

# Christopher A. Sims (1942-2026): paradigm-shifting macroeconomist and econometrician

Mikkel Plagborg-Møller<sup>1</sup>, Mark W. Watson<sup>2</sup>

<sup>1</sup> University of Chicago

<sup>2</sup> Princeton University

## ***Abstract***

*Christopher A. Sims, who died on March 14, 2026, left behind an indelible mark on macroeconomics and econometrics. His Nobel Prize winning research reshaped the paradigm for empirical macroeconomics, creating a rigorous and flexible framework for inferring the effects of macroeconomic policies. He also made important contributions to time series forecasting, Bayesian econometrics, factor modeling, approximation theory, and models of monetary and fiscal policy. Few academics have had as direct an impact on the work of central banks throughout the world. A frank and generous mentor with numerous students, Chris's impact extends well beyond his published papers.*

On March 14, 2026, Christopher Sims died peacefully at his home in Minneapolis. This followed injuries sustained in a horseback riding accident in 2024. He left behind his wife of 59 years, Cathie, their three children, and four grandchildren. He also left behind an indelible mark on macroeconomics and econometrics.

Chris's research reshaped the paradigm for empirical macroeconomics in the 1980s, creating a rigorous and flexible framework for inferring the effects of macroeconomic policies. His most influential paper, with the characteristically evocative title of "Macroeconomics and Reality," was presented in his 1977 Fisher-Schultz Lecture at the European Meetings of the Econometric Society and subsequently published in 1980 (1). Chris argued that the then-prevalent large-scale macroeconomic models were fundamentally flawed. These models featured dozens of dynamic equations, often assembled piecemeal, with explanatory variables chosen based on loose intuition rather than explicit economic theory. Chris instead proposed a flexible, essentially nonparametric, approach based on estimating a Vector Autoregression (VAR) model for a collection of several macroeconomic time series. Economic hypotheses could be tested as restrictions on the parameters of this model without imposing extraneous assumptions.

Importantly, Chris's lecture demonstrated how the VAR model could be used to trace the effects that a surprise "shock" to one variable had on the subsequent dynamics of other variables. This allowed the researcher to separate the *causal* effects of policy interventions, such as the Federal Reserve's open market operations, from the *endogenous* response of policy instruments to other

economic developments. These ideas were an outgrowth of Chris's earlier research on single-equation models, so-called distributed lag regressions. Building on the work of Leonid Hurwicz, Clive Granger, and the engineering literature, Chris developed a rigorous framework for thinking about the two-way dynamic feedback between policy and the macroeconomy, culminating in his 1977 lecture.

VARs transformed empirical macroeconomics, and by the mid-1980s had become the workhorse empirical model. A large research effort – by Chris, his students, and many others – focused on how VAR shocks captured fundamentals in the macroeconomy, such as monetary or fiscal policy, productivity, demographics, consumer tastes, and so forth. VARs used for this purpose became known as “Structural” VARs (SVARs), and even with the help of modern AI, it is impossible to count the thousands of SVAR models that have appeared in the economic literature since Chris's 1977 lecture. Chris received the Nobel Prize in 2011 (shared with Tom Sargent) for this and subsequent “empirical research on cause and effect in the macroeconomy.”

VARs proved useful even beyond causal inference. While teaching at the University of Minnesota, Chris also served as an academic consultant in the research department at the Federal Reserve Bank of Minneapolis. There, in work with Bob Litterman, Tom Doan, and others, Chris developed VAR models for macroeconomic forecasting. Due to their flexibility, VAR models feature many parameters characterizing the dynamic relationships between the variables under study. In his 1977 lecture, Chris had suggested that Bayesian shrinkage methods might be useful for regularization, but it was in the subsequent work at the Minneapolis Fed that the famous “Minnesota Prior” for Bayesian VAR analysis was developed. This prior specification continues to be the backbone of cutting-edge Bayesian forecasting models used today throughout academia and policy institutions.

The 1970s and 1980s were the heyday of the so-called “rational expectations” revolution in macroeconomics, which sought to derive policy prescriptions from theoretically grounded behavior of dynamically optimizing economic agents. Chris was skeptical of the stylized assumptions needed to make these theoretical models tractable, and which caused the early generation of models to be strongly rejected by statistical tests. Nevertheless, while Chris advocated for SVARs as a less restrictive empirical framework, he thought that the two approaches could be aligned and serve as complementary tools for policy analysis. With his student Eric Leeper, he gave an early example of how an optimizing model could be formulated without compromising too much on fitting the data. Continuing this line of work, Chris's students – and other researchers – ultimately succeeded in developing rational expectations macroeconomic models that forecasted nearly as well as VARs. Far from sitting on the sidelines, Chris directly contributed to developing the computational software used to solve these models. In fact, Chris's students even credit him with coining the term that came to be used for the entire class of models: Dynamic Stochastic General Equilibrium (DSGE) (2).

