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FROM THE GUEST EDITORS

Those of us who met the field of mathematical biology as a well-developed, flourishing, and rewarding discipline owe much to those who made it so. This special issue of *Mathematical Biosciences and Engineering* is dedicated to two such pioneers: Fred Brauer and Karl Hadeler. Since retrospectives of both men have been published in other venues [1, 2], we will only summarize their contributions briefly here.

Fred Brauer obtained his Ph.D. from MIT in 1956 under Norman Levinson, and during a long tenure at the University of Wisconsin he co-wrote several texts on ordinary differential equations that have become classics. His research entered mathematical biology first through early studies in predator-prey systems and harvesting, both with and without delays. He then moved into mathematical epidemiology, and the text he co-authored with Carlos Castillo-Chavez in both these areas earlier this decade is already in wide use.

Karl Hadeler obtained his Ph.D. in 1965 at Hamburg, working under Lothar Collatz. His early work focused on spectra of normal operators and other eigenvalue problems, but by 1974 he had already published with Springer a course in mathematics for biologists. He was a co-organizer of both the *Journal of Mathematical Biology* (which he continued to co-edit for decades) and the Oberwolfach Konferenzen, a series of meetings that built up a community of researchers as mathematical biology emerged as a field of study in its own right.

Both Fred and Karl are prolific and ground-breaking researchers, as well as dedicated mentors, continuing to attract and encourage young researchers into the field. Their work is measured not only by the hundreds of articles they have written, but in the dozens of careers they have fostered.

In March of 2007 we organized a workshop on the mathematics of global public health at Arizona State University, co-sponsored by the ASU Department of Mathematics and Statistics, the Southwest Consortium for Mathematical and Life Sciences (SWC-MLS), the Mathematics of Information Technology and Complex Systems (MITACS), The Public Health Agency of Canada (PHAC), the Mathematical and Theoretical Biology Institute/Institute for Strengthening Understanding of Mathematics and Science (MTBI/SUMS), the Decision Theater at ASU, and the ASU School of Computing and Informatics. The workshop was dedicated to the joint occasion of Fred Brauer's 75th birthday and Karl Hadeler's 70th. Although this special issue is not precisely a proceedings of that workshop, it grew out of the meeting, and in the following pages the reader will find some papers that contribute to fields where Fred and Karl have done prior work, and others that build upon their work to generate a vision for future work and insight for the community to unite on important challenges in this field.

REFERENCES

[1] Christopher M. Kribs-Zaleta, *Fred Brauer: The man and his mathematics*, in "Mathematical Approaches for Emerging and Reemerging Infectious Diseases: An Introduction" (Minneapolis, MN, 1999), 7–20, IMA Vol. Math. Appl., 125, Springer, New York, 2002.

[2] Simon Levin, *On Karl Hadeler becoming 70*, J. Math. Biol., **53** (2006), 496–498, DOI 10.1007/s00285-006-0026-x.

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