

Publication List

Michael T. Wolfinger

29th October, 2022

A) Submitted Manuscripts / Preprints

1. Darren Gemmill, Corey Nelson, Maulik Badmalia, Higor Pereira, Michael T. Wolfinger, and Trushar Patel. The 3' terminal region of Zika virus RNA contains a conserved G-quadruplex and is unfolded by human DDX17. *Manuscript submitted*, 2022
2. Benoit Besson, Gijs J. Overheul, Michael T. Wolfinger, Sandra Junglen, and Ronald P. van Rij. Pan-flavivirus analysis reveals that the insect-specific Kamiti River virus produces a new subgenomic RNA and high amounts of 3' UTR-derived siRNAs. *bioRxiv*, 2022, doi:10.1101/2022.08.18.504478
3. Tyler Mrozowich, Sean M. Park, Maria Walldl, Amy Henrickson, Corey R. Nelson, Borries Demeler, Ivo L. Hofacker, Michael T. Wolfinger, and Trushar R. Patel. Cyclization studies of Japanese encephalitis virus non-coding RNA terminal region. *bioRxiv*, 2022, doi:10.1101/2022.02.01.478553

B) Refereed Journal Papers

4. Nitchakan Darai, Panupong Mahalapbutr, Peter Wolschann, Vannajan Sanghiran Lee, Michael T. Wolfinger, and Thanyada Rungrotmongkol. Theoretical studies on RNA recognition by Musashi 1 RNA-binding protein. *Sci. Rep.*, 12:12137, Jul 2022, doi:10.1038/s41598-022-16252-w. PMCID: PMC9287312
5. Christoph Flamm, Julia Wielach, Michael T. Wolfinger, Stefan Badelt, Ronny Lorenz, and Ivo L. Hofacker. Caveats to deep learning approaches to RNA secondary structure prediction. *Front. Bioinform.*, 2:835422, Jul 2022, doi:10.3389/fbinf.2022.835422
6. Marlena Rozner, Ella Nukarinen, Michael T. Wolfinger, Fabian Amman, Wolfram Weckwerth, Udo Bläsi, and Elisabeth Sonnleitner. Rewiring of Gene Expression in *Pseudomonas aeruginosa* During Diauxic Growth Reveals an Indirect Regulation of the MexGHI-OpmD Efflux Pump by Hfq. *Front. Microbiol.*, 13:919539, Jun 2022, doi:10.3389/fmicb.2022.919539. PMCID: PMC9272787
7. Lena S. Kutschera and Michael T. Wolfinger. Evolutionary traits of Tick-borne encephalitis virus: Pervasive RNA structure conservation and molecular epidemiology. *Virus Evol.*, 8(1), Jun 2022, doi:10.1093/ve/veac051. PMCID: PMC9272599
8. Michael H. D'Souza, Tyler Mrozowich, Maulik D. Badmalia, Mitchell Geeraert, Angela Frederickson, Amy Henrickson, Borries Demeler, Michael T. Wolfinger, and Trushar R. Patel. Biophysical Characterisation of Human LincRNA-p21 Sense and Antisense Alu Inverted Repeats. *Nucleic Acids Res.*, May 2022, doi:10.1093/nar/gkac414. PMCID: PMC9177966
9. Devadatta Gosavi, Iwona Wower, Irene K. Beckmann, Ivo L. Hofacker, Jacek Wower, Michael T. Wolfinger, and Joanna Sztuba-Solinska. Insight into the secondary and tertiary structure of the Bovine Viral Diarrhea Virus Internal Ribosome Entry Site. *RNA Biol.*, 19:496–506, Mar 2022, doi:10.1080/15476286.2022.2058818. PMCID: PMC8986297
10. Anastasia Cianciulli Sesso, Branislav Lilić, Fabian Amman, Michael T. Wolfinger, Elisabeth Sonnleitner, and Udo Bläsi. Gene Expression Profiling of *Pseudomonas aeruginosa* Upon Exposure to Colistin and Tobramycin. *Front. Microbiol.*, 12:937, Apr 2021, doi:10.3389/fmicb.2021.626715. PMCID: PMC8120321
11. Hayato Harima, Yasuko Orba, Shiho Torii, Yongjin Qiu, Masahiro Kajihara, Yoshiki Eto, Naoya Matsuta, Hang'ombe Bernard M., Yuki Eshita, Kentaro Uemura, Keita Matsuno, Michihito Sasaki, Kentaro Yoshii, Ryo Nakao, William W. Hall, Ayato Takada, Takashi Abe, Michael T. Wolfinger, Martin Simmunza, and Hirofumi Sawa. An African tick flavivirus forming an independent clade exhibits unique exoribonuclease-resistant RNA structures in the genomic 3'-untranslated region. *Sci. Rep.*, 11:4883, Mar 2021, doi:10.1038/s41598-021-84365-9. PMCID: PMC7921595
12. Thomas Spicher, Markus Delitz, Adriano de Bernardi Schneider, and Michael T. Wolfinger. Dynamic Molecular Epidemiology Reveals Lineage-Associated Single-Nucleotide Variants That Alter RNA Structure in Chikungunya Virus. *Genes*, 12(2):239, Feb 2021, doi:10.3390/genes12020239. PMCID: PMC7914560