Early SVAR studies had shown that the effects of economic policies often took a long time to materialize. In the late 1990s and early 2000s, while thinking about the sources of inertia or “stickiness” in economic variables, Chris proposed a model of expectation formation that differed from the prevalent rational expectations approach. In Chris’s “rational inattention” model, agents optimally trade off the costs and benefits of gathering information to update their expectations about the macroeconomy. This leads them to rationally ignore certain types of information at certain times, causing sluggish adjustment to shocks. For this analysis Chris used concepts from information theory that he claimed to have learned while working on his Harvard undergraduate thesis in 1963 (3).

Two consistent themes run through the body of Chris’s research: first, to understand the probabilistic connections between a whole *system* of macroeconomic variables, and second, to test economic hypotheses using weak and explicitly stated assumptions. Initiating this agenda, his earliest papers considered mathematically challenging questions in nonparametric approximation theory that were far ahead of his time within econometrics. Relatedly, a few years later, Chris and fellow Nobel recipient Tom Sargent proposed a way to capture macroeconomic interdependence through a dynamic model with latent (unobserved) factors; higher-dimensional versions of these models are now central to economic forecasting.

Chris’s enthusiasm for probabilistic system modeling increasingly led him to adopt a Bayesian approach to estimation and inference. Initially the motivation was practical, as Bayesian shrinkage was needed to fit flexible models to the data sets he was studying. However, in the early 1990s, Chris demonstrated that Bayesian and frequentist approaches differed dramatically in time series models with high degrees of dependence over time. Concluding that only the Bayesian methods were tenable, he became an important (and forceful) advocate of their use in empirical economics, and many of his students have been among the leading Bayesian researchers in econometrics over the last several decades.

Few academics have had as direct an impact on the work of central banks throughout the world as Chris. SVARs and Bayesian DSGE models are bread-and-butter techniques in these institutions today. Moreover, Chris’s empirical work in the 1980s contributed to the decline of the then-dominant “monetarist” policy framework espoused by Milton Friedman, by showing that fluctuations in the stock of money were not solely due to independent actions by central banks, and that monetary policy had not played a dominant role in business cycle fluctuations historically. In more theoretical work in the 1990s and beyond, Chris joined a small group of researchers in arguing that fiscal policy (notably the management of the public debt) could have important effects on inflation and the price level, resulting in a line of research known as the “fiscal theory of the price level.”

At the time of his death, Chris was the John J. F. Sherrerd ’52 University Professor of Economics emeritus at Princeton University. Chris was born in 1942 in Washington, D.C., and grew up there and in Germany, Virginia, and Connecticut. He graduated from Harvard College in 1963, where

he majored in mathematics, organized student marches against nuclear proliferation, and played rugby and the trombone. Influenced by his uncle, an economist at Yale and the World Bank, Chris decided to leave mathematics and instead do graduate work in economics. Having begun his Ph.D. studies in economics at Berkeley, he returned to Harvard to finish his Ph.D. (and meet his wife Cathie). Chris remained at Harvard for two years as an assistant professor from 1968 to 1970. He and Cathie then moved to the University of Minnesota where Chris taught for the next twenty years. They moved to Yale in 1990 before coming to Princeton in 1999. Though Chris transferred to emeritus status in 2021, he remained actively engaged in research until his accident in 2024, and his trombone continued to be featured in department holiday parties.

Chris was a fellow of the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society, and the Econometric Society (where he served as president), and a distinguished fellow of the American Economic Association (where he also served as president). As already mentioned, he was awarded the Nobel Prize in 2011 together with Tom Sargent. On the day the award was announced, he taught his undergraduate class in the morning, attended the department's celebration in the afternoon, and then went straight to team-teach a Ph.D. course with his co-winner.

Though he spoke with great humor and wit, Chris was committed to treating economics as a science, which implied being unafraid to honestly state his opinions about economic research. Conferences in economics often feature discussants following presentations of academic papers. Chris was one of the best, certainly the toughest, and typically the most insightful. He was the same way when offering his assessment of colleagues' or students' research. Tom Sargent recalled: "*I have a large set of his comments on my papers, and they start like this: 'This paper is deeply flawed.'*" But then, Sargent said, Chris would typically offer a glimmer of hope by adding something like: "*You may think I'm completely negative about your paper. This is not necessarily true.*" (4) Similarly, Chris's student Lars Hansen has written: "*Sims was seldom a 'pat on the back' mentor. Instead, he challenged me to think harder and to probe questions more deeply and from different angles than I had considered. He was often one of my most severe critics.*" (5) According to Hansen, Chris's teaching at the University of Minnesota played an important role in Hansen's formulation and analysis of the Generalized Method of Moments, an econometric technique which contributed to Hansen winning the Nobel Prize (6). The two authors of this retrospective benefited immensely from Chris's incisive and iconoclastic perspectives throughout their careers – our research ideas did not feel battle-tested until Chris had given his opinion.

Despite his blunt feedback, Chris always appreciated progress in research: no paper solves everything, but many expand the research frontier. His tough comments were how he showed respect for those doing the research. He would show especially great excitement for the work of his many students and other young researchers, and he was extremely generous with his time and attention. As his wife Cathie explained: "*I don't think he ever saw a student that he didn't think was terrific.*" (7)

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## Figure Legend

Figure 1. Sims teaching a class in 2011 right after being awarded the Nobel Prize in economics.