TUESDAY Seminar

SEP 14 | 6 PM

via Zoom (link)

EXPRESS YOURSELF!

AN EXAMINATION OF DESIGN TRADEOFFS IN THE CONTEXT OF THE EXPRESSION PROBLEM

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A common concern in industrial programming is extension: we want to write software that can easily be extended as our system grows and accrues features (where "easily" is usually taken to mean "without making changes to, or even having access to, the source code of existing functionality.") Our datatype is defined by cases, and this datatype admits operations. Naturally, we would want a design that permits extension in either dimension, so that we can add cases of our datatype and we can add operations on our datatype. We will see why this is not always so easy to achieve, and we will compare different designs that allow extension in one dimension at the expense of extension in the other. We will then discuss how different programming paradigms encourage one design or the other. Finally, we will present recent work that approaches a full solution.