

The main references are Chapters 10 and 12 in

"Statistical Mechanics: Entropy, Order Parameters, and Complexity",
James P. Sethna, Oxford University Press, Second edition 2021.

"Crackling Noise", James P. Sethna, Karin A. Dahmen, Christopher R. Myers, Nature
410, 242 (2001).

"Power laws in physics", James P. Sethna, Nature Reviews Physics, 4, 501-503 (2022)

"Universal scaling for disordered viscoelastic matter I: Dynamic susceptibility at the
onset of rigidity", Danilo B. Liarte, Stephen J. Thornton, Eric Schwen, Itai Cohen,
Debanjan Chowdhury, and James P. Sethna, <https://arxiv.org/abs/2103.07474>

and

"Universal scaling for disordered viscoelastic matter II: Collapses, global behavior and
spatio-temporal properties", Danilo B. Liarte, Stephen J. Thornton, Eric Schwen, Itai
Cohen, Debanjan Chowdhury, and James P. Sethna, <https://arxiv.org/abs/2202.13933>,

There are several particular applications I will discuss,

Avalanches and deformation in glasses and disordered systems , Alberto Rosso, James
P. Sethna, Matthieu Wyart (Contribution to the edited volume "Spin Glass Theory and
Far Beyond - Replica Symmetry Breaking after 40 Years", World
Scientific) <https://arxiv.org/abs/2208.04090>

"Universality beyond power laws and the average avalanche shape", Stefanos
Papanikolaou, Felipe Bohn, Rubem L. Sommer, Gianfranco Durin, Stefano Zapperi,
and James P. Sethna, Nature Physics 7 316-320 (2011)

"From damage percolation to crack nucleation through finite size criticality", Ashivni
Shekhawat, Stefano Zapperi, and James P. Sethna, Physical Review Letters 110,
185505 (2013)

"Crossover behavior in interface depinning", Y. J. Chen, Stefano Zapperi, James P.
Sethna, Phys. Rev. E 92, 022146 (2015)

Normal form for renormalization groups, Archishman Raju, Colin B. Clement, Lorien
X. Hayden, Jaron P. Kent-Dobias, Danilo B. Liarte, D. Zeb Rocklin and James P.
Sethna, Phys. Rev. X 9, 021014 (2019)

"Unusual scaling for 2-D avalanches: Curing the faceting, and scaling in the lower
critical dimension", L. X. Hayden, Archishman Raju, and James P. Sethna, Phys. Rev.
Research 1, 033060 (2019)