By KELLY CROW

The Venice Biennial, which opens June 4, is the Olympics of the contemporary art world, a century-old event in which countries send their most promising artists to exhibit in pavilions and palazzos across the watery city. Instead of medals, artists vie for fame on the global art field.

Competition for attention will be tough this time around: 89 nations are participating, up from 77 two summers ago. A third are setting up their shows in small buildings dotting the Giardini, a Napoleonic park on the city's eastern edge; the rest are staking spaces in the city's historic shipyards or in buildings nearby. Nearly 40 art foundations and private collectors are also organizing separate exhibits citywide.

The government agencies and art councils that pay for these pavilions are doing whatever they can to help their art stand out. The United Arab Emirates plans to fete the 30 artists packed into its show with a May 31 gala on the terrace of the Peggy Guggenheim Collection overlooking the Grand Canal. Montenegro has enlisted performance-art heavyweight Marina Abramovic to make a cameo at its June 2 breakfast.

Not everyone on the map will be represented, though. Political unrest compelled Bahrain and Lebanon to back out. Egypt mulled withdrawal as well, but has decided to show up as planned, says biennial director Bice Curiger. First-timers this year include Haiti and Bangladesh.

The biennial’s main exhibition, “ILLUMInations,” will nod to Venice’s artistic past by displaying several 16th century masterpieces by Tintoretto alongside newer pieces by rising stars like Loris Gréaud and Urs Fischer. Mr. Gréaud, who is based in Paris, has created “The Geppetto Pavilion,” a life-sized sculpture of a whale whose belly contains a door that’s been fenced off. New York-based Mr. Fischer has used candle wax to recreate Giovanni Bologna’s iconic 1583 sculpture, “The Rape of the Sabine Women.” Mr. Fischer intends for his waxy homage to melt entirely by the time the biennial closes Nov. 27.

Here are some other national highlights.

U.S.
Artistic duo Jennifer Allora and Guillermo Calzadilla, based in Puerto Rico, wink at the biennial’s competitive vibe with interactive pieces manned by Olympic veterans. In “Track and Field,” gold-medal winners like Dan O’Brien will jog on a treadmill that’s been mounted atop a military tank; others will perform pommel-horse and balance-beam routines on a pair of wooden sculptures that replicate airline seats, says commissioner Lisa Freiman.

ITALY
The biennial’s host country weighs in with a broad survey of Italian artists, including photographer Paolo Ventura, who is known for building and photographing doll-house-style sets that recreate European streetscapes during World War II. Mr. Ventura’s latest series is rooted, fittingly, in Venice and follows the wanderings of an old man who has built an automaton to offset his solitude.

PORTUGAL
The biennial is known for launching artists onto an international stage. Francisco Tropa, born in Lisbon, isn’t well known in the U.S., but he’s a rising star in Europe. Mr. Tropa builds light projectors that zoom in on the eerie beauty of everyday scenes in nature, from flies to twigs to single drops of water.