track Chair

Член на програмни, научни или организационни комитети:

CompIMAGE'12 International Symposium on Computational Modeling of Objects Represented in Images, Rome, Italy, Scientific Committee Member

VISAPP'12 International Conference on Computer Vision Theory and Applications, Rome, Italy, Program Committee Member

ISVC'12 International Symposium on Visual Computing, Crete, Greece, Program Committee Member

IMAGAPP'11 International Conference on Imaging Theory and Applications, Algarve, Portugal, Program Committee Member

IEEE CIT'11 International Conference on Computer and Information Technology, Pafos, Cyprus, Program Committee Member

ISVC'11 International Symposium on Visual Computing, Las Vegas, NV, Program Committee Member

DGCI'11 Discrete Geometry for Computer Imagery, Nancy, France, Program Committee Member

ISVC'10 International Symposium on Visual Computing, Las Vegas, NV, Program Committee Member

IMAGAPP'10 International Conference on Imaging Theory and Applications, Angers, France, Program Committee Member

IEEE CIT'10 International Conference on Computer and Information Technology, Bradford, UK, International Program Committee Member

ICPR'10 International Conference on Pattern Recognition, Istanbul, Turkey, Technical Program Committee Member

CACS'10 Congress on Computer Applications and Computational Science, Singapore, Technical Program Committee Member

S3T Soft – Software, Services and Semantic Technologies, 2009, Sofia, Bulgaria Program Committee Member

DGCI'09 Discrete Geometry for Computer Imagery, Montreal, Canada, Program Committee Member

ISVC'09 International Symposium on Visual Computing, Las Vegas, NV, Program Committee Member

IMAGAPP'09 International Conference on Imaging Theory and Applications, Lisbon, Portugal, Program Committee Member

VipIMAGE'09 Thematic Conference on Computational Vision and Medical Image Processing,

Porto, Portugal, Scientific Committee Member

IEEE CIT'09 International Conference on Computer and Information Technology, Xiamen, China, International Program Committee Member

ISVC'08 International Symposium on Visual Computing, Special Track on "Discrete and Computational Geometry and their Applications to Visual Computing," Las Vegas, NV, Program Committee Member; Special Track Chair

ISVC'08 International Symposium on Visual Computing, Special Track on "Computational Bioimaging and Visualization," Las Vegas, NV, Program Committee Member; Special Track Program Committee Member

DGCI'08 Discrete Geometry for Computer Imagery, Lyon, France, Program Committee Member

IEEE CIT'08 International Conference on Computer and Information Technology, Sydney, Australia, International Program Committee Member

EUROMEDIA'08, Porto, Portugal, International Program Committee Member

Специализации в чужбина
(за последните 5 години)

Други професионални компетенции

ПУБЛИКАЦИИ

за периода 2007-2011

Книги:

1. Aggarwal, J.K., R.P. Barneva, V.E. Brimkov, K. Koroutchev, E. Korucheva (Eds.), Combinatorial Image Analysis, **Springer Verlag, Berlin-Heidelberg**, LNCS 6636, 2011, 496 pages
2. Barneva, R.P., V.E. Brimkov, K. Koroutchev, E. Korucheva (Eds.), Advances in Image Analysis and Applications, **Research Publishing, Singapore Chennai**, 2011, 146 pages
3. Barneva, R.P., V.E. Brimkov, H.A. Hauptman, R.M. Natal Jorje, J.M.R.S. Tavares (Eds.), Computational Modeling of Objects Represented in Images, **Springer Verlag**, **Berlin-Heidelberg,** LNCS 6026, 2010, 326 pages
4. Barneva, R.P., V.E. Brimkov, R.M. Natal Jorje, J.M.R.S. Tavares (Eds.), Object Modeling, Algorithms, and Applications, **Research Publishing Services, Singapore-Chennai,** 2010, 141 pages
5. Wiederhold, P., R.P. Barneva (Eds.), Combinatorial Image Analysis, **Springer Verlag**, LNCS 5852, Berlin-Heidelberg, 2009, 437 pages
6. Wiederhold, P., R.P. Barneva (Eds.), Progress in Combinatorial Image Analysis Research Publishing Services, **Research Publishing Services, Singapore-Chennai**, 2009, 247 pages
7. Brimkov, V.E., R.P. Barneva, H. Hauptman (Eds.), **Combinatorial Image Analysis, Springer**, Lecture Notes in Computer Science, No 4958, Berlin Heidelberg, 2008, 446 pages
8. Barneva, R.P., V.E. Brimkov (Eds.), **Image Analysis: From Theory to Applications, Research Publishing Services,** Singapore, Chennai, 2008, 243 pages