13. Alexandra Popa, Jakob-Wendelin Genger, Michael D. Nicholson, Thomas Penz, Daniela Schmid, Stephan W Aberle, Benedikt Agerer, Alexander Lercher, Lukas Endler, Henrique Colaco, Mark Smyth, Michael Schuster, Miguel L. Grau, Francisco Martínez-Jiménez, Oriol Pich, Wegene Borena, Erich Pawelka, Zsafia Keszei, Martin Senekowitsch, Jan Laine, Judith H Aberle, Monika Redlberger-Fritz, Mario Karolyi, Alexander Zoufaly, Sabine Maritschnik, Martin Borkovec, Peter Hufnagl, Manfred Nairz, Günter Weiss, Michael T. Wolfinger, Dorothee von Laer, Giulio Superti-Furga, Nuria Lopez-Bigas, Elisabeth Puchhammer-Stöckl, Franz Allerberger, Franziska Michor, Christoph Bock, and Andreas Bergthaler. Genomic epidemiology of superspreading events in Austria reveals mutational dynamics and transmission properties of SARS-CoV-2. *Sci. Transl. Med.*, 12, Dec 2020, doi:10.1126/scitranslmed.abe2555. PMCID: PMC7857414
14. Christida E. Wastika, Hayato Harima, Michihito Sasakai, Bernard M. Hang'ombe, Yuki Eshita, Qiu Yongjin, William W. Hall, Michael T. Wolfinger, Hirofumi Sawa, and Yasuko Orba. Discoveries of Exoribonuclease-Resistant Structures of Insect-Specific Flaviviruses Isolated in Zambia. *Viruses*, 12:1017, Sep 2020, doi:10.3390/v12091017. PMCID: PMC7551683
15. Elisabeth Sonnleitner, Petra Pusic, Michael T. Wolfinger, and Udo Bläsi. Distinctive regulation of carbapenem susceptibility in *Pseudomonas aeruginosa* by Hfq. *Front. Microbiol.*, 11:1001, May 2020, doi:10.3389/fmicb.2020.01001. PMCID: PMC7264166
16. Adriano de Bernardi Schneider, Roman Ochsenreiter, Reilly Hostager, Ivo L. Hofacker, Daniel Janies, and Michael T. Wolfinger. Updated Phylogeny of Chikungunya Virus Suggests Lineage-Specific RNA Architecture. *Viruses*, 11:798, Aug 2019, doi:10.3390/v11090798. PMCID: PMC6784101
17. Adriano de Bernardi Schneider and Michael T. Wolfinger. Musashi binding elements in Zika and related Flavivirus 3'UTRs: A comparative study *in silico*. *Sci. Rep.*, 9(1):6911, May 2019, doi:10.1038/s41598-019-43390-5. PMCID: PMC6502878
18. Flavia Bassani, Isabelle Anna Zink, Thomas Pribasnig, Michael T. Wolfinger, Alice Romagnoli, Armin Resch, Christa Schleper, Udo Bläsi, and Anna La Teana. Indications for a moonlighting function of translation factor alF5A in the crenarchaeum *Sulfolobus solfataricus*. *RNA Biol.*, 16(5):675–685, May 2019, doi:10.1080/15476286.2019.1582953. PMCID: PMC6546411
