

## Pedestals and Thinking Outside the Box

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This talk will discuss my experience working with Nat Fisch as a graduate student at Princeton, including lessons learned about how to approach physics problems, and how to use physics understanding in novel, perhaps “outside of the box,” ways to benefit fusion and other applications. Some of these modes of thinking will then be applied to the problem of the H-Mode pedestal in tokamaks, the edge transport barrier whose “height” (pressure) is a key aspect of fusion performance. Moving beyond the local transport paradigm has enabled an understanding and quantification of important constraints on the pedestal that govern its structure. The resulting model (EPED) has been extensively compared to experiment, and also used to discover a new regime, called “Super H-Mode,” that results from a bifurcation of the EPED solution. Finally, important open questions in pedestal research, and possible ways to apply out of the box thinking to the fusion problem, will be discussed.