Редактирани специални броеве на списания:

9. Barneva, R.P., V.E. Brimkov, Computational Modeling of Objects Represented in Images, **Graphical Models, Elsevier**, Vol. 73(6), 2011, 65 pages
10. Barneva, R.P., V.E. Brimkov, P. Wiederhold, Combinatorial Problems and Algorithms in Image Analysis, **International Journal of Imaging Systems and Technology, Wiley,** Vol. 21(1), 2011, 119 pages
11. Brimkov, V.E., R.P. Barneva, P. Wiederhold (Eds.), Theoretical Computer Science Issues in Image Analysis and Processing, **Theoretical Computer Science, Elsevier,** Vol. 412(15), 2011, 143 pages
12. Brimkov, V.E., R.P. Barneva (Eds.), **Discrete Applied Mathematics, Elsevier,** Vol. 157(16) (2009) 135 pages
13. Barneva, R.P., V.E. Brimkov (Eds.), Contemporary Challenges in Combinatorial Image Analysis, **International Journal of Imaging Systems and Technology (Wiley)**, Vol. 19 (2009) 166 pages
14. Brimkov, V.E., R.P. Barneva (Eds.), Advances in combinatorial image analysis, **Pattern Recognition (Elsevier)** 24 (8) (2009) 95 pages
15. Brimkov, V.E., R.P. Barneva (Eds.), **International Journal of Shape Modeling, World Scientific,** Vol. 14, Issue 2 (2008) 134 pages

Статии в списания:

16. Barneva, R.P., V.E. Brimkov, P. Wiederhold, Combinatorial problems and algorithms in image analysis, **International Journal of Imaging Systems and Technology (Wiley) 21**(1), 2011, 1-2
17. Barneva, R.P., B. Brimkov, How computer science develops mathematical skills. **Journal of Computing Sciences in Colleges (ACM) 26**(6), 2011, 170-172
18. Brimkov, V., R.P. Barneva, P. Wiederhold, Theoretical Computer Science Issues in Image Analysis and Processing, **Theoretical Computer Science (Elsevier) 412**(15), 2011, 1299-1300
19. Brimkov, V.E., R.P. Barneva, B. Brimkov, Connected distance-based rasterization of objects in arbitrary dimension, **Graphical Models (Elsevier) 73** (6), 2011, 323-334
20. Brimkov, V.E., R.P. Barneva, Computational modeling of objects represented in images, **Graphical Models (Elsevier) 73** (6), 2011, 311-312
21. Kanev, K., R.P. Barneva, V.E. Brimkov, D. Kaneva, Interactive printouts integrating multilingual multimedia and sign language electronic resources, **Journal of Educational Technology Systems**, Vol. 38, No. 2, 2009-2010, 123-143

22. Barneva R.P., V.E. Brimkov, K. D. Kanev, Combining Ubiquitous Direction-Sensitive Digitizing with a Multimedia Electronic Dictionary for Enhanced Understanding, **International Journal on Imaging Systems and Technology (Wiley) 19** (2), June 2009, 39-49

23. Barneva, R.P., V.E. Brimkov, Guest Editorial: Contemporary Challenges in Combinatorial Image Analysis, **International Journal on Imaging Systems and Technology (Wiley)** 19 (2), June 2009, 38-39

24. Asano, T., V.E. Brimkov, R.P. Barneva, Theoretical Challenges in Digital Geometry: A Perspective, **Discrete Applied Mathematics (Elsevier) 157** (16) August 2009, 3362-3371

