



Interlochen

ARTS ACADEMY

Interlochen, Michigan
209th Program of the 62nd Year

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PERCUSSION CONCERT

featuring the music of Gerard Grisey

Interlochen Arts Academy Percussion Ensemble

Keith Aleo, director

with members of the

Oberlin Percussion Group

Ross Karre, director

and Guest Artists

Ross Karre and Clara Warnaar

Wednesday, April 10, 2024

7:30pm, Music Center 1010

Le Noir de l'Étoile (1991).....Gérard Grisey
(1946–1998)

Ross Karre, percussion and electronic sounds
Clara Warnaar, percussion
Keith Aleo, percussion

Oberlin Percussion Group

Stephanie Bloch (IAA 22-23, IAC 22)

Zeyi Guo (IAA 19-22)

Interlochen Arts Academy Percussion Ensemble

Mitchell Beckmann, Wildwood, Mo.

Julian Jimenez-Pardo, San José, Costa Rica

Reese Modesitt, Spring, Texas

Hannah Stone, Mercer Island, Wash.

William Tao, Shanghai, China

Joshuah Vogel, Prescott Valley, Ariz.

PROGRAM NOTES

In 1967, a young astronomer detected in the heavens a rapidly varying radio signal, in the form of periodic impulses 1.3 seconds apart.

The discovery caused a sensation. The impulses were so regular that for a while they were taken to be signals coming from extraterrestrial civilizations. Then astrophysicists revealed a truth that was just as surprising: the signals were being emitted by a pulsar; the fantastic compact residue created by the supernova explosions that long ago disintegrated the massive stars.

Pulsars have a radius of only 15 kilometers for a mass as great as that of the sun; they are made up of material so densely compressed that their atoms are crushed to form a solid mass of neutrons. A thimble of the material from one of these stars would weigh 100 billion tons on Earth. Pulsars are giant magnetized spinning tops. Some of them rotate several tens of times per second, and their magnetic field is a 1,000 billion times bigger than the Earth's. A pulsar's magnetic lines of force channel the charged particles of the interstellar medium along its magnetic axis, which allows the emission of a beam of light that turns at the same time as the star, like a kind of cosmic lighthouse. With each rotation, the beam sweeps the Earth's line of sight and astronomers record a light pulse. A part of this radiation is emitted within the field of radio waves. It can therefore be picked up using enormous telescopes. Radio telescopes are sophisticated radars designed to detect low intensity radio signals, such as those that come from far-away stars. They consist of large metal surfaces, smooth or in mesh form, upon which the radio waves are reflected. Antennae transform the waves into electrical signals. These signals can be amplified by the membrane of a loudspeaker. The human ear can then hear the murmuring of the pulsars.

In the electromagnetic tornado given out by a pulsar, the radio waves emitted represent only a whisper, and it is this that is picked up by the instruments. For an astronomer, it is like trying to understand the way a large machine in a factory works by listening merely to the few muffled noises that escape from it. The energy collected is infinitesimal... In 50 years of observations, all the energy gathered by all the radio telescopes in the world is less than that you need to turn a single page of your program.

The first pulsar that you are going to hear has been recorded on magnetic tape for it can only be observed in the southern hemisphere. It is the Vela pulsar, the residue from the explosion of a supernova that primitive men could no doubt see in daylight 12,000 years ago. It spins at a rate of 11 revolutions per second.

The other pulsar was picked up by the Nançay radio astronomy station in Sologne. It is named 0329+54 (the figures are its galactic coordinates: 3hr29min right ascension and +54° declination). It spins at a rate of 1.4 revolutions per second. The supernova which created it exploded 5 million years ago and its radio impulses take 7,500 years to reach Earth.

Like great lighthouses in the heavens, pulsars will guide our musical navigation. Let us listen to these cosmic clocks marking out their seconds. We have an appointment with the guardians of time.

—Jean-Pierre Luminet (Astrophysicist at the Meudon Observatory)

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Ross Karre (IAA 00-01, IAC 98, 00) is a percussionist, filmmaker, and producer based in Oberlin, Ohio and New York City. Karre attended Interlochen Arts Camp and Interlochen Arts Academy in 1998 and 2000 before pursuing his bachelor's degree at Oberlin Conservatory with Michael Rosen. After completing his Doctorate in Music at University of California San Diego with Steven Schick, Karre formalized his visual arts studies with a Master of Fine Arts.

Karre is now Associate Professor of Percussion at Oberlin Conservatory and a percussionist for the International Contemporary Ensemble, where he was artistic director from 2016 to 2022. He has performed regularly with red fish blue fish, Third Coast Percussion (Chicago), and Yarn/Wire (New York City). He has performed at major festivals all over the world, including the Mostly Mozart Festival (New York City), the Holland Festival (Netherlands), Ojai Festival (California), LA Phil Noon to Midnight, Lucerne Festival, Taipei International Percussion Festival, Big Ears (Tennessee), MONA FOMA (Tasmania), Diskotek (Greenland), and Music Today Biennial (Brazil). *10.67 Cycles*, Karre's solo album featuring the music of Ash Fure and Pauline Oliveros, is available on Bandcamp.

Clara Warnaar (IAA 06-09, IAC 02, 05-06) is a percussionist and composer who tends towards interdisciplinary projects. In addition to being a member of International Contemporary Ensemble, Warnaar has appeared as a guest artist with Yarn/Wire, the Bang on a Can Orchestra, and Ensemble Signal. Actively playing and commissioning new music, Warnaar has premiered and recorded the works of Steve Reich, Ted Hearne, Nicole Mitchell, Ellen Reid and Missy Mazzoli, among others. Warnaar has appeared on Broadway in the show *Into the Woods*, and can be heard playing on the soundtracks of *White Noise*, *The Fate of the Furious*, and *Teenage Mutant Ninja Turtles*. She is also the drummer for the band, Infinity Shred.

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For Interlochen Arts Academy faculty bios, please visit our website at interlochen.org/directory/faculty or scan the QR code with your phone's camera.



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UPCOMING HIGHLIGHT

Wind Symphony Benefit Concert: Guitar Magic Friday, April 19 | Corson Auditorium

Enjoy an evening of instrumental music courtesy of the Interlochen Arts Academy Wind Symphony led by Dr. Matthew Schlomer. Proceeds from this performance benefit Friends of The Interlochen Public Library.

For information and tickets, visit tickets.interlochen.org

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You can ensure the next promising young artist has the opportunity to come to Interlochen by supporting student scholarships. Make your gift to the Interlochen Annual Fund by visiting www.interlochen.org/giveonline.

Many of our venues are equipped with induction loop systems for the hearing impaired. Please ask one of our ushers if you need assistance connecting to the system. Support for recent upgrades to these systems provided by Michigan Arts and Culture Council; the NEA; Rotary Charities of Traverse City; the Les and Anne Biederman Foundation, Inc.; the Oleson Foundation; and Robert W. Anderson.

In consideration of the performing artists and other patrons, the use of flash photography is not permitted. Federal copyright and licensing rules prohibit the use of video cameras and other recording equipment.

In order to provide a safe and healthy environment, Interlochen maintains a smoke-free and alcohol-free campus. Michigan law prohibits any weapons, including concealed weapons, on Interlochen property because we are an educational campus.

Thank you for your cooperation.

www.interlochen.org