19. Roman Ochsenreiter, Ivo L. Hofacker, and Michael T. Wolfinger. Functional RNA Structures in the 3'UTR of Tick-borne, Insect-specific and No Known Vector Flaviviruses. *Viruses*, 11:298, Mar 2019, doi:10.3390/v11030298. PMCID: PMC6466055
20. Petra Pusic, Elisabeth Sonnleitner, Beatrice Krennmayr, Dorothea Agnes Heitzinger, Michael T. Wolfinger, Armin Resch, and Udo Bläsi. Harnessing Metabolic Regulation to increase Hfq-dependent Antibiotic Susceptibility in *Pseudomonas aeruginosa*. *Front. Microbiol.*, 9:2709, Nov 2018, doi:10.3389/fmicb.2018.02709. PMCID: PMC6237836
21. Maria Waldl, Bernhard C. Thiel, Roman Ochsenreiter, Alexander Holzenleiter, João Victor de Araujo Oliveira, Maria Emília M.T. Walter, Michael T. Wolfinger, and Peter F. Stadler. TERribly Difficult: Searching for Telomerase RNAs in Saccharomycetes. *Genes*, 9(8):372, Jul 2018, doi:10.3390/genes9080372. PMCID: PMC6115765
22. Michael T. Wolfinger, Christoph Flamm, and Ivo L. Hofacker. Efficient computation of cotranscriptional RNA-ligand interaction dynamics. *Methods*, 143:70–76, Jul 2018, doi:10.1016/j.jymeth.2018.04.036. PMID: 29730250
23. Sven Findeiß, Stefan Hammer, Michael T. Wolfinger, Felix Kühnl, Christoph Flamm, and Ivo L. Hofacker. In silico design of ligand triggered RNA switches. *Methods*, 143:90–101, Jul 2018, doi:10.1016/j.jymeth.2018.04.003. PMID: 29660485
24. Elisabeth Sonnleitner, Alexander Wulf, Sébastien Campagne, Xue-Yuan Pei, Michael T. Wolfinger, Giada Forlani, Konstantin Prindl, Laetitia Abdou, Armin Resch, Frederic Allain, Ben Luisi, Henning Urlaub, and Udo Bläsi. Interplay between the catabolite repression control protein Crc, Hfq and RNA in Hfq-dependent translational regulation in *Pseudomonas aeruginosa*. *Nucleic Acids Res.*, 46:1470–1485, Feb 2018, doi:10.1093/nar/gkx1245. PMCID: PMC5815094
25. Muralidhar Tata, Fabian Amman, Vinay Pawar, Michael T. Wolfinger, Siegfried Weiss, Susanne Häussler, and Udo Bläsi. The anaerobically induced sRNA Pail affects denitrification in *Pseudomonas aeruginosa* PA14. *Front. Microbiol.*, 8:2312, Nov 2017, doi:10.3389/fmicb.2017.02312. PMCID: PMC5703892
26. Birgit Mörtens, Linlin Hou, Fabian Amman, Michael T. Wolfinger, Elena Evguenieva-Hackenberg, and Udo Bläsi. The SmAP1/2 proteins of the crenarchaeon *Sulfolobus solfataricus* interact with the exosome and stimulate A-rich tailing of transcripts. *Nucleic Acids Res.*, 45:7938–7949, Jul 2017, doi:10.1093/nar/gkx437. PMCID: PMC5570065

