# CURRICULUM VITAE

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## Personal

Born on 28 July 1954 in Zürich, Switzerland. Married. Two children.

## DIPLOMAS

*Maîtrise de Mathématiques et Applications Fondamentales*, University of Grenoble, 1977.

*Doctorat de 3ème Cycle*, University of Grenoble, 1981. (Graduate work on edge-colouring of cubic graphs, supervised by François Jaeger.)

*Doctorat d'État*, University of Grenoble, 1988. (Graduate work on perfect graphs and other problems in Graph Theory, supervised by Jean Fonlupt.)

## ACADEMIC POSITIONS

- 1981-1984, assistant of Professor Dominique de Werra at the École Polytechnique Fédérale de Lausanne (Switzerland).

- 1984-1985, research worker at laboratoire Artemis (University of Grenoble), within a European project for the C.A.D. of V.L.S.I.

- since 1985, researcher at C.N.R.S. (National Center for Scientific Research), in the Laboratory Artemis, Grenoble, France.

- Sabbatical year at RUTCOR (Rutgers University Center for Operations Research, New Jersey) in 1989.

Current research topics in graph theory : problems of colorations, perfect graphs, connectivity, problems related to statistical mechanics.

**PUBLICATIONS LIST**

1. M. Preissmann, «Even polyhedral decompositions of cubic graphs», *Discrete Mathematics* 32 (1980), no. 3, 331–334.
2. M. Preissmann, «Snarks of order 18», Discrete Math. 42 (1982), no. 1, 125–126.
3. M. Preissmann. «C-minimal snarks», *Annals of Discrete Mathematics* 17 (1983),559–565.
4. J.-C. Anglès d'Auriac, M. Preissmann and R. Rammal. «The Random Field Ising Models : algorithmic complexity and phase transition», *Journal de Physique-Lettres* 46 (1985), 173–80.
5. M. Preissmann, D. de Werra et N.V.R. Mahadev. «A note on super-brittle graphs», *Discrete Mathematics* 61 (1986), 259–267 .
6. M. Preissmann. «Locally perfect graphs», *J. of Comb. Theory Series B* 50 (1990), 22–40.
7. C.T. Hoàng, F. Maffray, M. Preissmann. «New properties of perfectly orderable graphs and strongly perfect graphs», *Discrete Mathematics* 98 (1991), 161–174.
8. C.T. Hoàng, F. Maffray, S. Olariu, M. Preissmann. «A Charming Class of Perfectly Orderable Graphs», *Discrete Mathematics* 102 (1992), 67–74.
9. F. Maffray and M. Preissmann, «Perfect Graphs with no $P_5$ and no $K_5$», *Graphs and Combinatorics* 10 (1994), 179–184.
10. F. Maffray and M. Preissmann, «Split neighbourhood graphs and the strong perfect graph conjecture», *Journal of Combinatorial Theory B* 63 (1995), 294–309.
11. J. Lehel, F. Maffray, M. Preissmann, « Graphs with largest number of minimum cuts», *Discrete Applied Mathematics* 65 (1996), 387–407.
12. F. Maffray, M. Preissmann, « A note on the NP-completeness of the k-colorability problem for triangle-free graphs », *Discrete Mathematics* 162 (1996), 313–317.
13. F. Maffray, O. Porto, M. Preissmann, « A generalization of simplicial elimination orderings », *Journal of Graph Theory* Vol.23 No2 (1996), 203–208.
14. J.-C. Anglès d'Auriac, M. Preissmann, A. Sebö, « Optimal cuts and statistical mechanics », *Journal of Mathematical and Computer Modelling* Vol.26 No 8-10 (1997), 1–11.
15. G. Bacsó, E. Boros, V. Gurvich, F. Maffray, M. Preissmann, « On minimal imperfect graphs with circular symmetry », *Journal of Graph Theory* 29 No4 (1998), 209–225.

16. F. Maffray, M.Preissmann, « Sequential colorings and perfect graphs», *Discrete Applied Mathematics* 94 (1999), 287–296.

17. F. Maffray, M. Preissmann, « A Translation of Gallai's Paper : 'Transitiv Orientierbare Graphen' », Chapter in *Perfect graphs*, edited by Jorge L. Ramirez- Alfonsin and Bruce A. Reed, J. Wiley (2001), 25–66.

