References

[AK01]   J. Atwell and B. King. Proper orthogonal decomposition for reduced basis feedback controllers for parabolic equations. *Mathematical and Computer Modeling*, 33:1–19, 2001.

[ASG01]   A.C. Antoulas, D.C. Sorensen, and S. Gugercin. A survey of model reduction methods for large-scale systems, 2001.

[BDGL03]   J. Burkardt, Q. Du, M. Gunzburger, and H.-C. Lee. Reduced-order modeling of complex systems. In *Numerical Analysis 2003*, pages 29–38, 2003.

[BK98]   J. Burns and B. King. A reduced basis approach to the design of low order compensators for nonlinear partial differential equation systems. *Journal of Vibrations and Control*, 4:297–323, 1998.

[GA]   S. Gugercin and A.C. Antoulas. A survey of model reduction by balanced truncation and some new results. preprint.

[GSA03]   S. Gugercin, D.C. Sorensen, and A.C. Antoulas. A modified low-rank Smith method for large scale Lyapunov equations. *Numerical Analysis*, 32(1):27–55, 2003.

[Hen]   T. Henri. *Réduction de modéles par des méthodes de dé composition orthogonal propre*. PhD thesis, Université de Rennes.

[HLB96]   P. Holmes, J.L. Lumley, and G. Berkooz. *Turbulence, Coherent Structures, Dynamical Systems and Symmetry*. Cambridge University Press, 1996.

[HPS]   C. Homescu, L.R. Petzold, and R. Serban. Error estimation for reduced order models of dynamical systems.

[IJz00]   IJzerman. *Signal representation and modeling of spatial structures in fluids*. PhD thesis, Universiteit Twente, 2000.

[Kar46]   K. Karhunen. Zur spektraltheorie stochastischer prozesse. *Annales Academiae Scientarum Fennicae*, 37, 1946.

[KV99]   K. Kunisch and S. Volkwein. Control of Burgers' equation by a reduced order approach using proper orthogonal decomposition. *Journal of Optimization Theory and Applications*, 102:345–371, 1999.

[KV01]   K. Kunisch and S. Volkwein. Galerkin proper orthogonal decomposition methods for parabolic problems. *Numerische Mathematik*, 90:117–148, 2001.

[KV02]   K. Kunisch and S. Volkwein. Galerkin proper orthogonal decomposition methods for a general equation in fluid dynamics. *SIAM Journal on Numerical Analysis*, 40:492–515, 2002.

[LMG02]   S. Lall, J.E. Marsden, and S. Glavaški. A subspace approach to balanced truncation for model reduction of nonlinear control systems. *Int. J. of Robust and Nonlinear Control*, 12:519–535, 2002.

[MMP01]   L. Machiels, Y. Maday, and A.T. Patera. Output bounds for reduced-order approximations of elliptic partial differential equations. *Comput. Methods Appl. Mech. Engrg.*, 190:3413–3426, 2001.

[Moo81]   B.C. Moore. Principal component analysis in linear systems: controllability, observability, and model reduction. *IEEE Transactions on Automatic Control*, AC-26, 1981.

[NTM03]   B. Noack, G. Tadmor, and M. Morzyński. A hieerarchy of low-dimensional models for the transient and post-transient cylinder wake. *J. Fluid Mechanics*, 497:335–363, 2003.

[RCM04]   C.W. Rowley, T. Colonius, and R.M. Murray. Model reduction for compressible flows using POD and Galerkin projection. *Physica D*, 189:115–129, 2004.

[Row]   C.W. Rowley. Model reduction for fluids, using balanced proper orthogonal decomposition. *Int. J. on Bifurcation and Chaos*. to appear.

[RP03]   M. Rathinam and L.R. Petzold. A new look at proper orthogonal decomposition. *SIAM J. Numer. Anal.*, 41:1893–1925, 2003.

[Sir87]   L. Sirovich. Turbulence and the dynamics of coherent structures, part i: Coherent structures. *Quarterly Applied Mathematics*, 45(3):561–571, 1987.

[TGP96]   K.Y. Tan, W.R. Graham, and J. Peraire. Active flow control using a reduced order model and optimum control. *AIAA Journal*, 1996.

[WP01]   K. Willcox and J. Peraire. Balanced model reduction via the proper orthogonal decomposition. *AIAA Journal*, 2001.