27. Christina Helmling, Anna Wacker, Michael T. Wolfinger, Ivo L. Hofacker, Martin Hengsbach, Boris Fürtig, and Harald Schwalbe. NMR structural profiling of transcriptional intermediates reveals riboswitch regulation by metastable RNA conformations. *J. Am. Chem. Soc.*, 139(7):2647–2656, Feb 2017, doi:10.1021/jacs.6b10429. PMID: 28134517
28. Petra Pusic, Muralidhar Tata, Michael T. Wolfinger, Elisabeth Sonnleitner, Susanne Häussler, and Udo Bläsi. Cross-regulation by CrcZ RNA controls anoxic biofilm formation in *Pseudomonas aeruginosa*. *Sci. Rep.*, 6(39621), Dec 2016, doi:10.1038/srep39621. PMCID: PMC5175159
29. Mansoured Tajadodd, Andrea Tanzer, Konstantin Licht, Michael T. Wolfinger, Stefan Badelt, Florian Huber, Oliver Pusch, Sandy Schopoff, Ivo L. Hofacker, and Michael F. Jantsch. Transcriptome-wide effects of inverted SINES on gene expression and their impact on RNA Polymerase II activity. *Genome Biol.*, 17:220, Oct 2016, doi:10.1186/s13059-016-1083-0. PMCID: PMC5080714
30. Martin Hölzer, Verena Krähling, Fabian Amman, Emanuel Barth, Stephan H. Bernhart, Victor Carmelo, Maximilian Collatz, Gero Doose, Florian Eggenhofer, Jan Ewald, Jörg Fallmann, Lasse M. Feldhahn, Markus Fricke, Juliane Gebauer, Andreas J. Gruber, Franziska Hufsky, Henrike Indrischek, Sabina Kanton, Jörg Linde, Nelly Mostajo, Roman Ochsenreiter, Konstantin Riege, Lorena Rivarola-Duarte, Abdullah H. Sahyoun, Sita J. Saunders, Stefan E. Seemann, Andrea Tanzer, Bertram Vogel, Stefanie Wehner, Michael T. Wolfinger, Rolf Backofen, Jan Gorodkin, Ivo Grosse, Ivo L. Hofacker, Steve Hoffmann, Christoph Kaleta, Peter F. Stadler, Stephan Becker, and Manja Marz. Differential transcriptional responses to Ebola and Marburg virus infection in bat and human cells. *Sci. Rep.*, 6(34589), Oct 2016, doi:10.1038/srep34589. PMCID: PMC5054393
31. Martina Sauert, Michael T. Wolfinger, Oliver Vesper, Christian Müller, Konstantin Byrgazov, and Isabella Moll. The MazF-regulon: A toolbox for the post-transcriptional stress response in *Escherichia coli*. *Nucleic Acids Res.*, 44(14):6660–6675, Aug 2016, doi:10.1093/nar/gkw115. PMCID: PMC5001579
32. Ronny Lorenz, Michael T. Wolfinger, Andrea Tanzer, and Ivo L. Hofacker. Predicting RNA structures from sequence and probing data. *Methods*, 103:86–98, Jul 2016, doi:10.1016/j.ymeth.2016.04.004. PMID: 27064083
33. Muralidhar Tata, Michael T. Wolfinger, Fabian Amman, Nicole Roschanski, Andreas Dötsch, Elisabeth Sonnleitner, Susanne Häussler, and Udo Bläsi. RNA-Seq based transcriptional profiling of *Pseudomonas aeruginosa* PA14 after short- and long-term anoxic cultivation in synthetic cystic fibrosis sputum medium. *PLoS ONE*, 11(1):e0147811, Jan 2016, doi:10.1371/journal.pone.0147811. PMCID: PMC4731081
34. Ronny Lorenz, Dominik Luntzer, Ivo L. Hofacker, Peter F. Stadler, and Michael T. Wolfinger. SHAPE directed RNA folding. *Bioinformatics*, 32:145–147, Jan 2016, doi:10.1093/bioinformatics/btv523. PMCID: PMC4681990
35. Sanja Antic, Michael T. Wolfinger, Anna Skucha, Stefanie Hosiner, and Silke Dörner. General and miRNA-mediated mRNA degradation occurs on ribosome complexes in *Drosophila* cells. *Mol. Cell. Biol.*, pages MCB–01346, Jul 2015, doi:10.1128/MCB.01346-14. PMCID: PMC4456442
36. Michael T. Wolfinger, Jörg Fallmann, Florian Eggenhofer, and Fabian Amman. ViennaNGS: A toolbox for building efficient next-generation sequencing analysis pipelines. *F1000Research*, 4(50), Feb 2015, doi:10.12688/f1000research.6157.2. PMCID: PMC4513691
37. Martin Mann, Marcel Kucharik, Christoph Flamm, and Michael T. Wolfinger. Memory efficient RNA energy landscape exploration. *Bioinformatics*, 30:2584–2591, Sep 2014, doi:10.1093/bioinformatics/btu337. PMCID: PMC4155248
38. Fabian Amman, Michael T. Wolfinger, Ronny Lorenz, Ivo L. Hofacker, Peter F. Stadler, and Sven Findeiß. TSSAR: TSS annotation regime for dRNA-seq data. *BMC Bioinformatics*, 15(1), Mar 2014, doi:10.1186/1471-2105-15-89. PMCID: PMC4098767
39. Ivo L. Hofacker, Christoph Flamm, Michael Heine, Michael T. Wolfinger, Gerik Scheuermann, and Peter F. Stadler. BarMap: RNA folding on dynamic energy landscapes. *RNA*, 16:1308–1316, Jul 2010, doi:10.1261/rna.2093310. PMCID: PMC2885680
40. Michael Geis, Christoph Flamm, Michael T. Wolfinger, A. Tanzer, Ivo L. Hofacker, Martin Middendorf, Christian Mandl, Peter F. Stadler, and Caroline Thurner. Folding kinetics of large RNAs. *J. Mol. Biol.*, 379(1):160–173, Mar 2008, doi:10.1016/j.jmb.2008.02.064. PMID: 18440024
41. Michael T. Wolfinger, Sebastian Will, Ivo L. Hofacker, Rolf Backofen, and Peter F. Stadler. Exploring the lower part of discrete polymer model energy landscapes. *Europhys. Lett.*, 74(4):726–732, May 2006, doi:10.1209/epl/i2005-10577-0

