



Dana M. Elzey, Dr.rer.nat., USA

Get Connected – "Making friends with colleagues is typically German"

Dana M. Elzey transferred this idea from Baden-Württemberg to Virginia

Dana M. Elzey, now a multiply awarded Professor of Materials Science at the University of Virginia (USA) and a devoted university teacher, started his academic career in Baden-Württemberg. After some difficult and rather unrewarding months as a soldier in Augsburg, the Mechanical Engineer decided in 1985 at the age of 28 to enroll for a Ph.D. study program in Swabia. The Max-Planck-Institute for Metals Research in Stuttgart, he thought, would be an interesting place to go. And interesting it was: with highly challenging research tasks in a foreign language, complex measurements using sophisticated testing and characterization equipment, and the German culture, food and lifestyle, it took him quite some effort to finally feel comfortable.

At that time his closest contact to German was – besides his work – through literature: He read and loved German philosophers including Kant, Hegel and Schopenhauer. After a while, however, he felt that he should get in closer contact with the Swabian colleges in the Institute. How right he was, he realized later, when he not only received a doctor's hat and a PhD degree from the Universität Stuttgart, but also word of consent of his German girlfriend Christine, who then decided to leave her home in Baden-Württemberg and follow him to Virginia. The family now lives in Charlottesville with two daughters and one son.

The Elzey's still have many friends in Baden-Württemberg. Both daughters will be coming to Tübingen and Stuttgart this summer to improve their German, which has a remarkable Swabian accent.

Mr. Elzey's research is generally concerned with design and development of high performance composite materials and their manufacturing processes. Current research is focused on the development of lightweight, cellular materials for aerospace and medical applications. He has developed models describing the deformation processing of composites. These models have been used to explore optimal process paths and in-situ control of material microstructure during processing. Working under a NASA grant, he developed the Quality- Cost Method for quantitatively assessing the affordability of emerging materials manufacturing technologies and has successfully demonstrated the method for manufacturing processes. He supervises graduate student research in the areas of process modeling,

smart structures and composites, and deformation mechanics. Mr. Elzey teaches at both the graduate and undergraduate level in areas of fracture mechanics, processing and selection of materials, introductory materials science and engineering design.

The connection to Baden-Württemberg is still strong through the family, but what were the kinds of academic experiences, that Dana Elzey had made while studying here? “My experiences of collaborations between academia and industry while a student at the Universität Stuttgart and MPI for Metals Research have strongly influenced my career as an academic researcher,” he says. “I think I always look for very practical results to come out of my research and look for the ways that these will directly benefit the industry partner”, that is Elzey’s description of Baden-Württemberg’s “Tüftlergeist” (i.e. puzzlers spirit). After all, this is what makes Baden-Württemberg’s industry so successful: The close cooperation between research and production. Elzey himself holds several patents.

As an academic teacher, Elzey also transfers what he learned in Stuttgart to the University in Charlottesville: “I have also sought to increase the involvement of industry, as a partner, in the education of our engineering school undergraduates. The world we live in today, with its emphasis on constant innovation and global competition, requires that academic institutions evolve to meet the changing needs of industry and society,” comments Prof. Elzey, who in 2002 received the “Materials Science and Engineering Undergraduate Teaching Award”. During his studies in Stuttgart he and his academic teacher, Eduard Arzt (now head of the Board of Directors of the MPI), had close contact with industrial partners who supported their research.

Other than “Bosch”, “Brezeln” and “breites Schwäbisch“ – what else did Dana Elzey get to know in Baden-Württemberg?

“As an American, I benefited by exposure to the integration of work and social life while in Baden-Württemberg. Americans tend to keep their social lives and work separate. Even if they do occasionally have an office party, they are always, at least mentally, keeping them separate; there are some people you work with, and others you live with. Accepting the people you work with as friends that you might really get to know and care about, has strongly affected my attitudes towards my colleagues at the University of Virginia. Not only does increased social interaction with colleagues make life more pleasant while at work, it improves productivity by stimulating creativity and collaboration. It's what's known as 'doing well while doing good'.”

Combining what he has learned in Stuttgart – socially and in the field of teaching and research – with the broader freedom available in the academic society of the US, Dana Elzey is a lucky and a quite rare example of a US-scientist going to and returning successfully from Baden-Württemberg.

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Baden-Württemberg

The German Southwest.