18. M. Preissmann, A. Sebö, « Some Aspects of Minimal Imperfect Graphs», Chapter in *Perfect graphs*, edited by Jorge L. Ramirez-Alfonsin and Bruce A. Reed, J. Wiley ( 2001), 185–214.

19. J.-Ch. Anglès d'Auriac, F. Iglói, M. Preissmann, A. Sebö, « Optimal cooperation and submodularity for computing Potts'partition functions with a large number of states » *Journal of Physics A Math. Gen.* 35 (2002), 6973–6983. ( http ://arXiv.org/abs/math.CO/0204217 )

20. G. Gasparyan, M. Preissmann, A. Sebö, « Imperfect and Nonideal Clutters : a Common Approach », *Combinatorica* 23 (2) (2003), 283–302.

21. G. Bacsó, S. Gravier, A. Gyárfás, M. Preissmann, A. Sebö, « Coloring the maximal cliques of graphs », *SIAM Journal on Discrete Mathematics* 17 No 3 (2004), 361–376.

22. J. Lehel, F. Maffray, M. Preissmann, « Maximum directed cuts in digraphs with degree restriction », *Journal of Graph Theory* 61 (2) (2009), 140–156.

23. B. Lévêque, F. Maffray, M. Preissmann, « Characterizing path graphs by forbidden induced subgraphs », *Journal of Graph Theory* 62 (3) (2009), 369–384.

24. M. Preissmann, A. Sebö, « Graphic Submodular Function Minimization : A Graphic Approach and Applications. » Dans Research Trends in Combinatorial Optimization, édité par W. Cook, L. Lovász et J. Vygen, Springer (2009), 365–385.

25. M. Bouznif, J. Moncel, M. Preissmann, «Generic algorithms for some decision problems on fasciagraphs and rotagraphs», *Discrete Mathematics* 312 (2012), no 17, 2707-2719.

26. D. Sasaki, S. Dantas, C.M.H. de Figueiredo, M. Preissmann, « Total chromatic number of some families of graphs with maximum degree 3 », Matemática Contemporânea Volume 42 (2012), 123-132.

27. D. Sasaki, S. Dantas, C. M. H. de Figueiredo, M. Preissmann, «The hunting of a snark with total chromatic number 5», Discrete Applied Mathematics 164 (2014), part 2, 470-481.

28. G. Brinkmann, M. Preissmann, D. Sasaki, « Snarks with total chromatic number 5 », Discrete Mathematics & Theoretical Computer Science 17(1) (2015), 369-382.

29. S. Dantas, C. M. H. de Figueiredo, G. Mazzuoccolo, M. Preissmann, V. F. dos Santos, D. Sasaki, «On the total coloring of generalized Petersen graphs », Discrete Mathematics 339(5) (2016), 1471-1475.
30. M. Bouznif, F. Havet, M. Preissmann, « Minimum-Density Identifying Codes in Square Grids » AAIM 2016, 77-88.
31. M. Bouznif, J. Moncel, M. Preissmann, « A constant time algorithm for some optimization problems in rotagraphs and fasciagraphs », Discrete Applied Mathematics 208 (2016), 27-40
32. S. Dantas, C. M. H. de Figueiredo, G. Mazzuoccolo, M. Preissmann, V. F. dos Santos, D. Sasaki, «On the equitable total chromatic number of cubic graphs », Discrete Applied Mathematics 209 (2016), 84-91.

**Submitted manuscripts**

P.-E. Anglès d'Auriac, F. Maisonneuve, V. Maisonneuve, E. Preissmann, M. Preissmann, «On more variants of the Majority Problem », version préliminaire : arXiv :1610.01062

M. Bouznif, J. Darlay, J. Moncel, M. Preissmann, « Exact values for three domination-like problems in circular and infinite grid graphs of small height », https ://hal.archives-ouvertes.fr/hal-01569881

**PhD supervision**

1. David Défossez, «Coloration d'hypergraphes et clique-coloration», University Joseph Fourier, Grenoble, October 2006.
2. Marwane Bouznif, «Algorithmes génériques pour la résolution de problèmes combinatoires dans la classe des rotagraphes et fasciagraphes. Applications aux codes identifiants, dominants-localisateurs et dominants-total-localisateurs.», University Joseph Fourier, Grenoble, July 2012.
3. Diana Sasaki de Souza Pereira, «Sobre coloração total de grafos cúbicos», Univerdidade Federal do Rio de Janeiro, October 2013.