42. Michael T. Wolfinger, W. Andreas Svrcek-Seiler, Christoph Flamm, Ivo L. Hofacker, and Peter F. Stadler. Efficient computation of RNA folding dynamics. *J. Phys. A: Math. Gen.*, 37(17):4731–4741, Apr 2004, doi:10.1088/0305-4470/37/17/005
43. Christoph Flamm, Ivo L. Hofacker, Peter F. Stadler, and Michael T. Wolfinger. Barrier trees of degenerate landscapes. *Z. Phys. Chem.*, 216:155–173, Jan 2002, doi:10.1524/zpch.2002.216.2.155

C) Refereed Conference Proceedings

44. Maria Waldl, Sebastian Will, Michael T. Wolfinger, Ivo L. Hofacker, and Peter F. Stadler. Bi-alignments as Models of Incongruent Evolution of RNA Sequence and Secondary Structure. In *Computational Intelligence Methods for Bioinformatics and Biostatistics*, pages 159–170. Springer International Publishing, Dec 2020. doi:10.1007/978-3-030-63061-4_15
45. Sebastian Pötzsch, Gerik Scheuermann, Peter F. Stadler, Michael T. Wolfinger, and Christoph Flamm. Visualization of lattice-based protein folding simulations. In *IV '06: Proceedings of the conference on Information Visualization*, pages 89–94, Washington, DC, USA, Jul 2006. IEEE Computer Society. doi:10.1109/IV.2006.127

D) Book Chapters

46. Michael T. Wolfinger, Roman Ochsenreiter, and Ivo L. Hofacker. Functional RNA Structures in the 3'UTR of Mosquito-Borne Flaviviruses. In Dmitrij Frishman and Manja Marz, editors, *Virus Bioinformatics*, pages 65–100. Chapman and Hall/CRC Press, 2021

E) Non-refereed Articles

47. Sean M. Park, Tyler Mrozowich, Michael T. Wolfinger, and Trushar R. Patel. Investigating Japanese encephalitis virus long-range terminal region interactions. *Biophys. J.*, 121(3):206A, Feb 2022, doi:10.1016/j.bpj.2021.11.1703
48. Adriano de Bernardi Schneider and Michael T. Wolfinger. The role of arbovirus genome untranslated regions on neurotropism. *Int. J. Infect. Dis.*, 79:142, Feb 2019, doi:10.1016/j.ijid.2018.11.347
49. Adriano de Bernardi Schneider and Michael T. Wolfinger. Preventing disease outbreaks with computational biology, how far can we go? *NCT CBNW Newsletter*, 58, Jun 2018, doi:10.5281/zenodo.1463018

F) Theses

50. Michael T. Wolfinger. *Energy Landscapes of Biopolymers*. PhD thesis, Universität Wien, Oct 2004
51. Michael T. Wolfinger. The Energy Landscape of RNA Folding. Master's thesis, Universität Wien, Mar 2001

