Immigrant scientists from other European countries (predominantly German) were crucial in establishing the tradition of modern science in the Russian Empire of the 18th and 19th centuries. Since the 1860s, however, outgoing waves of scientific migration started originating in Russia, bringing important innovations to international science. The scale and patterns of migration varied greatly with the turbulent time. The talk will describe several landmark stages of the process and their cultural consequences: from opening higher education possibilities for women during the late 19th century, to post-1917 academic refugees and Soviet defectors, to the 1960s brain drain provoked by the launch of Sputnik, and to what can be called the first truly global scientific diaspora of Russophone scientists after 1990.