WHAT IS CLAIMED IS:

1. An apparatus comprising:

a circuit configured to process an input signal using a set of channel parameters, the circuit further configured to:

produce, using a first adaptation algorithm, a first set of channel parameters for use by the circuit as the set of channel parameters in processing the input signal;

approximate a second set of channel parameters of a second adaptation algorithm for use by the circuit as the set of channel parameters in processing the input signal based on the first set of channel parameters and a relationship between a third set of channel parameters generated using the first adaptation algorithm and a fourth set of channel parameters generated using the second adaptation algorithm; and

perform the processing of the input signal using the second set of channel parameters as the set of channel parameters.

2. The apparatus of claim 1, further comprising the circuit further including a detector that performs the processing of the input signal using the set of channel parameters.

3. The apparatus of claim 2, further comprising the detector being a Soft-Output Viterbi Algorithm (SOVA) detector and the set of channel parameters being branch biases of the SOVA detector.

4. The apparatus of claim 2, further comprising the first adaptation algorithm being a minimum mean squared error (MMSE) adaptation algorithm and the second adaptation algorithm being a Minimum Bit-Error Rate (MBER) adaptation algorithm.

5. The apparatus of claim 1, further comprising a memory storing the third set of channel parameters generated using the first adaptation algorithm and the fourth set of channel parameters generated using the second adaptation algorithm.

6. The apparatus of claim 1 further comprising the circuit further including a detector that performs the processing of the input signal using the set of channel parameters, the circuit further configured to:

perform processing of the input signal using a fifth set of channel parameters generated using the second adaptation algorithm as the set of channel parameters in processing the input signal to produce a detection result;

determine that a decoding of one or more detection results produced by the detector using the fifth set of channel parameters has failed a threshold number of times; and

at least partly in response to the determining the decoding has failed the threshold number of times, perform the processing of the input signal using the second set of channel parameters as the set of channel parameters.

7. The apparatus of claim 6, further comprising the circuit configured to:

determine that a decoding of one or more detection results produced by the detector using the second set of channel parameters has succeeded; and

at least partly in response to the determining the decoding has succeeded, adapt, using the second adaptation algorithm, the second set of channel parameters using the successful decoding result.

8. The apparatus of claim 1, further comprising the circuit further including a detector that performs the processing of the input signal using the set of channel parameters, the circuit further configured to:

perform processing of the input signal using a fifth set of channel parameters generated using the second adaptation algorithm as the set of channel parameters in processing the input signal to produce a detection result;

determine that a decoding of one or more detection results produced by the detector using the fifth set of channel parameters has succeeded after less than a threshold number of failures; and

at least partly in response to the determining the decoding has succeeded, adapt, using the second adaptation algorithm, the fifth set of channel parameters using the successful decoding result.

9. The apparatus of claim 1, further comprising:

a memory storing the third set of channel parameters generated using the first adaptation algorithm and the fourth set of channel parameters generated using the second adaptation algorithm;

the input signal being a readback signal read from a sector of a magnetic storage medium; and

the third set of channel parameters and the fourth set of channel parameters corresponding to an area of the magnetic storage medium including the sector and being generated during a manufacturing process including reading back known data written to the area of the magnetic storage medium including the sector.

10. A system comprising:

a channel circuit configured to process an input signal using a set of parameters;

an adaptation circuit configured to:

produce, using a first adaptation algorithm, a first set of channel parameters for use by the channel circuit as the set of channel parameters in processing the input signal;

approximate a second set of channel parameters of a second adaptation algorithm for use by the channel circuit as the set of channel parameters in processing the input signal based on the first set of channel parameters and a relationship between a third set of channel parameters generated using the first adaptation algorithm and a fourth set of channel parameters generated using the second adaptation algorithm; and

output the second set of channel parameters to the channel circuit for use as the set of channel parameters in processing the input signal.

11. The system of claim 10 further comprising the channel circuit being a Soft-Output Viterbi Algorithm (SOVA) detector and the set of channel parameters being branch biases of the SOVA detector.

12. The system of claim 11 further comprising the first adaptation algorithm being a minimum mean squared error (MMSE) adaptation algorithm and the second adaptation algorithm being a Minimum Bit-Error Rate (MBER) adaptation algorithm.

13. The system of claim 11 further comprising.

a memory storing the third set of channel parameters generated using the first adaptation algorithm and the fourth set of channel parameters generated using the second adaptation algorithm;

the input signal being a digitized sample sequence corresponding to a sector of a magnetic storage medium; and

the third set of channel parameters and the fourth set of channel parameters corresponding to an area of the magnetic storage medium including the sector and being generated during a manufacturing process including reading back known data written to the area of the magnetic storage medium including the sector.

14. The system of claim 13 further comprising:

an analog-to-digital converter (ADC) circuit configured to generate one or more ADC samples based on an readback signal corresponding to the sector;

an equalizer circuit configured to receive ADC samples and to equalize the ADC samples to generate the digitized sample sequence; and

a decoder configured to receive an output of the SOVA detector processing the input signal using the set of parameters and to perform decoding on the output of the SOVA detector.

15. The system of claim 10 further comprising the channel circuit being a detector and the adaptation circuit being further configured to:

output a fifth set of channel parameters to the channel circuit for use as the set of channel parameters in processing the input signal to produce one or more detection results, the fifth set of channel parameters generated using the second adaptation algorithm;

determine that a decoding of the one or more detection results produced by the detector using the fifth set of channel parameters has failed a threshold number of times; and

at least partly in response to the determining the decoding has failed the threshold number of times, perform the processing of the input signal using the second set of channel parameters as the set of channel parameters.

16. The system of claim 10 further comprising the channel circuit being a detector and the adaptation circuit being further configured to:

output a fifth set of channel parameters to the channel circuit for use as the set of channel parameters in processing the input signal to produce one or more detection results, the fifth set of channel parameters generated using the second adaptation algorithm;

determine that a decoding of the one or more detection results produced by the detector using the fifth set of channel parameters has succeeded after less than a threshold number of failures; and

at least partly in response to the determining the decoding has succeeded, adapt, using the second adaptation algorithm, the fifth set of channel parameters using the successful decoding result.

17. A method comprising:

producing, by a circuit configured to process an input signal using a set of channel parameters and using a first adaptation algorithm, a first set of channel parameters for use by the circuit as the set of channel parameters in processing the input signal;

approximating a second set of channel parameters of a second adaptation algorithm for use by the circuit as the set of channel parameters in processing the input signal based on the first set of channel parameters and a relationship between a third set of channel parameters generated using the first adaptation algorithm and a fourth set of channel parameters generated using the second adaptation algorithm; and

performing the processing of the input signal using the second set of channel parameters as the set of channel parameters.

18. The method of claim 17 further comprising circuit including a Soft-Output Viterbi Algorithm (SOVA) detector that uses the set of channel parameters as branch biases of the SOVA detector to perform the processing of the input signal.

19. The method of claim 18 further comprising the first adaptation algorithm being a minimum mean squared error (MMSE) adaptation algorithm and the second adaptation algorithm being a Minimum Bit-Error Rate (MBER) adaptation algorithm.

20. The method of claim 17 further comprising:

the input signal being a digitized sample sequence corresponding to a sector of a magnetic storage medium;

the third set of channel parameters and the fourth set of channel parameters corresponding to an area of the magnetic storage medium including the sector and being generated during a manufacturing process including reading back known data written to the area of the magnetic storage medium including the sector; and

the relationship between the third set of channel parameters and the fourth set of channel parameters being a difference.