Presentation List

Michael T. Wolfinger

29th October, 2022

1. RNA structuredness of viral genomes. Presented at the 7th Computational Approaches to RNA Structure and Function meeting, Benasque, Spain, 12 August 2022. doi:10.13140/RG.2.2.18471.83365
2. Deciphering viral RNA structure with ViennaRNA. Presented at the EVBC 'Viruses in silico' lecture, online, 22 November 2021. doi:10.13140/RG.2.2.26042.31684
3. Molecular epidemiology of Chikungunya virus in its endemic regions. Presented at the German Conference on Bioinformatics (GCB), online, 15 September 2020. doi:10.13140/RG.2.2.36069.83687
4. Fighting SARS-CoV-2 and other viruses with RNA bioinformatics. Presented at Chulalongkorn University, Bangkok, Thailand, 11 March 2020. doi:10.13140/RG.2.2.31355.67367
5. Fighting SARS-CoV-2 and other viruses with RNA bioinformatics. Presented at VISTEC, Rayong, Thailand, 10 March 2020. doi:10.13140/RG.2.2.31355.67367
6. Fighting SARS-CoV-2 and other viruses with RNA bioinformatics. Presented at Kasetsart University, Bangkok, Thailand, 4 March 2020. doi:10.13140/RG.2.2.31355.67367
7. Fighting SARS-CoV-2 and other viruses with RNA bioinformatics. Presented at Chiang Mai University, Chiang Mai, Thailand, 28 February 2020. doi:10.13140/RG.2.2.31355.67367
8. The quest for conserved RNAs in viral genomes. Presented at University of Kent, UK, 15 October 2019. doi:10.13140/RG.2.2.36590.15683
9. Evolutionary traits in Chikungunya virus untranslated regions. Presented at the 4th Vienna Doctoral School (VDS) "*Molecules of Life*" Retreat, Mondsee, Austria, 26 June 2019. doi:10.13140/RG.2.2.25171.73767
10. Explaining Flavivirus Neurotropism with Thermodynamics. Presented at the 6th Computational Approaches to RNA Structure and Function meeting, Benasque, Spain, 19 July 2018. doi:10.13140/RG.2.2.19047.14244
11. Characterization of Flavivirus 5'UTR elements. Presented at the 32nd TBI Winterseminar, Bled, Slovenia, 16 February 2017. doi:10.13140/RG.2.2.28432.07686
12. Rewriting the history of Zika sfRNA evolution. Presented at the 31st TBI Winterseminar, Ljubljana, Slovenia, 17 February 2016
13. Building efficient NGS analysis pipelines with ViennaNGS. Presented at the 30th TBI Winterseminar, Bled, Slovenia, 19 February 2015. doi:10.13140/2.1.3308.3686
14. RESTful RNA Folding. Presented at the 28th TBI Winterseminar, Bled, Slovenia, 16 February 2013. doi:10.13140/RG.2.2.35142.96321
15. The RNA-REG Genome Browser. Presented at the RNA-REG meeting, Aflenz, Austria, 10 May 2012
16. Energy Landscapes and Dynamics of Biopolymers. Presented at CIBIV, Vienna, Austria, 5 March 2012
17. Wang-Landau Sampling of discrete Biopolymer Models. Presented at the Biomathematics meeting, Ljubljana, Slovenia, 22 February 2007
18. Estimation of low-energy refolding paths / Visualization of Lattice Protein Dynamics. Presented at the EMBIO meeting, Vienna, Austria, 23 May 2006
19. Estimation of low-energy refolding paths. Presented at the 21st TBI Winterseminar, Bled, Slovenia, 21 February 2006

Poster List

Michael T. Wolfinger
29th October, 2022

1. Christida E. Wastika, Yasuko Orba, Michito Sasaki, Yuki Eshita, Bernard M. Hang'ombe, Michael T. Wolfinger, William W. Hall, and Hirofumi Sawa. Discoveries of dual-host affiliated Insect-specific flaviviruses in Zambia. Presented at the U.S.-Japan Cooperative Medical Sciences Program's 22nd International Conference on Emerging Infectious Diseases in the Pacific Rim, February 2020
2. Michael T. Wolfinger, W. Andreas Svrcek-Seiler, Christoph Flamm, Ivo L. Hofacker, and Peter F. Stadler. Energy Landscapes and Dynamics of Biopolymers. Presented at the Evolution of Biomolecular Structure Symposium, Vienna, Austria, May 2006
3. Michael T. Wolfinger, Peter F. Stadler, Ivo L. Hofacker, and Christoph Flamm. Landscapes and Energy Barriers. Presented at the 16th International Course and Conference on the Interfaces among Mathematics, Chemistry & Computer Sciences, Dubrovnik, Croatia, June 2001