25. Brimkov, V.E., R.P. Barneva, Editorial. Combinatorial Approach to Image Analysis, **Discrete Applied Mathematics (Elsevier) 157** (16) August 2009, 3359-3361

26. Brimkov, V.E., R.P. Barneva, Advances in combinatorial image analysis, **Pattern Recognition (Elsevier) 24** (8), August 2009, 1623-1625

27. Brimkov, V.E., R.P. Barneva, On the Polyhedral Complexity of the Integer Points in a Hyperball, **Theoretical Computer Science (Elsevier) 406,** 2008, 24-30

28. Brimkov, V.E., G. Nordo, R.P. Barneva, A. Maimone, Genus and dimension of digital images and their time- and space-efficient computation, **International Journal of Shape Modeling (World Scientific)** Vol. 14, Issue 2, 2008, 147-168

29. Brimkov, V.E., R.P. Barneva, Discrete and Computational Geometry and their Applications in Visual Computing, **International Journal of Shape Modeling (World Scientific)** Vol. 14, Issue 2, 2008, v-vii

30. Brimkov, V.E., R. Barneva, Applications of digital geometry to surface recognition, **International Journal for Computational Vision and Biomechanics (Serials Publishing),** 2008, 163-172

31. Brimkov, V.E., R. Barneva, Digital Stars and Visibility of Digital Objects, In: *Computational Modeling of Objects Represented in Images*, **Lecture Notes in Computer Science, Springer (2010)**, **Berlin-Heidelberg,** No. 6026, 11–23.

32. Barneva, R.P., V.E. Brimkov, K. Kanev, Theoretical Issues of Cluster Pattern Interfaces, Petra Wiederhold, R.P. Barneva (Eds.), *Combinatorial Image Analysis*, **Lecture Notes in Computer Science,** No 5852, **Springer** (2009), 302-315.

33. Brimkov, V.E., R. Barneva, B. Brimkov, Minimal offsets that guarantee maximal or minimal connectivity of digital curves in nD, In: Srečko Brlek, Xavier Provençal, and Christophe Reutenauer (Eds.), *Discrete Geometry for Computer Imagery*, **Lecture Notes in Computer Science,** No 5810, **Springer** (2009), 337-349.

Рецензирани глави в книги и в сборници на конференции:

34. Kanev, K., R.P. Barneva, V.E. Brimkov, D. Kaneva, Print-based interaction interfaces for multilingual multimedia and sign language electronic resource integration. Proc. **ICSOFT 2009 4th Interantional conference on Software and Data Technologies**, Sofia, Bulgaria, 26-29 July 2009, Vol. 2, 223-228.

35. Brimkov, V.E., R.P. Barneva, B. Brimkov, F. de Vieilleville, Offset approach to defining 3D digital lines, In: Bebis et al. (Eds.), International Symposium on Visual Computing, **Lecture Notes in Computer Science**, No 5358, **Springer** (2008), 678-687.

36. Brimkov, V.E., R.B. Barneva, Linear time constant-working space algorithm for computing the genus of a digital object, In: Bebis et al. (Eds.), International Symposium on Visual Computing, **Lecture Notes in Computer Science,** No 5358, **Springer** (2008), 669-677.

37. Barneva, R.P., V.E. Brimkov, Digital geometry and its applications to medical imaging, In: Tavares, J. et al., **Advances in Computational Vision and Medical Image Processing: Methods and Applications, Springer**, Computational Methods in Applied Sciences (2008) 77-92.

38. Barneva, R.P., V.E. Brimkov, K.D. Kanev, Electronic multimedia dictionary with direct-access printed Interface, In: Barneva, R.P., V.E. Brimkov (Eds.), **Image Analysis: From Theory to Applications, Research Publishing Services** (2008) 39-46.

39. Brimkov, V.E., G. Klette, R. Barneva, R. Klette, Theory of digital manifolds and its applications to medical imaging, In: J. M. R. S. Tavares and R. M. N. Jorge (Eds.), **Computational Vision and Medical Image Processing, Taylor & Francis /Balkema** (2007), 21-26.

Технически доклади:

40. Brimkov, V.E., R. Barneva, *A note on convex hulls of digital lines and discs*, Preprint IC/2007/070, The Abdus Salam **International Centre for Theoretical Physics**, Miramare-Trieste, Italy, August 2007, 7 pages, http://publications.ictp.it

41. Brimkov, V.E., G. Klette, R. Barneva, R. Klette, *Theory of digital manifolds and its application to medical imaging*, CITR-TR-200, Centre for Image Technology and Robotics, **University of Auckland**, New Zealand, May 2007, http://www.citr.auckland.ac.nz/techreports/

Резюмета и постери:

42. Barneva, R.P., Partnership with the Technology Incubator at SUNY Fredonia, ***Conference STEM – Building towards equity and excellence***, November 3-4, 2011, Albany, NY, p. 9
43. Barneva, R.P., Preparing at SUNY Fredonia: qualified specialists ready to take on the challenges of the information age, ***National Professional Science Master's Association – Best Practices Workshop***, Niagara Falls, NY, October 13-15, 2011, p. 3
44. Barneva, R.P., G. Cole, G. Singh, Best Teaching Practices in the Department of Computer and Information Sciences, ***5th Annual SUNY Fredonia Teaching and Learning Conference***, Fredonia, NY, 2011, p. 7
45. Barneva, R.P., V.E. Brimkov, K.D. Kanev, Direct-access interface: theoretical developments and applications, Proc. ***Second New York Conference on Applied Mathematics***, April 2011, Buffalo, p. 41
46. Barneva, R.P. ,V.E. Brimkov, K.D. Kanev, New Dimensions in Language Acquisition: Interactive Books with Multimedia Support, ***Proc. Conference on Instructional Technologies***, 2009, Oswego, NY, pp. 56-57
47. Brimkov, V.E., R.P. Barneva, Optimally fast detection of repetitions in two-dimensional arrays, In Proc. of *New Trends in Mathematics and Informatics*. ***Jubilee International Conference 60 years Institute of Mathematics and Informatics, Bulgarian Academy of Sciences***, Sofia, Bulgaria, 6-8 July 2007, p. 24

Приложение 2

ПРОЕКТИ

за периода 2007-2011

1. ***Space-efficient algorithms in image processing: Models and Algorithms. (2011-2012)***
   Project Leader (¥ 700,000)
   Shizuoka University, Japan, SUNY Fredonia, USA, SUNY Buffalo State College, USA, Universidad Autónoma de Madrid, Spain, Universidad Nacional de Educación a Distancia, Spain, Université de Savoie, France, McMaster University, Canada
   Funded by Research Institute of Electronics, Shizuoka University, Japan
2. ***Space-efficient algorithms in image processing: from Theoretical Models to Practical Implementation. (2010-2011)***
   Project Leader (¥ 1,000,000)
   Shizuoka University, Japan, SUNY Fredonia, USA, SUNY Buffalo State College, USA, Universidad Autónoma de Madrid, Spain, Universidad Nacional de Educación a Distancia, Spain, Université de Savoie, France, McMaster University, Canada
   Funded by Research Institute of Electronics, Shizuoka University, Japan
3. ***Space-efficient algorithms in image processing: Theoretical Foundations and Implementation. (2009-2010)***
   Member (¥ 1,000,000)
   Shizuoka University, Japan, SUNY Fredonia, USA, SUNY Buffalo State College, USA, Universidad Autónoma de Madrid, Spain, Universidad Nacional de Educación a Distancia, Spain, Université de Savoie, France, McMaster University, Canada
   Funded by Research Institute of Electronics, Shizuoka University, Japan
4. ***Space-efficient algorithms in image processing: Theory and Applications. (2008-2009)***
   Member (¥ 1,000,000)
   Shizuoka University, Japan, SUNY Fredonia, USA, SUNY Buffalo State College, USA, Universidad Autónoma de Madrid, Spain, Universidad Nacional de Educación a Distancia, Spain, Université de Savoie, France
   Funded by Research Institute of Electronics, Shizuoka University, Japan